

ENTROPY REVERSED

Table of Contents.

Preface and section subjects.

Chapters and chapter subjects:

1. Ontology (What is).
2. Political Philosophy.
3. Pragmatic Ethics: Racism and War.
4. Cosmology (What happens).

*

*

*

Preface and section subjects.

The purpose of this document is to embody and express a possible solution to the mind-body problem—along with potential consequences. That proposed solution is first discussed in section 1.6.4.9. (philosophy perspective) and then in section 2.5.4.2. (physics perspective).

Some explanation seems to be necessary. It should be obvious that this is *not* a story—it is an essay. It has neither plot, nor conflict, nor antagonist and protagonist (nor any characters at all), nor dialogue, nor, really, description. Additionally, it has extensive quoting from philosophers and scientists, not to mention (a few—many apologies) equations and graphs—along with a great deal of explication of the quotes. Its purpose is *not* entertainment, but to inform (that's why it has an '.info' domain extension)—what Kierkegaard would have referred to as “edification.” An essay is part of an honorable and ancient tradition in literature, and, while literary devices and effects don't have to be used—they can be used. As said, the purpose is to inform—as well as to persuade. The subject is the mind-body problem, which is difficult enough as it is—without also requiring that jokes be included. Because the subject is complex, reasoning from the 'hard' sciences through philosophy while seeking affirmative conclusions in the 'soft' sciences, I believed extensive thought experimentation was needed. The 'soft' sciences, generally, utilize many more variables than the 'hard' sciences such as physics, thus, while it sufficed for Einstein to imagine riding a beam of light to illustrate relativity theory, when discussing possible future histories you need...future history. Some appearance of verisimilitude is necessary.

This essay is divided into four chapters, each composed of a number of sections, each section is identified by four numbers (in the form “w.x.y.z.”), and each of which pertains to particular topics. The first number is the chapter number and the other three numbers are for tracking purposes. The sections and their (general) subjects are listed in document order below as part

of this preface. These sections are then further divided into three parts: the first part is written in the third person omniscient narrator form, who explains the quotations presented to the best of his ability; the second part is written in the first person “I” form, who narrates (primarily) the extrapolations of the thought experiments based on the ideas presented; and the third part, written in the second person and addressed to a “you” represents an actual relationship from one side only. This pattern changes after section 2.2.1.4. to a less rigid organization.

Sections.: Subjects;

1.6.4.1.: God; 1.6.2.1.: Pragmatism; 1.6.4.2.: Physicalism; 1.6.4.3.: Chalmers; 1.6.4.4.: Type-F monism; 1.7.1.1.: Peace; 1.5.4.1.: Indeterminism; 1.5.4.2.: Quantum entanglement; 1.2.1.1.: Race; 1.6.4.5.: Something or nothing; 1.6.5.1.: Evil; 1.7.1.2.: The sensus divinitatis; 1.7.1.3.: Science and religion; 1.6.4.8.: What is; 1.6.4.9.: Philosophical argument for proposition that solution to mind-body problem is physicalistic monism; 1.6.4.10.: Noumenon + nexus; 1.6.4.11.: Neutral monism; 1.5.4.3.: Becoming; 1.7.1.4.: Monotheism; 1.6.4.6.: Leslie’s 4th and 5th solutions; 1.6.2.2.: Causality; 1.6.5.2.: The good; 1.6.4.7.: Entelechy; 1.6.2.3.: Identity; 1.6.5.3.: Free will; 1.6.2.4.: Certainty; 1.6.5.4.: Bullshitting; 1.6.5.5.: Truth; 1.1.1.1.: Hitler’s lies; 1.2.1.2.: War; 2.2.1.3.: Anarchism; 2.5.4.2.: Physical argument for proposition that solution to mind-body problem is physicalistic monism; 2.2.2.1.: Libertarianism I (Freedom); 2.2.2.2.: Libertarianism II (Nonviolence); 2.4.4.1.: Tariffs and other Taxes; 2.2.1.4.: Conservatism and Liberalism; 2.6.2.5.: Epistemology (Reference); 4.5.5.1.: $\Omega = 1$.

* * *

1.6.4.1.

“Thus, while for the merely speculative employment of reason the supreme being remains a mere ideal, it is yet an ideal without a flaw, a concept which completes and crowns the whole of human knowledge. Its objective reality cannot indeed be proved, but also cannot be disproved, by merely speculative reason.” — Immanuel Kant “Critique of Pure Reason” (New York: St. Martin’s Press, 1965), p. 531

The point of the “Critique”: God’s existence can be neither proved nor disproved. Time, meaning thousands of years, has not erased this flash of insight. God, defined the only way he can be, as creator, must therefore be ungraspable by mere humans. Although he may be immanent, his existence would necessarily transcend this universe, which is the only one we inhabit.

So, for thousands of years senseless arguments go on about whether or not God exists. And Kant answers them in a way that has never been disproved. It is impossible to prove either that God exists or that God doesn’t exist. And, the reason is fairly simple. If God is conceived as Creator, then his existence must transcend this universe, as he must have exerted causal influence “before”/“elsewhere” from our universal time/space. This is because our space/time

did not exist “before” or “elsewhere” from the Big Bang...and creation implies causality. If God transcends this universe, then creatures whose knowledge is of this universe only cannot prove either case, as there could (and probably would) be factors we would know nothing about. We are ineluctably creatures of this universe and no other.

What is being said here is not only that something cannot be proven, but rather the much stronger assertion that no chain of reasoning, no concatenation of facts and/or estimates, no probability calculus—can ever, in any human context, bring about one iota of illumination regarding God’s existence or lack of existence. We cannot guess; we cannot suppose; we only fantasize arrogantly when we say that we know something about this matter. Whether atheist or theist—you are equally wrong. You have no grounding; you have nothing to point to that matches the enormity of your assertion. Self-aggrandizement only carries one so far.

So, it should be clear that this blanket logical prohibition against drawing *any* conclusions about this matter includes *all* usages of the propositional or probability calculi. So *any* conclusion about the likelihood or unlikelihood of God’s existence that pretends to any rationality whatsoever is invalid. This means, in practice, that *all* belief systems about divinity, pro and con, are religious in nature. It might seem odd that atheism can accurately be termed a “religion”—yet it is the case, as atheists, like theists, are reasoning with data that are not only insufficient but also trumped by the unknown. Another way of saying it: theists and atheists both have the same problem, which is that they are trying to believe in something that cannot be verified, nor can the odds for or against it even be estimated. If God is considered as the Creator, then the mystery of God’s existence is irrevocably intertwined with the mystery of existence itself: why is there something rather than nothing?

* * *

So, I walked around this place. It is similar to so many others because we are there. As usual, there was once somebody else—but, as usual, they are gone.

* * *

My love, my darling, I will be with you tonight.

1.6.2.1.

“...reality, like every other quality, consists in the peculiar sensible effects which things partaking of it produce.” — Charles S. Peirce “Philosophical Writings of Peirce” (New York: Dover, 1955), p. 36

Whatever had happened by the end of the semi-mythical 21st Century, it is sure that we at least, for some reason, got the best of the philosophy at the time. Much has not survived, but that did. And, Kant (and Descartes, and Locke, and Hume, and Schopenhauer, and Kierkegaard, and

Nietzsche, and Heidegger, and Sartre, and Pierce, and James, and Dewey, and Russell, and Whitehead, and Wittgenstein)—and all the others, stand unrefuted by the thousands of years that have passed. Fashions come and go, and supposed answers do as well, but these men and women still stand supreme where thought matters, and it does not seem to matter that many thousands of years, by any reckoning, have passed.

Pragmatism, among other things, takes what we have as a “working truth.” Reality, far from being something large and mysterious, is merely what we can and have to work with.

* * *

I’m at my job again. Amazing that so little has changed over the years. Still a lot of dusty records. You have time to reflect, even dream, and certainly time to pray. Being Protestant, I pray firstly for wisdom to know what is right, and secondly for the courage to do what I have decided to be right. I do so even though I clearly understand, from my Calvinist grandmother, that asking God for things for myself is wrong.

* * *

My darling, all I wish is to be with you tonight. My love, all I can think of is your welfare.

1.6.4.2.

"...if the physical domain is causally closed, then there will be some reductive explanation in physical or functional terms." — David J. Chalmers "The Conscious Mind" (New York: Oxford University Press, 1996), p. 178

But the physical domain is not causally closed, as is shown by quantum mechanics, which introduces indeterminacy and therefore ends strict determinism. Yet, what we are left with is physicalism, which is to say that all there is is what there is. You can call it "matter/energy"; and you can locate it in "space/time." But, in any case, that is all there is.

So, how does consciousness fit in? It is part of the physical universe, the part of the universe that acts—that has agency. Matter, when organized in a particular way, becomes conscious of what is around it, and then does something about that. Later, it becomes aware of itself (At what point? Who knows?) and that is termed “self-consciousness.”

* * *

After the 21st century, or whichever century it might have been, it took thousands of years and much suffering to recover. But humanity, remarkably, did recover, and we started our slow expansion outward. Speeds a respectable proportion of the speed of light were achieved, and we reached nearby star systems. At first, nothing seemed amiss. Then, new physics

harnessed the power of singularities to conjoin distant parts of space. The ordinary man, as in previous centuries, merely pushed the button without understanding or even caring about the stupendous complexity of the ideas that gave that button efficacy. But the expansion was no longer slow, and, as we reached further across the galaxy, we found Earth-like planets that, unlike the first few explored, had produced life. Some still had it, meaning plant or plant-like life. But, animal or animal-like life, meaning life possessing what we call "consciousness" and "agency" was gone—excepting perhaps only the lower (essentially brainless) forms. Once it got started, it always proceeded to intelligence. But then it self-destructed.

* * *

You and I, that becomes the universe as I get older. I can feel the universe shrinking. Soon I shall retire, and we can be together for the last years.

1.6.4.3.

“Chalmers' ...Type-F monism...has its immediate ancestry in Bertrand Russell's neutral monism in *The Analysis of Matter* (1927)...For Russell, the idea came from his observation that physical theories characterize physical things only in terms of how they relate to other physical things, but do not tell us anything about the intrinsic properties of those things—which leaves open the possibility that some of the properties of physical things might be phenomenal.” Raymond Tallis "What Consciousness Is Not" ("The New Atlantis": Fall, 2011), pp. 71-72

Some of the properties of physical things are phenomenal. They exist only in the minds of self-promoting agents with the property of creativity. The physical entities themselves, such as light or sound waves, impinge on the awareness of the creative entity, and make impressions in the mind that exist only as percepts at the moment of awareness. Chalmers' Type-F monism takes advantage of "...the possibility that some of the properties of physical things might be phenomenal" (Tallis; *ibid.*), p. 72. Are percepts not 'made out' of material at the moment they are existing? Certainly, but if what we (or I) perceive them (the percepts) to be are some entity or entities which is/are objectively not-the-case, then what we (or I) are (or am) perceiving is a mistake, a non-entity. It doesn't exist, and it never did. Consequently, what makes a percept a percept is that it is perceived; what makes it true or not is correspondence (in this case) between percept and the unknown reality. "Correspondence" here can be thought of in statistical terms: "truth" in a percept can be expressed in probabilistic terms, as an analog to potential, in a probability wave. "Coherence" is another useful theory of truth. But that is considerably more difficult to evaluate, as it must be evaluated in subjective terms.

* * *

It seems that intelligence is always accompanied by war. Intelligence only arises naturally through evolution, anyway, and so it is dominated by the principle of competition. However, that leads only to war once groups get large enough, and they do that fairly rapidly. On world after

world, we found the evidence of war, sometimes recent, sometimes millions of years old. Sometimes something survived; sometimes nothing survived. However, if animals survived, they proceeded, always, to intelligence and the inevitable war once again.

So many of these worlds, much like Earth: white, billowing clouds, brilliant sunshine, crystal-clear lakes and streams, seasons, mountains, and oceans. And,...the disintegrating bones of the previous inhabitants.

* * *

Darling, I am thinking of you here, so far from you but still so close as I'll be with you tonight. Work was good, as always, with many stories in the records and from the principals. I'll finish up and return as quickly as I can.

1.6.4.4.

"Type-F monism is the view that consciousness is constituted by the intrinsic properties of fundamental physical entities: that is, by the categorical bases of fundamental physical dispositions." — David J. Chalmers "Philosophy of Mind" ed. David J. Chalmers (New York: Oxford University Press, 2002), p. 265

This is a matter of how physical things relate to other physical things, and it is important to note that mere relationship is a real existent in a physical-only world, although it is not made up of the 'stuff of the universe'—whatever that is. It may have more in common with the so-called "coherence theory of truth." What exists between two entities in this world, whether between two perceiving entities, one perceiving entity and one non-perceiving entity (because it is not a self-directed agent, on the theory that development depends partly on need), or two non-perceiving entities, can always be characterized as a relationship, and something therefore that has consequences in the real world.

An important point to add with respect to Chalmers, since he was responsible for the elucidation of the "hard problem of consciousness," is that that problem *is not* the same problem as the "mind-body problem." The mind-body problem is *only* about *how* and *where* the mind manages to interact with the body. Depending on the answer, the "how" might still be an open question, but the "where" question may be solvable. If the answer to the mind-body problem is some type of physical monism, then the "how" problem is automatically solved—as the two entities, mind and body, simply become identical.

* * *

So something impinges on something else in this universe, and a causal relationship ensues. If a living, creative entity, call it 'animal' or whatever you will, is involved, the outcome is not predictable, as real novelty exists in this universe, and it proceeds from 'animals' or God.

I step outside my program, and look around at the street, this street in a city on a planet I've only visited a few times before, and see something that looks like it could be on Earth. Humans are everywhere, and they are walking around and getting things done for themselves and those they care about—looking much like they do on Earth.

It seems peaceful, and it is hard to believe that there is another war going on.

* * *

When I dream of you, I dream of love. We are together, and our bodies intertwine. Our breath comingles, and words sometimes come. It is not an end, and it is not a beginning. When it is over, I stretch out, and my own breath escapes me. Someday it will not return, but for now it does. Rising, walking, eating, talking, all in the glow of health and happiness, and the awareness of you.

1.7.1.1.

"...the fundamental principle on which our present peace depends must be replaced by another, which declares that the true and solid peace can consist, not in equality of arms, but in mutual trust alone." — Pope John XXIII "Pacem in Terris" ("Peace on Earth") (Papal encyclical April, 1963), Section 113.

This speaks for itself, and its truth is apparent to all.

* * *

We spread through half the galaxy, but the simple act of escaping our solar system of origin to another star system, as difficult as it was, went a long way toward ensuring our survival, we believe. We had not found another species which managed to do it, until recently. The safe assumption is that such an escape is necessary. War was not thereby eliminated, but humanity's behavior did change over time—with the 'cushion' of safety provided by dispersion and distance and learning more about mutual trust.

We occupied most of the Perseus and Sagittarius and Outer Arms, as well as most of the Near 3kpc Arm, but only a small portion of the Far 3kpc Arm and Norma Arm and, in particular, about a third of the huge Scutum-Centaurus Arm.

This, of course, is where we met the Other(s). They came at us out of the larger part of the Scutum-Centaurus Arm, and took us completely by surprise. We had thought we were alone. Their violence was astonishing. They massacred civilians without any compunction, and seemingly took no prisoners from among our soldiers. We fought back, after the initial surprise, and showed some technological advantage, but were unable to gain back any of the star

systems we had lost, and to this day we do not know what has occurred on them. The situation now appears to be a stalemate. The war, of course, is fought almost entirely in space, so it goes back and forth, with little in the way of permanent change.

One very peculiar thing is that captured vessels of the enemy, which are rare in themselves, show no occupants, although inner configurations of the vessels themselves seem to hint at operators. We do not know if these vessels are suicidally abandoned or unoccupied in the first place and controlled remotely—although that seems unlikely. Despite extensive research and speculation, there is no idea of what the Other(s) might be, and, of course, the name reflects that, as they or it might simply be one entity. Because we have since encountered the enemy on the other side of the galaxy as well, we know that we occupy just about one half of the entire galaxy and so do they (or: so does it). The war goes on.

* * *

My darling, one of the case records I read today concerned a soldier who had been traumatized in this war. Like so many others, he had taken to Death, the drug we are attempting to control. I know this seems so strange to you, and so foreign to the life you lead, but I need to tell you about it when I get home.

My love, tomorrow I will be retired, and we will be together all of the time. Will I have five years left to love you and will it be enough time to express what is in my heart? It would not be enough if I had a hundred years. We will do what we can.

1.5.4.1.

"Since the predictions of quantum mechanics...violate the Bell-type inequality, it is an immediate consequence that no theory satisfying determinism is compatible with quantum mechanics...this is not simply the claim that quantum mechanics violates determinism...What is asserted here, rather, is the much stronger claim that *no* deterministic theory, *no* theory which posits deterministic physical states underlying the allegedly 'incomplete' state descriptions of quantum mechanics, can reproduce, at the observational level, the statistical predictions of quantum mechanics." — Jon P. Jarrett "Bell's Theorem: A Guide to the Implications" in "Philosophical Consequences of Quantum Theory" edited by James T. Cushing (Notre Dame, Indiana: University of Notre Dame Press, 1989), p. 71

So, when quantum mechanics first appeared, the evident indeterminism inherent in the theory, particularly in the Copenhagen interpretation, bothered Einstein to the extent that he devised, with two other scientists, the Einstein-Podolski-Rosen thought experiment—designed to test the idea that quantum mechanics was incomplete. Long thought to be untestable in practice, it became testable through the inequality proposed by John Bell, and advances in technique made possible a series of tests somewhere in the late 20th Century. An experiment by somebody coincidentally named Aspect pretty well proved that determinism was dead. And, so

it has remained even up to the present day, approximately, as far as anyone can tell, about twelve thousand years later. Many things that had seemed to be engraved in stone have been disproved, but this remains.

* * *

I, for one, have never believed that I was a robot or a zombie. Such crazy ideas have surfaced many times: before the 20th Century, during the 20th Century, and after the 20th Century. But they have continually run up against the plain experience of all human beings. We know that we are free, and the only way for that to be possible is for the causal cycle to be broken—by us.

* * *

You are the most beautiful woman in the world. Whenever we walk into a room, you become the most beautiful woman in that room. Whatever city we are in, whatever world we are on—you are the most beautiful woman there. When I look at you, I see not only what you are today, I also see the many versions of you from the past. All are superimposed on your face and body; all are simultaneously you and not-you; all coexist.

1.5.4.2.

"The questions with which Einstein attacked the quantum theory do have answers; but they are not the answers Einstein expected them to have. We now know the moon is demonstrably not there when nobody looks." — N. David Mermin "Can You Help Your Team Tonight by Watching on TV? More Experimental Metaphysics from Einstein, Podolsky, and Rosen" in "Philosophical Consequences of Quantum Theory" edited by James T. Cushing (Notre Dame, Indiana: University of Notre Dame Press, 1989), p. 50

"...we are forced to admit that these objects—even if they occupy regions of space that are extremely far from one another—are not truly *separated*. It is this idea that, for short, I shall henceforth call "nonseparability" (see also Glossary)." — Bernard d'Espagnat "In Search of Reality" (New York: Springer-Verlag, 1983) p. 45

"Nonseparability (of a Complex Extended System)

(a) Impossibility of considering that a description of the complex system in question is literally true if this description represents the system as being composed of two (or several) subsystems all of which are localized in distinct regions of space and free from instantaneous or faster-than-light interactions with one another....(Thus, in general, two particles that have interacted in the past and that have not interacted since with any other system must, strictly speaking, be considered to be a "nonseparable" system, regardless of the distance between the locations where they will eventually be detected. In quantum mechanics, this corresponds to

the fact that, in general, it is not possible under these conditions to associate a wave function with each particle individually. A wave function can be attributed only to the composite system.)

(b) Existence of interactions that allow for instantaneous or faster-than-light “influences” between localized parts of an extended system.

(a') and (b'): Same definitions as (a) and (b), respectively, but without the phrase “instantaneous or faster-than-light.” — d’Espagnat “In Search of Reality” from Glossary (Ibid.) p. 174

“Influence

This notion generalizes the notion of cause, and its definition meets with the same difficulties.” — d’Espagnat “In Search of Reality” from Glossary (Ibid.) p. 173

Quantum entanglement is just what it says it is: particles become entangled in various causal ways, and, even when they are separated in space, they exhibit this entanglement by correlations in physical properties. Tachyons do not exist, but the baffling entanglement does. At one time, this even fostered the theory that all electrons are actually one and the same particle.

For a long time it was thought that it was not possible to use this phenomenon to send information faster than the speed of light, due to restrictions in Special Relativity and consequent paradoxes. About five thousand years ago, with the arrival of new and enormously stronger sources of power, it was decided to test that theory even though the assumption against the paradoxes involved in information propagating at a rate exceeding the speed of light seemed to be bulletproof.

The results were absurd: it was shown that information could be transferred over distances within time periods that clearly calculated out to faster-than-light speeds and the expected paradoxes still did not appear. It was as if causality itself knit over the obviously necessary violation of law. The conclusion drawn was that a portion of each of the entangled particles in some sense became part of each other. With this advance, and almost unlimited energy available, our system of long distance transport based in information movement became possible.

The entanglement was the outward sign of the inward identity—a creation of the relationship in its starkest terms.

*

*

*

Social workers are concerned with relationships. Humans move in orbits, and bump into each other; they become entangled in relationships, and their courses and motions in life forever after can be affected. I fell in love, and needed to work to support my family. Choices were made.

Were they good, or were they bad? It is impossible to tell until the end comes. All things are possible in God.

When I meet my clients, I must be concerned, and it has to stem from authenticity. If there is none of that, I will fail.

Now, I travel daily over half the galaxy, enforcing a public health code designed to create the best treatment system possible for drugs, and one drug in particular, which we know as Death. Similar in some ways to the ancient marijuana, it seems innocuous, but grabs its victims and leads them to sheer indolence and forgetfulness. It is not physically addictive, but its psychological hold over its addicts makes mere physical addiction unnecessary. And, it does kill in the long run.

The young man I was going to tell my wife about is a case in point. It is easy for me to reconstruct a dialogue in my head with him, even though we only met that one time.

Me: "Why do you do it?"

Him: "Which, the lying or the using?"

Me: "Both."

Him: "Look, I am sorry about the lying, but..."

He and I together: "...that is what addicts do."

(We laughed simultaneously, and then he looked directly at me, and I looked into his eyes at the same time and saw the fear, and I knew that he was lost.)

* * *

We have been together for fifty years, and I have always been faithful to you. I doubt that I could have done it without God, but this, like many other things, is completely uncertain.

There have been women who looked at me in a specific way, and I knew what was on their minds. It is exciting; it is always nice to be wanted. But,...I always thought "what would come next?" It doesn't matter if you never found out—if I had somehow managed to keep it a secret. Why? Because I would have known what I did, even if you did not, and that would have affected my behavior and consequently our relationship. If a person wants to cheat, then have the courage to end the relationship first. Don't act like the mythical coward and try to have it both ways, because it doesn't work.

1.2.2.1.

"I am suggesting neither that Emerson is an exemplary North Atlantic racist nor that his peculiar form of racism simply rationalizes Euro-American domination and extermination of Native Americans and Mexicans. In fact, his rejection of John Knox's theory...and approval of racial 'mixing' make Emerson a rather liberal 'racist.' Furthermore, Emerson's moral support for Indians and Mexican sovereignty is well known,..." — Cornel West "The American Evasion of Philosophy: A Genealogy of Pragmatism" (Madison, Wisconsin: The University of Wisconsin Press, 1989), p. 34.

"There were even examples of "speciation" on isolated planetary systems, during those centuries when travel was still slower than the speed of light. "Speciation" here is used in the figurative sense, as the genetics remained close enough that inter-breeding always remained at least a distant possibility. But, once space gave up one of its secrets, and the adjoining of light-years distant areas became possible, humanity's fundamental attraction for something different, for reasons of evolutionary differentiation and consequent genetic survival superiority, re-asserted itself, and one could travel from one side of the galaxy to the other side and find populations who generally looked the same. Color-based racism ended. Of course, it should have ended long ago due to its inherent stupidity—as an obvious example of the "guilt by association" fallacy." — Unknown ("The Unknown Blogger 2" Location #12392748Ω1=2Ω), 16

"...Emerson's notion of power—...—celebrates moral transgression..." "Moral transgression essentially consists for Emerson in the exercise of personal conscience against custom, law, and tradition." — Cornel West (ibid.) p. 17.

West's criticism of Emerson as a thinker who held a "...peculiar form of racism..." is moderated somewhat by the acknowledgement that Emerson had been approving of racial "mixing"—which did turn out to solve a critical problem. Without such a solution, it is doubtful we would have survived.

"The absence of moral feeling in the white man is the very calamity I deplore. The captivity of a thousand Negroes is nothing to me." — Ralph Waldo Emerson, from "Emerson in his Journals," quoted in West (ibid.) p. 20.

It is hard for a person who had admired Emerson to read such a penetratingly honest, and correct, evaluation of "The absence of moral feeling..." as a calamity—for Emerson himself.

"While we were fighting with the Other(s), dark things came and went in the night." — Unknown ("The Times" Location number currently unknown), 36

America was dominated, either explicitly or implicitly, by the problem of race in those distant 20th and 21st centuries. Emerson, the quintessential Transcendentalist, foreshadowed what was coming in his inability to feel the outrageous violation of morality inherent to slavery.

Can a proposed, a speculative, solution to a problem be an actual solution?

And, how to explain that quote from "Unknown," obviously of great antiquity, but (also obviously) of obscure provenance? Is the quote from the Dark Age? How could it be possible to explain the mention of the Other(s)?

* * *

You ask me what makes practical the seemingly irrelevant quest for theoretical knowledge. I say: man alone is the hypothetical animal, and it can be argued that this accounts for his success. "Hypothetical" here means trying alternatives within the mind alone: a chimpanzee experimenting with sticks and stones does not qualify. Theoretical knowledge added to the storehouse of concepts man already possesses makes possible more and stronger hypotheses, and these lead inevitably, I think, to progress.

The use of code words makes easy the task of controlling groups. "Dark" has many unfortunate associations, created during the long millenia, and none of them make any real sense.

To us today, perhaps twelve thousand years later, the idea creates simple puzzlement. How could something as obviously irrelevant as skin color be taken to mean so many things upon first meeting another individual?

The "race problem" was solved by one simple word: miscegenation. Over thousands of years, opposites attracted, and they got to know one another, and they fell in love, and they married, and they had children. After a while, everybody was pretty much the same color, with only slight differences that spoke of long forgotten ancestors. Opportunities for people to hate each other still existed, as humans could still find reasons to hate—skin color had only been one proxy for that cheap solution to whatever is bothering you, but *that* reason disappeared, as its only factual basis disappeared.

* * *

I must express all my love for you here.

1.6.4.5.

"...why is there something instead of nothing?" — Martin Heidegger "An Introduction to Metaphysics" (New Haven: Yale University Press, 1959), pp. 7-8

According to Heidegger, this is the fundamental question of philosophy. Nobody knows the answer. It is probable, certainly in our estimation, that nobody will ever know the answer. The answers that have been proposed range from the argument made by some physicists that, since there was no time or space 'before' the Big Bang, there is no question to discuss, as there

was no time for a causal process to happen, nor any space wherein a causal process could have occurred—to the simple belief that God created everything. One hundred centuries and more since the Twentieth Century, when Heidegger asked the question, little has been added. Although our science has advanced enormously, we still don't have the slightest idea of what might have happened 'before' the Big Bang, or even if the concept carries any meaning.

* * *

The notion that the question is meaningless because unanswerable doesn't stand well. As I walk around this city, I imagine whether the inhabitants seriously believe that it is irrelevant that God might have created the universe and consequently would exist. If God doesn't exist, it becomes impossible, as far as anybody can tell, to ground ethics in some fashion. I believe this was Nietzsche's point. Ethics ungrounded leads to relativism, egoism, and lots of other 'isms. If God created the universe, then he is presumably the lawgiver, and there is some grounding for ethics—even if we do not necessarily know what that grounding (in the intellectual sense) might be and what the results might be. The question of how or why the universe got here and the consequent answer affect every part of every life.

* * *

So here we are, you and I, two infinitesimal bits of matter in a gigantic universe, and, for some reason, we care about each other. Is it possible that this is a reflection, or even an instance, of a primordial Love that generated that universe? Of course it is.

1.6.5.1.

"...evil has no positive nature; what we call evil is merely the lack of something that is good."
"...the malice by which His so-called enemies oppose God is not a menace to Him, but merely bad for themselves—an evil because what is good in their nature is wounded." "All natures, then, are good simply because they exist and, therefore, have each its own measure of being,..." — Saint Augustine "City of God" (Garden City, NY: Image Books, 1958), pp. 217, 247, 250

The famous "theodicy" problem (How can God exist as an all-good and all-powerful and all-knowing entity when evil exists in the world?) is addressed by Saint Augustine as a non-problem—by saying that evil does not exist; it is merely a privation.

Therefore, another word for evil, or Satan, would be "nothing." There is no Satan.

None of this implies that there is no evil in this world. We make our own judgements of good and evil in this world and these judgements, if correct, provide identification of both good and evil actions. (Subject, in believer's minds and in all relevant cases, to God's agreement.) The notion that evil must be something with a physical body is therefore inessential and

non-explanatory and therefore lacking a fundamental proof in causal reasoning. Non-existents cannot participate in causal activities in a physical universe.

* * *

The disasters that happened sometime during or after the “twenty-first century” were directly started by the collapse (or, at least, staged disintegration) of the “cloud,” which was apparently some primitive version of the seemingly infinite machine-related processes we have now. In addition to being primitive, it was also apparently vulnerable, and its collapse or partial disintegration left the entire world without information needed to survive in the form it (the entire world) currently had. The only actual survivors of the information in the cloud are the contents of one major university library, and many records, from different journalistic sources, of news items from the twentieth and twenty-first century. No notion of why the cloud collapsed is accepted as veridical, but there are many competing explanations—each one of which is sufficient as an explanation. The mere quick (as a matter of seconds) loss of the electric grid would have been sufficient, and we know that at least occurred. .

With this collapse, a new “Dark Age” began, longer than the first (semi-mythical) “Dark Ages” and far more savage. The near miraculous rediscovery of the records that did exist prior to the cloud collapse were part of what brought humanity out of those dreadful times. It is also possible, as we later found out, that the inability of human beings on Earth to destroy themselves, due to the degradation of armaments and general inability to wage world-wide war at the time, was actually beneficial—as we did not destroy ourselves, like so many other races on so many other worlds.

In any case, the Dark Age was extreme in its cruelty. If Satan was in fact a personage, it certainly would have been possible to believe in him during that time. No human, of any age or sex, was exempt from the threat of complex tortures of the most inhumane sort, and even wealth and power conferred little immunity in the case of a reversal of fortune, and those people, in particular, suffered the most when their luck ran out.

This world-universe is here because of God—not because of the all-devouring Nothing. That is an existent only as a concept in the minds of thinking beings.

* * *

To guard against harm to you has been my life’s aim.

1.7.1.2.

“There is within the human mind, and indeed by natural instinct, an awareness of divinity.”

“...God himself has implanted in all men a certain understanding of his divine majesty.” “...there

lies in this a tacit confession of a sense of deity inscribed in the hearts of all.” — John Calvin
“Calvin’s Institutes” (Louisville, Kentucky: Westminster/John Knox Press, 1989), p. 21

This is the *sensus divinitatis*.

* * *

I seem to have been born with it. Because of that, I must count myself as one of the luckiest persons alive. I know not what others believe. But I am fortunate enough to know what I believe. Thank God.

I once saw God in the eyes of a sorrowing mother. She had an autistic child, and, when I saw her as her caseworker, she told me she was dying of liver cancer. In spite of the pain ahead of her, her only thought was “what will happen to my child?” She might have become an angel in that moment.

* * *

God loves all of us, darling, you most of all, I would think—because of how loving you are.

1.7.1.3.

“The universe is not just a gigantic theatre in which the human play is being performed after an overture lasting fifteen thousand million years.” “Above all other disciplines of intellectual inquiry, theology needs the help of many perspectives in framing its account of ‘infinite-dimensional’ reality.” “Theology faces a particular difficulty in that the nature of its Object transcends us and our power to grasp him.” “Natural science does enjoy the exercise of procedures for testing its insights.” “...theology cannot be expected to achieve the same agreed and cumulative character.” “The test of the validity of the exercise of theological investigation will lie in its ability to discern pattern, to offer coherent understanding of human experience at its most profound.” “Religion without science is confined; it fails to be completely open to reality. Science without religion is incomplete; it fails to attain the deepest possible understanding.” — John Polkinghorne “Science and Creation” (Boston: New Science Library, 1989), pp. 52, 84, 94-7

Figures in human history such as Galileo were forced, under threat of great harm, to recant statements and positions they knew to be true. Human beings are fallible, and church authorities were and are no different. The arguments regarding a supposed dichotomy between science and religion that existed between well-intentioned and well-principled people before the twenty-first century, with great ferocity during the Dark Age, and even unto our present time have only demonstrated that they have no content. Theists never had any sound reason to believe that God would not be the Lord of discoverable truth, and atheists never had any sound reason to believe that discoverable truth was threatened by something they did not believe in.

Both sides should have merely respected each other, and tried to learn more about each other's position. Fortunately, today, this ersatz "controversy" is largely dead, a relic disregarded by almost all thinking people.

* * *

If God exists, as I believe He does, then the idea that there could be a separation determined by reason of truth between religion and science would have to be a false idea. With the removal of this conflict, religion has come into a golden age, where believers find a welcome from others eager to hear new truth, while science enjoys the deserved respect that great effort and ability should attract.

* * *

What do I love most about being with you? The night and all it brings. For fifty years we have been together, and holding you close at night, my arms wrapped around you, listening to our breathing together, feeling the warmth of our bodies enveloping us—this is the best.

You are the most beautiful woman in the world; you have always been the most beautiful woman in the world.

1.6.4.8.

"A curious thing about the ontological problem is its simplicity. It can be put in three Anglo-Saxon monosyllables: "What is there?" It can be answered, moreover, in a word—Everything—and everyone will accept this answer as true." — Willard Van Orman Quine "On What There Is" in "From a Logical Point of View" (New York: Harper Torchbooks, 1963), p. 1

It is good to start from something that is pretty well inarguable. In all probability, anybody who cares about truth should believe as little as possible, because there is so little that can be truly known—but hold passionately to those beliefs that he or she does hold, unless the countervailing evidence becomes incontrovertible.

* * *

If "Everything" includes entities known as "other universes"—what reality can be said to be possessed by something that has no possible causal contact with our own universe?

One way of dealing with quantum paradoxes was proposed by Hugh Everett III, an American physicist who postulated a "many-worlds" interpretation of the "collapse" of the quantum wavefunction. Essentially, at the point of controversy where uncertainty reigns over what is occurring with fundamental particles, the many-worlds interpretation simply states that all possible outcomes occur. And, at that point, our universe divides into many new universes,

each to proceed forever separate. This multiplication has supposedly *been* going on and will supposedly *be* going on, in incalculable and unfathomable numbers now and forever. It is a clear violation of Occam's Razor, which is ironic as Everett himself thought of that principle of desirable parsimony as a reason for acceptance of his idea.

"Everything" cannot include entities known as "other universes," at least in the scenario as proposed by Everett. "Other universes," even if once connected to our own, that are no longer in causal contact with our own and have no future possibility of being connected to our own—are not part of "everything," are not literally part of our reality, and don't exist for any conceivable purpose we may have outside of logical and mathematical speculation. While they may serve a speculative purpose, that ends it right there. This includes such speculative purposes as are found in literature.

The modal logics of Saul Kripke and other logicians are useful for such purposes, but such ontological extravagances as the statement by David Lewis that all logically possible worlds actually exist—"On the Plurality of Worlds" (Oxford UK: Basil Blackwell, 1986) pp. 1-2—are untenable within a pragmatist perspective.

In what sense does a history of thousands of years of fruitless although well-informed and well-reasoned controversy "prove" that a problem cannot be solved? In no sense at all. In what sense does a history of thousands of years of fruitless although well-informed and well-reasoned controversy "show" that a problem has very little likelihood of being solved, and consequently lead to a sound and useful philosophical resolution of the problem? In a considerable sense—within a pragmatist perspective. That, at least, is my belief.

* * *

What I would want: I would want to spend every day in the universe with you. How many days are there in the universe? I don't know—perhaps the answer is "infinity."

1.6.4.9.

"We have been trying for a long time to solve the mind-body problem. It has stubbornly resisted our best efforts. The mystery persists." "Resolutely shunning the supernatural, I think it is undeniable that it must be in virtue of *some* natural property of the brain that organisms are conscious." "My position is...pessimistic about the prospects for arriving at a constructive solution to the mind-body problem, but it is optimistic about our hopes of removing the philosophical perplexity." "...we can rest secure in the knowledge that some (unknowable) property of the brain makes everything fall into place." "Consciousness arises early in evolutionary history and is found right across the animal kingdom." "...the limits of our minds are just not the limits of reality. It is deplorably anthropocentric to insist that reality be constrained by what the human mind can conceive." — Colin McGinn "Can We Solve the Mind-Body

Problem?" in "Mind, vol. xcvi, no. 391" (Oxford UK: Oxford University Press, July 1989), pp. 349, 353, 361-3, 366

"...mental particulars are identical with physical particulars." — Colin McGinn "Philosophical Materialism" in "The Problem of Consciousness: Essays Towards a Resolution" (Oxford UK: Basil Blackwell, 1991), p. 162

It is nice to know that some problems, in a sense, have been solved. With the triumph of physicalism in general thought after so many centuries, it became clear that the mind-body problem, although not solved in the sense that the mechanism is known, is solved in the sense that it is isolated to the Kantian noumenon—a physical entity in a physical world. After centuries of enslavement to the threat of a Cartesian dualism—the insubstantial, non-detectable, and, importantly, non-efficacious "spirit" was banished; and it is presumed that it will never return.

Descartes assumed that there was another type of efficacious entity or reality within our universe that could causally affect the behavior of matter and energy *without* being either matter or energy (which two, of course, are the same thing anyway—note general relativity and, specifically: $E = MC^2$.) (Which, translated, means: Energy equals Mass [meaning: Matter] multiplied by the speed of light [C] squared.) This presumed-to-be-efficacious entity or reality he named through usage of existing words such as mind, or spirit, or soul. All of these, of course, are different from such co-existing entities as physicalist terms, and consequent causal realities to matter and energy as space and time, that are the Cartesian philosophical equivalents of extension and thinking (which exists through duration) and which consequently and completely described body and mind in Descartes' universe (see section 2.5.4.2., second part, for citation). But, it never made sense that a hypothetical something utterly unlike, because defined and thus constituted (for the sake of the hypothesis) unlike, could causally affect our mundane material world. Additionally, the continuing lack of evidence for ghosts, demons, angels and other supernatural agents within our universe, in spite of endless attempts to uncover proofs of such agents, ran on to the point where it became simply unbelievable that such proofs could exist. While it was clearly impossible to prove that such creatures could not exist *somewhere* in this immensity, the perceived probabilities of this possible reality became so vanishingly small that they came to be disregarded as preposterous by virtually all thinking people. This, by the way, did nothing to defeat belief in a God, as a God, true to conceptions of Him, would have the luxury, if He so chose, of residing somewhere other than our homely and possibly boring (to a divine Personage) universe. Being omnipotent has its perquisites.

* * *

Twentieth Century Man: "I am in two parts."

Me: "How do they communicate?"

T. C. Man: "They depend on a, ummm, causal connection."

Me: "I'm glad you used that word 'causal.' How does something defined only as non-physical move the physical?"

T. C. Man: "...ummm..."

Me: "The brain is clearly physical. What does it do if it does not move the body? Would the mind be a mere epiphenomenon, something that receives signals but sends nothing back? Would that even make sense, that a connection would exist but be only one-way?"

T. C. Man: (Silence.)

* * *

Yes, my darling, for every thing there must be a reason.

Once again we are slumbering peacefully together. I wish to touch you. Remembering: our first date, we are sitting next to each other, watching a show, and I wish to touch you for the first time, so I reach to your hand, and stroke your left index finger gently between the first and second knuckles. You turn and look at me, and I at you. We gaze for a long time—it seems. (I could not possibly know how long it was.) Then, without any further thought, I move toward you, and you toward me. Our lips touch, and a light explodes in the back of my brain.

Now, half a century later, I reach toward you again. I locate that spot on your finger, and stroke it gently. You turn to face me, and our lips touch...

1.6.4.10.

"The concept of the noumenon is, therefore, not the concept of an object, but is a problem unavoidably bound up with the limitation of our sensibility..." "...as sensible intuition does not extend to all things without distinction, a place remains open for other and different objects; and consequently that these latter must not be absolutely denied, though—since we are without a determinate concept of them...neither can they be asserted as objects for our understanding." "Understanding...must not presume to claim applicability to things-in-themselves but only to appearances..." — Immanuel Kant "Critique of Pure Reason" (New York: St. Martin's Press, 1965), p. 293

"Four notions...that of an 'actual entity,' that of a 'prehension,' that of a 'nexus,' and that of the 'ontological principle.'" "Actual entities'—also termed 'actual occasions'—are the final real things of which the world is made up." "...these actual entities are drops of experience..." "The ontological principle can be summarized as: no actual entity, then no reason." "A prehension...will be said to have a 'vector character'; it involves emotion, and purpose, and valuation, and causation." "Actual entities involve each other by reason of their prehensions of

each other. There are thus real individual facts of the togetherness of actual entities...Any such particular fact of togetherness among actual entities is called a 'nexus'..." "All else is, for our experience, derivative abstraction." — Alfred North Whitehead "Process and Reality" (New York: Macmillan Publishing Company, 1978), pp. 18-20

Kant's "noumenon" is the "thing-in-itself," the unknowable reality at the center of being. His "phenomenon" is the appearance, which is the only thing that can be known by us. The noumenon can be understood only as the limitation on what can be known by those who are ineluctably creatures of this universe.

Whitehead can be seen as extending that analysis. The "actual entities" act as noumena, and join into a nexus. What this implies is that complex entities can also be noumenal.

However, there is one specific difference that is relevant here. Whitehead says that "A prehension reproduces in itself the general characteristics of an actual entity..." "In fact, any characteristic of an actual entity is reproduced in a prehension." — Whitehead (ibid.), p. 20. In Kant, the "appearance" is not caused by and stands in no specific relation to the noumenon. The noumenon is completely unknowable, and reasoning from the appearances to it is not legitimate reasoning in any sense. In a sense, the noumenon lives behind an event horizon.

* * *

"We see now that when we think of ourselves as free, we transfer ourselves into the intelligible world as members and recognize the autonomy of the will together with its consequence—morality; whereas when we think of ourselves as under obligation, we look upon ourselves as belonging to the sensible world and yet to the intelligible world at the same time." — Immanuel Kant "Groundwork of the Metaphysic of Morals" trans. H. J. Paton (New York: Harper Torchbooks, 1964), p. 121

(The idea for the next section was occasioned by "Kant and the Noumenon" by Roger Scruton in his "Modern Philosophy" (New York: Penguin Books, 1994) p. 55.)

I had only recently had the insight that Kant himself saw the unknowable "ding an sich" (thing-in-itself) as knowable in a restricted sense as, as he saw it, we ourselves constitute such objects looking out on the universe. This, again, as he saw it, primarily has consequences for practical philosophy—which was his term for ethics. My interest here is primarily in ontology—and I see it as having consequences there as well. Later in this essay, my interest will shift to the mutually affecting subjects of political philosophy and ethics—where consequences will also be seen.

Following Whitehead, and therefore assuming that realities are determined in the nexus of relationships among fundamental actual entities, the thing in itself would not be restricted to the classical fundamental entities (particles, etc.) only, but would also include more complex entities

built up out of those fundamental entities. This is only a re-statement. If we are purely physical creatures, and our reality consists in the causal web and its causal ramifications, then characteristics, say for example male and female characteristics, being created not only of their internal structure but also ultimately affected by and modified by their experiences, would become part and parcel of the ding an sich. They would have these characteristics down to the unknowable core of their being. This is only one example.

So, I am the noumenon. Or, to put it better, I am this noumenon.

So, I am the noumenon which attempts to see into myself—but ends up perceiving nothing; at least, nothing different from what I am used to seeing from that direction.

* * *

I wake about 2:00 A.M., and you are snoring gently. It causes me to smile, and I shift myself slightly to accommodate the curve of your body. At first I was feeling rather cold, but, gradually, warmth permeates my own body, resulting in a sense of calm and well-being. You continue to snore (gently). I could listen to it for hours, and never imagine that I am wasting time.

I look out upon the universe from this vantage point. I can see a great deal, but if I simply turn around, so to speak, and try to see myself—I can see nothing. It seems a paradox, but it isn't. So, I am partly the noumenon which attempts to see into myself—but ends up perceiving nothing; at least, nothing different from what I am used to seeing from that direction. Does this have any consequences for the Kant/Whitehead 'discernibility' question? The only possible consequence would have to be indiscernibility, between, say, male and female characteristics, and, while this is possible—it is also necessary to acknowledge that indiscernibility would be shown only in this case, and that Whitehead's question is still a live question.

Perhaps it is also possible that Kant was visualizing noumena as particles (indivisible spatially) while Whitehead was visualizing 'actual entities' as complex (divisible spatially).

1.6.4.11.

"Physics, in itself, is exceedingly abstract, and reveals only certain mathematical characteristics of the material with which it deals. It does not tell us anything as to the intrinsic character of this material." — Bertrand Russell "The Analysis of Matter" (Nottingham UK: Spokesman Books, 2007), p. 10

"I start from the assumption that both the causal dependence, and the anomalousness, of mental events are undeniable facts." "...Kant...says...'Philosophy must therefore assume that no true contradiction will be found between freedom and natural necessity in the same human actions,...'" "The first principle asserts that at least some mental events interact causally with physical events." "The second principle is that where there is causality, there must be a law:

events related as cause and effect fall under strict deterministic laws.” “The third principle is that there are no strict deterministic laws on the basis of which mental events can be predicted and explained...” “...anomalous monism, classifies the position I wish to occupy. Anomalous monism resembles materialism in its claim that all events are physical, but rejects the thesis, usually considered essential to materialism, that mental phenomena can be given purely physical explanations.” — Donald Davidson “Mental Events” in “Essays on Actions and Events” (New York: Oxford University Press, 1980) pp. 207-8, 214

Neutral monism, proposed by Russell, was given a more thorough development by Davidson. Davidson confronted directly the seemingly obvious contradiction between stating that everything that existed in this universe was composed entirely and without exception of physical entities (matter and energy, situated in space and time) that were subject to causal laws and stating that the human reality, whatever it might be, was thus physical and yet free. In so doing, neutral monism was rendered more respectable. Nonetheless, it should always have been respectable, because all humans already knew they were made of flesh and blood and yet were free. The only question was “how?” To rephrase, Davidson’s “mental phenomena” were micro indistinguishable from their physical substrate, but were yet unexplainable. Quantum mechanics demarcated what was unexplainable in space and time.

*

*

*

Today, we accept the reality that we are free and that there is no possibility of communicating with spirits while in this world—at least in this particular universe. (This refers to normal communication based in causal relationships; believers in God can simply add a corollary for the exception.) Science still cannot penetrate into the heart of reality that Sartre saw as “nothingness,” but we know now as, at least, being something. But that doesn’t stop us from being pragmatic, and seeing that, as Kant said, there really is no alternative to accepting the plain truth, given by process of elimination. The result is neutral monism, or, as Davidson put it: “anomalous monism.” We are noumena, and as noumena we are impenetrable, beyond understanding, and, by all reasonable judgment, free—existing somehow as part of the unknown basic “stuff” of the universe.

Me: “I know you are not really there.”

It: “Yet, you are afraid.”

Me: “Yes.”

It: “Why?”

Me: “Because I understand the power over the human mind of fantasies.”

It: "No, it is because you know that, somewhere ahead of you, lies the Abyss. And, somewhere in that Abyss, I wait for you."

Me: "If you were real, I would term you a 'liar.' You would fit perfectly that old image of 'The Father of Lies.' However, a lie itself is but a negation of the truth."

It: "Define 'truth.'"

Me: "You would know, if you existed, that that is impossible. And,...in any case, I deny any right on your part to command, as well as any means to exist."

It: (Starts to say something.)

Me: "You are without use. You are a worthless concept in my mind, a holdover from thousands of years ago. I am done with this."

It: (Vanishes.)

Me: "Yet, in moments of great stress—"it" may return. I'll need strength, which must come from another source."

* * *

Night. I temporarily get up and return. As I begin to embrace you, you move slightly and snuggle perfectly into the curve of my arm. You begin to breathe gently and I know you are asleep. Although the position is uncomfortable for me, I can not move, not because I'm immobilized but rather because I choose not to. I am uncomfortable—but you are not, and that is more important. This doesn't make me a hero, but rather just an ordinary person in love.

1.5.4.3.

"...the objectivistic interpretation of the principle of indeterminacy...means the *reinstatement of becoming in the physical world.*" "Is not the *concept of objective probability...imposed on us* by the facts of wave mechanics?" "Contemporary physics in its implications returns...to the evidence of our immediate experience...to that of a *really growing world with genuine novelties emerging not 'out of nothing,' but from past antecedents.*" "If every moment is irreducibly original by its own nature...then the irreversibility of becoming cannot be denied." "...the constraining—though not predetermining—influence of the past is an essential feature of becoming, as much as is the irreducible novelty of each present event." — Milic Capek "The Philosophical Impact of Contemporary Physics" (New York: Van Nostrand, 1961) pp. 334, 337, 340, 344, 395

What Capek is saying is that each matter/energy configuration of a physical system can be thought of as forming the subsequent configuration, but with novel changes that were not predictable from the mere rigid causal lines. It is a blend of causality with novelty. Neither rigid determinism nor chaos holds. Unpredictable change is an inherent part of the natural world, and, when life is included, it takes control right at that point, and agency is born.

Life seems, in some sense, to be operating in defiance of the second law of thermodynamics. And, more accurately, this thermodynamic law also pertains to the lifespan of the universe itself.

The second law of thermodynamics was stated by its originator, Carnot, very well, as "...in his theoretical study of the steam engine. Carnot made the important observation that work cannot be derived from heat unless this heat be allowed to fall from a higher to a lower temperature. This statement constitutes "Carnot's Principle." — d'Abro, "The Rise of the New Physics," Vol. 1 (New York; Dover Publications, 1951) p. 337. Later, Clausius provided a more mathematical treatment, including a new physical variable, entropy.

"Entropy" is defined, in "The McGraw-Hill Encyclopedia of Science and Technology," (ibid., p. 828) as: "A function first introduced in classical thermodynamics to provide a quantitative basis for the common observation that naturally occurring processes have a particular direction. Subsequently, in statistical thermodynamics, entropy was shown to be a measure of the number of microstates a system could assume [this measure is directly connected to 'degrees of freedom']. Finally, in communication theory, entropy is a measure of information." The "particular direction" of the "naturally occurring processes" is that of what we term the "forward" direction of time. With entropy defined, Clausius was able to prove the "entropy function," explained in the McGraw-Hill Encyclopedia (ibid., p. 828) as: "The state function entropy S puts the foregoing discussion on a quantitative basis. Entropy is related to q , the heat flowing into the system from its surroundings, and to T , the absolute temperature of the system." The encyclopedia goes on to say that the "important properties" of this function S are: 1) the difference between "natural" and "reversible" changes and, 2) "The entropy of the system S is made up of the sum of all the parts of the system so that $S = S_1 + S_2 + S_3 \dots$ "

"The principle of entropy states:

"Any reversible change occurring in an isolated system leaves unchanged the value of the total entropy of the system, and any irreversible change causes an increase in the total entropy." — d'Abro, Vol. 1 (ibid., p. 353)

What does this mean? Reversible changes are those where the change of entropy in a system equals the ratio q/T , while irreversible changes (Planck called them "natural" changes) are those where the change of entropy in a system is greater than the ratio q/T . (' T ' and ' q ' are defined above.)

Consequently, the total entropy of the system (the universe, in this case) does not decrease—outside of something that would be akin to a divine fiat. But, for the animal, it is important to note that actions taken almost always seem to serve a teleological purpose—there is an end in sight, and that end seems intended to serve the animal's interests. This is not what would be expected in a universe with entropy but without agency efficacy.

* * *

I have some words here; I do not know where they came from. Perhaps I copied them from somewhere else; perhaps I wrote them myself. If they are recognized, I would appreciate being told who wrote them—if it was not myself. In any case, they are apropos for this time.

“Be not afraid.

“Go forward into your fear.

“Trust that there will be a sustaining hand.

“When we are afraid we come to understand God in a new way. Our image of God often comes most sharply into focus when we are afraid, when our hearts tremble, that is when we see God.”

* * *

It is early in the morning. Neither of us can sleep. We both have our concerns. I stroke your hair, and you stroke mine. Our breathing commingles. You are my solace. May every person who walks this world have a chance for something like this!

1.7.1.4.

“15 He saith unto them, But whom say ye that I am? 16 And Simon Peter answered and said, Thou art the Christ, the Son of the living God. 17 And Jesus answered and said unto him, Blessed art thou, Simon Bar-jona: for flesh and blood hath not revealed *it* unto thee, but my Father which is in heaven.” — St. Matthew 16:15-17 King James Version of the Bible (New York: American Bible Society, 1958) p. 18 New Testament

“61 But he held his peace, and answered nothing. Again the high priest asked him, and said unto him, Art thou the Christ, the Son of the Blessed? 62 And Jesus said, I am: and ye shall see the Son of man sitting on the right hand of power, and coming in the clouds of heaven.” — St. Mark 14:61-62 (ibid.) p. 54 NT

“30 I and *my* Father are one.” — St. John 10:30 (ibid.) p. 107 NT

“36 Say ye of him, whom the Father hath sanctified, and sent into the world, Thou blasphemest; because I said, I am the Son of God?” — St. John 10:36 (ibid.) p. 107 NT

“4 When Jesus heard *that*, he said, This sickness is not unto death, but for the glory of God, that the Son of God might be glorified thereby.” — St. John 11:4 (ibid.) p. 107-8 NT

“6 Jesus saith unto him, I am the way, the truth, and the life: no man cometh unto the Father, but by me.” — St. John 14:6 (ibid.) p. 112 NT

There are many examples of Jesus calling himself the “Son of Man” in the Gospels. There are fewer examples of Jesus calling himself the “Son of God” in those same Gospels.

So, what is the explanation for why Jesus doesn’t simply refer to himself routinely as the Son of God? It does seem that the twin phrases “Son of Man” and “Son of God” form the basis of the theory of the dual nature of Jesus. But, there is nothing controversial about any man calling himself “Son of Man.” The controversy arrives when somebody calls himself “Son of God.” Is this the reason? Of course, nobody knows.

Some commentators use the passage in Matthew 16:15-17 to back an assertion that he wanted his disciples to perceive that he was the Son of God through the mediating influence of God Himself: “...flesh and blood hath not revealed *it* unto thee, but my Father which is in heaven.” But, when the high priest questions him, he is content to turn the priest’s words back upon him: “...Art thou the Christ, the Son of the Blessed? And Jesus said, I am...” (ibid.)

Just as a proof of God’s existence is impossible, so also is a proof of Jesus’ divinity, and essentially for the same reasons: if Jesus is divine, outside of a miraculous demonstration, there can be no demonstration of transcendence of this universe, and, once that demonstration is history—all records can be doubted. It is the transcendent nature of the divine that is inherently in question, and all proofs are ultimately useless.

* * *

For myself, the problem is compounded. With the *sensus divinitatis*, I feel sure of God’s presence. However, I find nothing comparable to that with regards to the divinity of Jesus. That question seems to me to be a question that is far more the concern of God Himself rather than myself. Absent the sense of the divine, how could I attain direct knowledge of the relations of gods? That is clearly impossible. All a person like myself has is the historical testimony of the Bible.

Additionally, and importantly, the splitting of the Godhead into three personages is a direct challenge to the fundamental postulate of monotheism. It is almost impossible to not give some consideration to the high priest’s cry of “blasphemy” in Matthew 26:65.

The words of St. John do not prove; they do not even convince the skeptic. Rather, they invite belief, which comes as a relief when confronted with the human condition. When Jesus says "...I am the way, the truth, and the life..." that provides me an opportunity that would be foolish to ignore.

What about the third member of the Trinity, the Holy Ghost or Spirit? Equally well attested to in Scripture, the Paraclete starts out, in my estimation, with the problem of being saddled with the terms "ghost" and "spirit." I have trouble conceiving what these terms could actually mean, given that such entities cannot function (although they could exist, as far as anybody knows) in this universe. The fact that they might have a real meaning in a transcendent context (a context that somehow transcends this universe) changes nothing for a mere human, as I cannot transcend this universe in this life.

Jesus does lay down an imperative in St. Matthew 28:16 "Go ye therefore...and teach...in the name of...the Holy Ghost." However, it is possible to interpret these words in such a way as to eliminate "the Holy Ghost" as a personage, and consequently transform it into an idea or metaphor.

In fact, the Holy Spirit as a personage can be used for all sorts of sophistical reasonings. When confronted with the obvious fact that the Scriptures have been variously interpreted many different ways from the very beginning, a person arguing for a particular point of view can say he *knows* he is right in his interpretation—because he was inspired by the Holy Spirit. That ends a discussion quickly through circular reasonings: the Scriptures are correct because they are inspired; and I am correct in my interpretation because I am inspired by the Holy Spirit—proof of the inspiration is in the Scriptures, and so neither conclusion can be wrong. Another way to say it would be: "the Scriptures say the Holy Spirit exists (thus validating the Holy Spirit), and the Holy Spirit inspires the Scriptures (thus validating the Scriptures)." Again, it is circular reasoning. Additionally, it would mean: *you* personally were inspired by that spirit—but all those whose interpretation was not *exactly* as yours were not. That would seem to be quite difficult considering that a sentence in *any* language is almost impossible to assign an *exact* meaning. After all, the "meaning" of "meaning" itself is absent "meaning" without specific reference to a rational agent/observer. Furthermore, within the mind-body controversy, it is the existence of that "rational agent/observer" that is sometimes in question. Biblical literalism is "literally" impossible, due to the non-Godly reality of humanity qua humanity. Wishful human thinking by itself cannot bridge the infinite gulf between God and humanity.

So, when I am confronted with the idea of the Trinity, I find in myself belief in the Duality: God the Father and God the Son, with no Holy Spirit included as a member of the group.

However, I also find the idea natural, that my God, conceived as the Creator of the universe, and, in fact, also conceived as the solution to the question "Why is there something rather than nothing?" can only be God: Jehovah, Allah, who I see as the father of Christ my Saviour. And, additionally, it also becomes plain that only God can be the answer to "What or who created

God?” God created Himself, in direct violation of the precept that “nothing comes from nothing.” One is either the Creator of all or one is not, as one who did not create himself but was himself created could not be the Creator of all.

Obviously, a Being who does that (creates all) would surely be both omniscient and omnipotent. Also, we are assured by scripture that God has a Holy Spirit—so any presumed manifestation of that Spirit, functioning as the Holy Spirit has traditionally been supposed to function, in any form and setting, can always be explained by and as a miracle created by a Personage capable of creating multiverses within the Planck time. The prohibition against non-material causal interactions within this universe would, of course, pertain to natural causal interactions only. The difficulty is not in saying there is a Holy Spirit, but rather in assuming that we could inerrantly distinguish its actions.

Fourteen thousand years after Jesus, give or take a few centuries, the human race has taken its Abrahamic religions, the great religions of the monotheistic tradition (Judaism, Christianity, and Islam), and, for the most part, combined them by deciding that Jesus was a man, and the particular patriarch or teacher or prophet you follow to God is less important than that you find God. Since I consider Jesus to be my Savior, I am then still a throwback in mostly following the traditional belief in Jesus’ divinity. The caveat is that I am not a Trinitarian, but rather a Dualitarian. (Another term for this could be “Binitarian.”)

But the war goes on. Does it make sense to speak in terms of a war when the enemy opponent is seemingly nonexistent? Yes, it does.

* * *

We, you and I, are the lucky ones. We are the ones who woke up each morning to the same dear face and sweet smile. We know what it is like to feel and experience the emotions brought by a love that has come, after many years, to fruition.

1.6.4.6.

“Suppose that a thing, if it were to exist all by itself, could in some cases be absolutely better than a blank...” “...could such a reality itself have acted creatively, ensuring that there wasn’t a blank?” — John Leslie and Robert Lawrence Kuhn “The Mystery of Existence: Why Is There Anything At All?” (West Sussex UK: Wiley-Blackwell, 2013), p. 101

“Does an infinite mind supply the reason for all other existing things? Or are minds or conscious experiences in some way fundamental to all existence?” — John Leslie and Robert Lawrence Kuhn “The Mystery of Existence: Why is There Anything At All?” (ibid.), p. 142

The first quote here ends up referencing a theory due to Plato that was advanced in “The Republic”: that “The Good” is what bestows existence on all known things (“Plato: Collected

Dialogues” Princeton, NJ: Princeton University Press, 1961, p. 744). It is therefore a very old idea from philosophy. The second quote here ends up referencing quantum theory, and specifically the requirement for an observer to trigger the collapse of the Schrodinger wave function. It is therefore a very new idea from modern physics.

It would seem that there is no connection between the two. But, to us, there is a connection. Now, does that mean we can prove our supposition? Of course not. There are many things—perhaps most things, perhaps all non-mathematizable things—that cannot be proven. However, we can find much beauty in the thought that Goodness itself creates everything, and in particular a cosmos where experience of other entities is fundamental to that creation.

All that is known for sure is that we, as creative agents, take knowledge of phenomena from our sensory inputs, and this knowledge relates to physical things outside of us, and then we make judgments about what to do based on that. Our self-interest is involved.

But then, in contradistinction, in order to accomplish anything, we must move outside of ourselves (so to speak) and find out how to live with others. In the process, some of those others (whose existence cannot even be proven) prove to be attractive, and we fall in love.

Putting these two quotes together, can we envision a cosmos, meaning our homely physical universe, motivated by a cosmic Love (if God is capitalized, and God is Love, then Love must be capitalized) that has a creative power? Our own love for each other then becomes a small but meaningful part of God’s love for his creation, and a creative force.

* * *

It was getting time for me to go home. Normally, after visiting my program for the day, I would spend some time in a bookshop or a library, sipping a stimulative (not depressive) drink. This day was no different. After talking to the program directors, the psychologists, the social workers, and the counselors, my mind is always full, and I need time to wind down. The philosophy section at the bookshop was well-stocked, and I found something to buy. The ideas continued to flow, although I am getting old, and am very close to retirement.

* * *

In my imagination, I wake up, we are together, and I bury my face in your soft hair. We remain ensconced like that for a long time, with many thoughts moving lazily through my mind. The main thought, however: “...what agony it would be to be separated from you.”

1.6.2.2.

“...we may define a cause to be an object followed by another,...Or, in other words, where, if the first object had not been, the second never had existed.” — David Hume in “An Enquiry

Regarding Human Understanding” contained in “Hume on Human Nature and the Understanding” edited by Anthony Flew (New York: Collier Books, 1962), p. 89

The “Great Skeptic,” Hume, said that there was no necessary causal connection that could be discovered by the senses when contemplating natural events. The only connection that could be discovered would be discoverable through the reason, meaning abstract thinking, and that was unreliable (our words). In our time, so many thousands of years later, Hume stands unrefuted on this point. Causality is still a mystery to us. And, physics has proven to be of no help, as physicists still haven’t arrived at the ‘bottom’ of reality—nor does it seem that they will. Does it make sense to say that there is a “bottom” to reality?

For the purposes of this essay, it will be assumed that all “causality” that can be found in this universe is physical in nature.

* * *

The lesson I took, however tardily, from all this was that chance, whether something that could be termed “real” chance, or something that was actually due to some unknown agency, was a reality in this world. This, of course, meant that I should take a conservative approach, never take chances at face value, and triple-check everything. Oddly, that is what I had tried to do.

I was ready to go home. It was always necessary to stroll about, as usually I was in a great city, full of life and interest. But, I’d had my coffee, and my little bit of reading, and I yearned for the face of my beloved.

I went to a sub-station of the transportation service, and entered one of the cubicles where the physics of singularities would send me to my home planet, many light years away, in only a small period of time. I never understood that physics, and I hoped that I would never be likely to need that understanding.

During the time after my program visit, I had entered into conversation with a person at the bookshop. He had mentioned that a nearby star system had recently been captured by the Other(s), and that apparently some sub-stations had not yet been programmed to avoid that system. He warned me to be careful, and, of course, I said I would.

I entered the cubicle, and checked all the settings—all seemed to be in order. I set the course to my home, and utilized the necessary controls—all knowing that I was about to be whisked through numerous sub-stations on my way home.

I pushed the last button. There was a flash from the mechanism, a quick sensation of falling, and the cubicle seemed to spin around, the door opened and a jolt to or from the chair expelled me out the door. As I lost consciousness, I read from the sign the name of the proscribed star system. I was a captive.

* * *

My love, my darling, are you lost to me forever? Every moment from now on I will remember with bitterness how this happened.

1.6.5.2.

“If I am asked ‘What is good?’ my answer is that good is good, and that is the end of the matter. Or if I am asked ‘How is good to be defined?’ my answer is that it cannot be defined, and that is all I have to say about it.” “...propositions about the good are all of them synthetic and never analytic;...” — G. E. Moore “Principia Ethica” (Cambridge UK: Cambridge at the University Press, 1971), pp. 6-7

Oddly, I find this comforting. Like Socrates, I would have wanted to wrestle with the question of ‘what is the good?’ However, the centuries have confirmed Moore, because no definition has been found, and God is still the only answer that cannot be disputed—assuming He exists.

* * *

I awoke, and found myself floating, naked, in a space indeterminate. It was very cold, and a bluish mist swirled around everything, including myself. From out of this fog protruded several instruments of unknown purpose. The purpose became apparent quickly, as a razor sharp blade lashed out and took off a tiny slice of my right big toe. Before I could scream, another tool extended itself, and swabbed the toe with some kind of solution that seemed to attack every nerve ending.

The pain was far beyond anything I had ever experienced.

This process continued, sometimes with short but blessed intervals, and sometimes non-stop. My throat was reduced to rags and, in fact, the pain from that area was seemingly as bad as what was going on elsewhere.

Some time later, my legs and arms and genitals were gone, and the instruments were moving up my torso. I do not know how I was kept alive. I do not believe I was sane during most of the time. There came a moment when a particularly sensitive area was sliced, and my brain seemed to explode. Synaesthesia was induced, where pains were seen as lights, or heard as sounds. I flickered in and out of consciousness and then, suddenly, there was a transcending flash of white noise, and everything stopped. I could sense nothing. My body was gone. In the long years subsequent, I came to remember this moment as “The Explosion.”

Did I die? Or did I just seem to die? Was it that some "I" slipped through the interstices of the grosser matter? Or did my entelechy, something similar to a principle of organization, get superimposed on what was merely a different grouping of matter?

Did I die? Did I live?

Am I still me? Or just something with my memories?

* * *

You were a good girl, and you are a beautiful woman. You are my heart and my life. No power in this universe could make me want to leave you.

1.6.4.7.

"Entelechy...1. In Aristotle's use: the realization or complete expression of some function; the condition in which a potentiality has become an actuality." — "The Compact Edition of The Oxford English Dictionary" (Oxford UK: Oxford University Press, 1971), p. 874

"...the soul is the first grade of actuality of a natural body having life potentially in it. The body so described is a body which is organized." — Aristotle "On the Soul" from "The Basic Works of Aristotle" (New York: Random House, 1968), p. 555

During the 20th and 21st centuries, there was a lot of talk about how computer programs were like minds. A computer program was supposed to be a sort of 'entelechy.' However, John R. Searle's 'Chinese Room' argument is now seen, given collective experience, as an effective response to that idea — "The Mystery of Consciousness" (New York: The New York Review of Books, 1997) pp. 11-14. We now have the benefit of thousands of years experience with computers capable, in theory, of modeling our entire visible universe—but nothing that could reasonably be characterized as self-consciousness has ever been detected. The conclusion is that software programming coupled with computer hardware does not, by itself, amount to a mind, and consequently will not cause such an entity to attain sentience. The truth is that we still don't have the slightest idea of what a person who is capable of acting independently and with free will might be. All we know is that we are such persons.

* * *

Once the shock of relief from the end of the torture had passed, I attempted to reach out and discover where, and what, I was. To my surprise, there were causal connections available, which brought in information from 'outside,' and there seemed to be actions I could take, which actually controlled something going on 'outside.'

A very long time passed, while I struggled with what amounted to my new body. I found that I was in a large ocean, which was dominated by a plant that had grown enormous through a shared root system of many seemingly individual plants. This plant had some animal characteristics, and seemed to have been on the verge of attaining consciousness on its own. Somehow, I had simply imposed my own consciousness on that nascent consciousness. It died aborning and I went on, amazed at my own survival.

Although it might seem like a short jump, in fact it took me many years to learn to control my new body. Eventually, though, I had it capable of movement, just like any other animal. I had created an animal out of a plant. Quite an achievement, even though the plant had already been almost there as an animal anyway. Evolution obviously works much better than direction from a confused mind.

* * *

Darling, darling, I know you are many years dead. My sense of loss holds me back from doing what I want to do. If only I could see your sweet face and hear your sweet voice again!

1.6.2.3.

“Consider another range of possible cases. These involve all of the possible variations in the degrees of both physical and psychological connectedness. This is the Combined Spectrum.” “At the near end of this spectrum is the normal case in which a future person would be fully continuous with me as I am now,...” “At the far end of this spectrum the resulting person would have no continuity with me as I am now,...” — Derek Parfit “Reasons and Persons” (Oxford UK: Clarendon Press, 1984), Kindle location 5267

“We are inclined to believe that there is always a difference between some future person’s being me, and his being someone else. And we are inclined to believe that this is a deep difference. But between neighbouring cases in this Spectrum the differences are trivial.” — Parfit (ibid.), Kindle location 5312

Parfit was a reductionist on the subject of personal identity; basically what he was saying was that people are nothing but their brains and bodies. However, he also asserted that, since there is no test of personal identity, it is impossible to tell if a person is continuing in any case. So there is an admission of ignorance regarding the fundamental fact. People are nothing but their brains and bodies, but the difficulty in teasing out the actual “person” in there somewhere leaves open the possibility that some type of symbolically-based replica of that person could be applied to other matter—and the result would be that original person, in every meaningful sense of the word.

* * *

Is that what happened to me? Or, did it happen, and yet: the result, which I believe is me, is in fact a different person? I puzzled over this for a while, and decided to ignore it. Part of the “identity” problem as it is practiced by philosophers is that it seems impossible to determine whether it is part of the subject matter of epistemology (the division of philosophy that tries to answer the question “what can we know and how do we know it?”) or part of the subject matter of ontology (the division of philosophy that tries to answer the question “what is?”). Practical considerations mandated that I worry less about how do I know stuff and worry more about what “stuff” actually is here and what can I do with it.

Essentially, I became a new creature. I learned how to leap space by crossing a portion of myself to the planet’s satellite, which was a comparable size to its primary, and so was hospitable to life, and in fact possessed many plant species. I later found out that this was an enormous stroke of luck, as systems in the Other side of the galaxy showed no signs of life, and this system had been taken over by the Other(s). Perhaps it (they) had been there only a short time, and we had driven it (them) off. Perhaps the war had ended in some sort of a mutual cataclysm. In any case, by the time I was capable of paying any attention to these questions, millions of years had passed, and evidence was hard to find.

However, one thing I did find, which was a branch of the main Earth library and museum. It had a communicator to that institution and, to my amazement—it still worked. My powers of comprehension and memory seemed to be almost computer-like by this time, and I exhausted the resources of that magnificent place. Importantly, I got the secret (which I had never bothered to learn nor thought I should learn) of utilizing singularities to conjoin space-like entities.

* * *

My memory runs away with me: you and I are lying on the bed together for a while, kissing and snuggling close, and I find myself telling you “it will be okay, we will get through this together—as long as we have each other.”

You kissed me long and soft.

You can’t imagine how much I love you.

My memory is making the past present.

1.6.5.3.

“The name of a cause and of an agent, is properly given to that being only, which, by its active power, produces some change in itself, or in some other being. The change, whether it be of thought, of will, or of motion, is the effect. Active power, therefore, is a quality in the cause, which enables it to produce the effect. And the exertion of that active power in producing the

effect, is called action, agency, efficiency.” “...we are efficient causes in our deliberate and voluntary actions.” — Thomas Reid “Essays on the Active Powers of the Human Mind” (London, UK: B. Griffin and Co., 1843), p. 252

Reid is merely saying what everybody believes, which is: that they have control over their own actions. Even people who promote the idea that everything is determined, which, if true, would reduce our minds to mere impotent epiphenomena, act in their own lives as if their choices matter.

In Kant’s Third Antinomy, he takes the position that freedom and determinism cannot be reconciled. However, that was written before the advent of quantum mechanics. Indeterminism became part and parcel of physics in the early 20th century, and it was never again possible to automatically deny freedom using Laplacian language.

Our own modern philosophers have advanced no further than this, in spite of thousands of years of effort. The supposition of free will is granted, but understood impossible to prove. The search for “hidden variables” goes on.

It is impossible to ignore the simple fact that personal responsibility, and therefore all of ethics, depends on personal freedom.

*

*

*

How can I know from my own immediate experience of agency that, in spite of feelings, all that I think I am doing is not determined? The simple answer is that I cannot. If, in fact, all was determined, and I was simply a helpless observer, unable to change anything—all would feel exactly as it feels now. There is no way out of this impasse.

However, sometimes a rhetorical question is in order: how on Earth can anybody believe that the obvious march toward intelligence through survival testing (evolution) doesn’t indicate that the brain does something? It is plain that the brain does something. And, what it does is carry out the choices of this thing we call a ‘person.’ The fact that we cannot adequately define ‘person’ changes nothing in this case, as it is still plain that this person exists to accomplish something, so that is what it does and is. Sometimes it just makes sense to be practical, admit that you haven’t explored the ground of reality (because you cannot), and accept that—if you want to survive, you just have to believe in yourself.

I have the dubious privilege of examining these ideas at length. Taking more time over them will be necessary. But the collected wisdom of humanity through thousands of years hasn’t added much. In my opinion and belief, we are still in the hands of the Creator.

*

*

*

How do you manage to become more beautiful every day? In my memory, I review every moment with you. The past is present.

1.6.2.4.

“47...Forget this transcendent certainty, which is connected with your concept of spirit.” — Ludwig Wittgenstein “On Certainty” (New York: Harper Torchbooks, 1972), p. 8e

“55. So is the hypothesis possible, that all the things around us don’t exist? Would that not be like the hypothesis of our having miscalculated in all our calculations?” — Wittgenstein (ibid.), p. 9e

“56...are we to say that certainty is merely a constructed point to which some things approximate more, some less closely? No. Doubt gradually loses its sense...” — Wittgenstein (ibid.), p. 9e

“142. It is not single axioms that strike me as obvious, it is a system in which consequences and premises give one another mutual support.” — Wittgenstein (ibid.), p. 21e

“144. The child learns to believe a lot of things...Bit by bit there forms a system of what is believed, and in that system some things stand unshakeably fast...What stands fast does so, not because it is intrinsically obvious or convincing; it is rather held fast by what lies around it.” — Wittgenstein (ibid.), p. 21e

“179. It would be correct to say: ‘I believe...’ has subjective truth; but ‘I know...’ not.” — Wittgenstein (ibid.), p. 25e

“467. I am sitting with a philosopher in the garden; he says again and again ‘I know that’s a tree,’ pointing to a tree that is near us. Someone else arrives and hears this, and I tell him: ‘This fellow isn’t insane. We are only doing philosophy.’” — Wittgenstein (ibid.), p. 61e

There is no certainty outside of mathematics. And, the branch of mathematics called logic strays from certainty whenever it strays from abstract symbolism and starts to substitute in words for symbols. Yes, words are symbols, but they are of a different type from mathematical constants and variables. They cannot be defined with certainty, as their meanings always depend on context—and not only their spelling.

Informal logic, however—that is a great deal of fun.

*

*

*

Me: I say this.

Him: that is false, because you are what you are.

Me: when you say I am what I am, do you mean that what I say is falsified because I bring with me certain characteristics?

Him: yes, of course, but also that you said something different from what you said.

Me: I'm confused.

Him: of course you are. You see, I heard you say "such-and-such." But, in fact, you said "so-and-so."

Me: how do you know?

Him: I heard it in my head.

Me: along with everything else?

Him: yes, you have finally got it.

* * *

I cannot imagine being in love with anybody but you. If there is a future beyond what we call "death," and I knew that I was to be with someone else in that future life, would it be blasphemous, would it be sacrilegious, to petition God to be allowed to be celibate instead? This, of course, in spite of the obvious fact that God would have both the right and the reason (being God) to command in that instance? What if quantum branching were true, and the chances of being with you again in the fullness of time were astronomically low? Leaving aside the simple fact that, as a mere creature, my will would never be sufficient to accomplish my purpose? These questions cannot be answered. I can only trust and hope that divine justice, whatever form it might take, might some day be barely comprehensible to me.

1.6.5.4.

"...telling lies does not tend to unfit a person for telling the truth in the same way that bullshitting tends to. Through excessive indulgence in the latter activity, which involves making assertions without paying attention to anything except what it suits one to say, a person's normal habit of attending to the ways things are may become attenuated or lost...The bullshitter...does not reject the authority of the truth, as the liar does, and oppose himself to it. He pays no attention to it at all. By virtue of this, bullshit is a greater enemy of the truth than lies are." Harry G. Frankfurt "On Bullshit" (Princeton NJ: Princeton University Press, 2005), pp. 60-61

“How do lies injure us?...The most irreducibly bad thing about lies is that they contrive to interfere with, and to impair, our natural effort to apprehend the real state of affairs...In telling his lie, the liar tries to mislead us into believing that the facts are other than they actually are. He tries to impose his will on us. He aims at inducing us to accept his fabrication as an accurate account of how the world truly is...Lies are designed to damage our grasp of reality. So they are intended, in a very real way, to make us crazy.” Harry G. Frankfurt “On Truth” (New York: Alfred A. Knopf, 2009), pp. 75-78

American politicians were consummate bullshitters. And, of course, to give them their due—they were also excellent liars. Frankfurt’s distinction between lying and bullshitting is useful, and it does seem to be true that the “soft” version of lying that bullshitting is—is more dangerous to the body politic than outright lying. But, whether lying or bullshitting, American politicians managed to do more damage to America, the country known as the “United States,” than anybody else before or since those crucial years of the early 21st century.

* * *

Reporter: OK, sir, we have heard you say that these particular dollar figures are pertinent to the subject. Firstly, could you tell us where you got these figures?

Mr. Official: ‘pertinent,’ you say? I find that to be a very arrogant question. You must be very bad at what you do.

Reporter: sir, we would just like to know more specifics. To place what you said in context. If you could make clear...

Mr. Official: I am not the detail person. Check with my secretary. On second thought, don’t check with my secretary, as I do not have one. I am your only source for truth.

Reporter: but what do you plan to do?

Mr. Official: when I know, I’ll let you know—I guess. All in good time. Things are going very well.

You hear a politician make some statement? If it is not obvious from what he says—ask him the right questions: Where? When? How? Who? What? Why? How much? For what purpose? Does he have a source? If he does not explain further to fill in question marks—he is lying. Evidence is necessary when making some contentious statement, otherwise that statement starts life out as half a lie. Lies of omission, like lies of commission, are still lies.

* * *

You asked me why men "can't wait." (This, of course, is within the context of the bad behavior of certain men with women.) The organs of a man's body are always producing the seminal fluid. It builds up, and with that comes a physical need. The majority of men find ways to cope that do not victimize women (or others), but a smaller percentage seems to be unable to do so. None of that is an excuse, but only a reason. Reasons are not excuses.

I do know, however, that the minutes and hours I've spent with you, whether in explicit sex or not—have been the happiest of my life.

1.6.5.5.

"What matters is this: if all we know is what sentences a speaker holds true,...we cannot take even a first step towards interpretation without knowing or assuming a great deal about the speaker's beliefs. Since knowledge of beliefs comes only with the ability to interpret words, the only possibility at the start is to assume general agreement on beliefs." "Since charity is not an option, but a condition of having a workable theory, it is meaningless to suggest that we might fall into massive error by endorsing it." "Charity is forced on us; whether we like it or not, if we want to understand others, we must count them right in most matters." "We make maximum sense of the words and thoughts of others when we interpret in a way that optimizes agreement (this includes room, as we said, for explicable error, i.e. differences of opinion)." — Donald Davidson "On the Very Idea of a Conceptual Scheme" in "Inquiries into Truth and Interpretation" (Oxford UK: Clarendon Press, 1984), pp. 196-7

Truth, like a handful of other fundamental concepts, is entirely resistant to definition—a prime reason why it has been the preferred elementary-school-style playground of politicians and dishonest lovers.

However, it does make sense to say that it arises within relationships, and utilizes language to forge better relationships—when it is truth, that is.

* * *

Him: I say to you: "I love you just the way you are"—and, one day or night, I realize that I *do* love you just the way you are. This—*this*, must be God's will for me.

Him: Why? Because, as you and I know, love is the greatest achievement of all.

Him: I love you, and you love me.

* * *

So, science seems to be telling us that what is real and ultimately efficacious is the relationship, and not so much the matter/energy entities involved; also, the "matter/energy entities" are

virtually all involved in causal relationships already. So are there “levels” of “reality” in relationships? Somehow, I feel that my love for you is more real than anything else in my life. What can this mean? To me, it means that somehow, for this tiny part of reality I call “myself,” the relationship I have with you partakes of the fundamental nature of God—and consequently carries with it the irresistible power and moral authority of God, the Creator of the universe. However, to be fair, it is possible that it has nothing to do with a God, but rather it is a function of physics operating by itself. It is faith alone that moves me to my view of the relationship.

1.1.1.1.

“At the start of 1920 Hitler took over the party’s propaganda...He began immediately to organize by far the biggest meeting ever dreamt of by the pitifully small party. It was to be held on February 24, 1920...Hitler was not even scheduled as the main speaker...In the course of his speech Hitler had enunciated for the first time the twenty-five points of the program of the German Workers’ Party. They had been hastily drawn up by Drexler, Feder and Hitler...they became the official program of the Nazi Party when its name was altered on April 1, 1920 to the National Socialist German Workers’ Party...They are certainly a hodgepodge, a catchall for the workers, the lower middle class and the peasants, and most of them were forgotten by the time the party came to power...A good many paragraphs of the party program were obviously merely a demagogic appeal to the mood of the lower classes at a time when they were in bad straits and were sympathetic to radical and even socialist slogans...These demands had been put in at the insistence of Drexler and Feder, who apparently really believed in the “socialism” of National Socialism...of course, nothing was ever done about them.” — William L. Shirer “The Rise and Fall of the Third Reich: A History of Nazi Germany” (New York: Simon and Schuster, 1960), pp. 40-41

The fond conceit that, because the Nazi Party was more correctly called the “National Socialist German Workers Party,” the Nazis (and Hitler in particular) were actually socialist, is blown up by this simple quote. The fact is that, while Hitler and his minions were certainly as bad as Stalin and his minions—one set of goons was right wing while the other set of goons was left wing. What joined them was their mutual totalitarianism.

* * *

Totalitarians of the usual stripe took hold in America. We are not entirely sure of why this happened. These were politicians whose sole purpose seemed to be to sow discord in the country of their nativities. It seems that they did so by abusing whoever crossed them, and the country followed them into that obnoxious behavior. The country (the “United States of America,” so called) became an armed camp, where two large groups of people were essentially at war, each side seeing the other side as dangerous, stupid, and intolerable.

When I became aware of this history, I found it fascinating. I was sure, and this point of view has been echoed by many of our scholars, that the seeds of the destruction of this “United

States,” and in fact the entire world—were planted at this time. The seemingly endless Dark Age that followed, or started in (as near as anyone can figure), the 21st Century, is then in some fashion to be laid at these politicians’ doors—as much as anybody else’s.

Regardless of how much truth there may be in the old records, it is certain that these politicians were very bad economists, and that, in addition to whatever bad personal behavior they might have evidenced, would have helped drive the United States over a cliff. This, of course, would not have necessarily happened right away, but far-reaching choices were probably made. We know now that an office structured like the Presidency of the old United States had little effect on economic success for the country, and the only real way such a President could have a positive outcome would be by expending political capital to get Congress to pass laws terminating less necessary governmental programs, thus making permanent tax-cutting possible and thereby stimulating the economy.

These politicians apparently had little stomach for that. During electioneering, they would even refuse to nominate any programs for termination, in spite of the many boondoggles which existed in the Federal budget—and in spite of the clear and simple fact that any ordinary budget should not include what is less necessary if it cannot be paid for. Deficit spending seemingly made it possible to pay for everything. Everybody got happy for a while.

Oddly, political adherents thought of these politicians as “conservative” or “liberal.” This is ridiculous, as these politicians, in their economic behavior, were clearly, almost to a person, all big-spending, big-taxing, big-government politicians. Mere incessant name-calling of the other sides convinced the yokels otherwise.

Not irrelevant itself was that the terms “conservative” and “liberal” were completely bent from their original meanings, due to the politicians’ general twisting of words. They no longer meant an aversion to risk and a preference for the status quo, or an antiauthoritarian attitude combined with a preference for individual liberty, respectively. On the contrary, they were supposed to be equivalent to whatever the particular politician speaking said they were, a ridiculous assumption that only held because many of the American so-called voters, taxpayers, and citizens were in thrall to these politicians’ tribal instincts. The politicians got richer, while their acolytes merely, for the most part, got poorer—while the self-same politicians told them they were better off than ever before, without, of course, producing any proof that such was the truth .

*

*

*

It seems that times have always been bad. But there is one compensation.

When you and I first met, I had been watching this loony rock act with a friend. He suggested getting a hot dog. I agreed, and, on the way, saw a young woman. My head swiveled as I tried to follow her path. I ‘marked’ what she wore. Then I grabbed that friend, before he got to the

hot dog, and told him that I was going to talk to some girls, and “the one in the white pants and red top is mine.”

I turned around and walked down the field, watching where the group of girls went. Once they had settled onto a blanket about mid-field, I went up into the stands to think. What did I think about? Of course, I thought about what I would say to you. I could come to no conclusions—so I just walked toward you.

Fifty years later, my darling, there we were.

1.2.1.1.

“Were it a complete, untrammelled, absolute manifestation of violence (as the pure concept would require), war would of its own independent will usurp the place of policy the moment policy brought it into being;...” — Carl von Clausewitz “On War” (New York: Alfred A. Knopf, 1993), p. 98

“No one starts a war — or rather, no one in his senses ought to do so — without first being clear in his mind what he intends to achieve by that war and how he intends to conduct it.” — Carl von Clausewitz “On War” (ibid.), p. 700

Thesis: total war with absolute unmitigated violence is the ideal war. Antithesis: actual war, even in theory, is always influenced and mitigated by forces external to it. Therefore, war has a dual nature, and becomes merely the continuation of state or national policy by other means. The political character of war means, consequently, that conduct of war should be under the control of political leadership. The politicians should not ask the impossible of the military, and ensuring that the impossible is avoided is the role of the military commanders, who should represent realities to the politicians—but the military should also understand that it is an instrument of the State, and does not exist for its own sake. There is no purely military evaluation of any particular strategic situation.

* * *

Eventually I occupied the entire Milky Way galaxy (as it was once called). My body existed on the surfaces of stars and their retinues of planets and moons.

With great caution, I had spread into the half of the galaxy we had known as occupied by the Other(s). Millions of years had passed since my “Explosion,” and there was nothing there. I mean quite literally nothing, what life that did exist there also seemed to have been present only since the Other(s) vanished, however and whenever that might have been. As near as I could figure, that vanishing had been only a short time after my own lifetime in the body of a human. (Whether I was still a “human” I could not say.)

On our side of the galaxy, ancient traces of our civilization still existed, but that was all. Again, the end seemed to be shortly after my own lifetime. Since then, other civilizations had evolved, apparently only to repeat the dreary cycle ending in mass death due to war. It seemed that only the Other(s) and ourselves had escaped that fate to colonize other star systems—at least temporarily.

I found the home planet Earth. The ruins were magnificent—but it was impossible to tell what had happened—although it was logical to postulate that the end was caused in some way by the war.

What had gone wrong? Why was this mistake so nearly universal?

I am a galaxy-wide entity, with computing resources far beyond those of previous civilizations I am familiar with—but, like so many of the deeper questions, these resources do not provide the answers. All I can say is that von Clausewitz might have had the correct idea when his analysis brought him to the point where he had to say that the psychological dynamic of war inevitably leads toward untrammelled violence. Since there is always the existential excuse that this current war is such a threat to the existence of the nation (a conclusion always possible through the “slippery slope” argument) that one must go to the extremes—the hotheads and self-interested end up in control some of the time. And, once in control they usually try to remain in control indefinitely, and so they can wreak permanent damage. Miscalculations are made, and finally the disaster happens, although nobody wants that outcome.

It should be clear that I would believe that the only answer lies in the words of Jesus, which are intended to interpret (I assume) God’s language in the sixth commandment (“Thou shalt not murder.”). This is not pacifism; Jesus points out the psychological meaning of the words. While it is true that self-defense was and remains permitted, legitimate self-defense can become murder in wartime when in the hands of self-interested politicians who pretend to buy the “existential” argument only to further their own goals. Only by tempering the passions brought on by war, particularly a war caused by unprovoked attack, through wisdom based in either or both of humanism and religion, can a society survive indefinitely. “Indefinitely” was apparently too long a time for most intelligent species, in fact—all, as far as I know.

I look from afar at trillions of other galaxies, and wonder.

* * *

Yes, my darling, you are right: we need hope.

2.2.1.2.

“ANARCHISM (from the Gr. ἄν-, and ἀρχή, contrary to authority), is the name given to a principle or theory of life and conduct under which society is conceived without

government—harmony in such a society being obtained, not by submission to law, or by obedience to any authority, but by free agreements concluded between the various groups, territorial and professional, freely constituted for the sake of production and consumption, as also for the satisfaction of the infinite variety of needs and aspirations of a civilized being.” — Peter Kropotkin article on “Anarchism” in 11th edition of the Encyclopedia Britannica (1905), reprinted in “Kropotkin’s Revolutionary Pamphlets” ed. Roger N. Baldwin (New York: Dover Publications, 1927) p. 284.

After its beginnings in Godwin and Proudhon—and then on to Bakunin, anarchism was distinguished partly by an acceptance of the inevitability of violence if anarchism’s aims were to be achieved. This, like many other self-interested claims, was put to the test and ultimately failed. But, before it failed, it managed to leave a legacy of hatred that chose to see only that anarchism was once very violent.

In fairness, this isn’t a small thing. Anarchism bears some responsibility for the founding of the modern conception of terrorism. It was, then, an “end justifies the means” philosophy. It was self-interested, in its early violent incarnations, in the sense that its proponents insisted on immediate achievement of its goal. If innocent people were killed in pursuit of that goal: that was just tough luck. From the years 1894 to 1914, six heads of state [largely innocent of meaningful culpability—our interjection] were assassinated for the sake of the anarchist idea. — Barbara Tuchman “The Proud Tower” (New York: The MacMillan Company, 1966) p. 63.

“Haymarket...provided the best propaganda Anarchism ever had.” “For years afterward the silhouette of the gallows and its four hanging bodies decorated Anarchist literature,...” — Tuchman (ibid.) pp. 67-68.

“Kropotkin’s faith in mankind, despite a life of hard experience, was inexhaustible and unshatterable.” “This agreeable person...was an uncompromising apostle of the necessity of violence.” — Tuchman (ibid.) pp. 70-71.

“...these leaders...were certain that Anarchism because of its rightness must triumph...” “Their insistence on revolution stemmed directly from their faith in humanity, which, they believed, needed only a shining example and a sharp blow to start it on its way to the golden age.” — Tuchman (ibid.) pp. 76-77.

“Of the dual nature of Anarchism, half hatred of society, half love of humanity, the public was aware only of the first.” — Tuchman (ibid.) p. 108.

“It was an idea which drew men to follow it but because of its built-in paradox could not draw them together...” — Tuchman (ibid.) p. 113.

Anarchism followed a trajectory during the second half of the nineteenth century, which started with Proudhon’s answer to the question posed by the title of his book “What is Property?” as “*It*

is Robbery,...” (New York; Dover Publications, 1970, p. 11), moved through Bakunin’s bomb-throwing, and ended up with Kropotkin’s eventual tempering of his apostolic fervor for violence. In fact, by the turn of the century, he had already used such Tolstoyan phrases as: “We must build in the hearts of men. We must establish a kingdom of God” (Tuchman; *ibid.*, p. 72).

Anarchism’s conflict with communism, and Kropotkin’s conflict with Marx, was initiated by anarchism’s insistence on personal freedom from authority. This gave communism an insuperable organizational edge, and Marx’s followers, along with the socialists, were able to exclude the anarcho-syndicalists from the Second International in 1889.

In spite of the literal interpretation of Proudhon’s dictum, anarchists had generally considered private property earned directly through labor as acceptable. Their argument was with exploitative capitalism—where that connection between effort and reward became more and more tenuous. Murray Rothbard, as the leader of a group known as “anarcho-capitalists,” discarded the useless rhetoric that attacked the wealthy, both the legitimately (meaning: ‘they earned it’) and illegitimately (meaning: ‘they stole it’) wealthy. (Our words: it isn’t what a person is—it is what he does, or did.)

*

*

*

I was somewhat aware of this history. Obviously, the colonization of our half of the galaxy took a very long time, with many setbacks, and created along the way many backwaters—that ended up as experimental petri dishes for many different political philosophies. Among these thousands of “dishes”—no matter what size they may have been—existed quite a few that tried anarchy, with results that were not entirely expected.

Before I explain what happened, it is necessary to also explain that, when exploring the literature of anarchism’s so-called “classic” period (“The Essential Works of Anarchism” ed. Marshall S. Shatz; New York: Bantam, 1971, pp. 1-265), none of these writers expected anarchism to develop in such a way that it included nonviolence as a presupposition. In fact, with the exception of Tolstoy, all would have advocated violence and only Kropotkin would have joined Tolstoy on the question in late life. This includes Godwin, whose proscriptions against revolution still did not forbid the violent form.

Rothbard’s attempts to solve the various problems practical anarchism presented were, oddly, eventually proved workable, due to the later ubiquity of data-gathering and the availability of computing power and memory. However, when reading through the eyes of a twentieth-century person, Rothbard’s anarchistic prescriptions for roads (“...*all* pieces of land, *all* land areas, including streets and roads, would be owned privately...”), for courts (“How would courts be financed in a free society? There are many possibilities. Possibly, each individual would subscribe to a court service, paying a monthly premium,...Or,...he may pay a fee whenever he chooses to use the court...with the criminal or contract-breaker eventually recompensing the

victim or plaintiff.”), and for war itself (“...how could a libertarian society defend us against the Russians?...There are, of course, several dubious assumptions implied in such a question...But a libertarian America would clearly not be a threat to anyone,...because it would be dedicated to no aggression against anyone, or against any country. Being no longer a nation-state, which is inherently threatening, there would be little chance of any country attacking us.”) seem like nonsense, and naive nonsense at that. (Quotations from “For a New Liberty: The Libertarian Manifesto” Auburn AL: The Ludwig von Mises Institute, 2006, pp. 249, 276, 295.)

While initial outcomes from such political experiments were positive, showing the greater efficiency of the market versus governments and the consequent savings of money amongst taxpayers/customers, the long term results caused most of the experiments to fail, with only a few adherents left that may or may not have actually adhered to the basic “no government” idea—opinions differ on that question. Although it is true that human behaviors have changed somewhat over the many centuries, it is still true that evaluation of human ethics is not quantifiable, and perfection doesn’t seem attainable. Privatized roads and courts *mostly* collapsed under, respectively, market externalities and inefficiencies (markets have trouble “clearing” when there is insufficient competition) and simple greed. As for war and defense issues generally, Rothbard’s notion that a socio-political entity lying exposed meant less likelihood of invasion turned out to be false (mild sarcasm). So, core duties of governments, and defense in particular, have remained, for the most part. The significant savings we have experienced in government costs have been directly related, however, to the lessons learned from these quasi-anarchistic states: 1) the private sphere is more efficient, through the competition principle, *assuming* that the employees are motivated (by money) while 2) the public sphere is more effective, through the cooperation principle, *assuming* the employees are motivated (toward public goods). So, all tasks deemed absolutely necessary for the survival of the polity are public sector tasks, while everything else, and specifically the generation of wealth, lies within the purview of the private sector. The major exception to the failure of the most radical changes was in police forces, which came to be seen differently with the full-throated acceptance of citizen self-defense—when appropriate individual eligibility standards for weapons of self-defense and training standards for those weapons were met. Rothbard had said “...there is a common fallacy, held even by most advocates of laissez-faire, that the government must supply ‘police protection,’...” (ibid., p. 267). Generally, although there are still police and they are still honored when they perform well, citizen defense and the difficulty of ‘getting away’ with crimes (this also due to the efficient surveillance of public spaces) has led to significant shrinkage, in terms of money spent, in what has come to be called “internal defense.”

“...we will be where all are free, where there are no longer masters and servants, where intellect stands for brute force; there will no longer be any use for the policemen and militia to preserve the so-called “peace and order”...” — August Spies, speech in court during the Haymarket Trial, October 1886, from “The Chicago Martyrs” as reprinted in “Nonviolence in America,” Ed. Staughton and Alice Lynd (Maryknoll, NY: Orbis Books, 1995) p. 44

“At the core of much of the anarchist project is the assumption, first, that human beings have a nature or essence: and, second, that that essence is good or benign,...” — Todd May “The Political Philosophy of Poststructural Anarchism” (University Park, PA: The Pennsylvania State University Press, 1994) p. 63

My own point of view when I get the urge to explain leads me to say that: 1) the strange dynamic between the two lodestars of anarchism, hatred of society and love of humanity (Tuchman; *ibid.*, p. 108 and Spies; *ibid.*, above) was ultimately incomprehensible for most citizen-voters because singly immeasurable and jointly incommensurable, and, 2) May’s correct thesis that anarchism saw humans as “more” of something definably “good” than something definably “evil” ended up as rather outlining an identifiable weakness in anarchist thought. ‘Good’ and ‘evil’ are terms that cannot be defined, except perhaps in opposition to each other. And, by the arrival of the new civilization after the Dark Age, it was already becoming clear that nobody was going to be left believing in “essences” that somehow floated above reality, were attached to individual human beings, and possessed of actual and functional attributes from God and the Devil.

There were other consequences of the failure of anarchism. The absurdity of believing that a society could be politically split, even in theory, into two competitive parties, one ethical and/or moral and the other not ethical and/or moral should have been evident *prima facie*. (Of course, the actual splitting of a society into two or more barely functional pieces along the fault lines of any one of “a million” issues is merely the simplest of all dishonest political projects.) With the advent of faster-than-light travel and the ensuing homogenization of governmental functioning over almost a trillion worlds, along with vastly better data acquisition and analysis, much about human political behavior became clearer. And the senselessness of lying about artificially constructed ethical oppositions, of pretending that such an idea (some are born to morality and some are not) could be true of humans, was the ultimate guarantor of the inevitable phasing out of our anarchist societies—as they, like virtually all of the ancient political views, were impaled on the horns of the unworkable and nonexistent good soul/bad soul dilemma.

“Men like to make things, to handle the materials and see them take shape and come out as desired, and they are proud of the products. And men like to work and be useful, for work has a rhythm and springs from spontaneous feelings just like play, and to be useful makes people feel right. Productive work is a kind of creation, it is an extension of human personality into nature.” — Paul Goodman “Communitas” (1947), reprinted in “The Essential Works of Anarchism” ed. Schatz (*ibid.*) p. 576.

Goodman celebrated the joy of work, where a human could find meaning in his or her life. Of course, he had to use the word “creation” to pick out the attribute of work that was most meaningful. When we are engaged in producing something new, however it may be configured, we move qualitatively closer to a more apprehensible view of our own reality and therefore have the possibility of seeing ourselves in a new light.

*

*

*

Worrying about human mortality (and my own) would not be so important were it not that survival of the soul is the only possible outcome where I have even a chance of seeing you again.

2.5.4.2.

This section concerns superposition and interaction within the quantum mechanical (QM) milieu, and how they affect the mind-body problem. “Superposition” is defined as: “The action of causing two or more sets of physical conditions or phenomena...to coincide....” — O. E. D. p. 3163. All formal definitions in this section will come from “The Compact Edition of the Oxford English Dictionary” (New York: Oxford University Press, 1971). “Interaction” may be taken in the usual senses. There will be some repetition, as these are complicated ideas, and re-reading concepts from different angles may be useful.

“...I have generally held...to what is often called the ‘Copenhagen interpretation.’ For me, this...term means that physical certainty is limited in nature to those properties which are described in the wave function or state vector of a system, and that interaction (which may be observation) is necessary for determination of all the manifest properties (eigenvalues) of an individual micro-event (eigenstate) of the system. I believe that this point of view is substantially that of most physicists.” — Richard Schlegel “Superposition & Interaction” (Chicago IL: University of Chicago Press, 1980) p. x.

In this section, the Copenhagen interpretation of quantum mechanics will be accepted. It is the consensus view; which is creditable to, among others, John Bell and Alain Aspect. Wave functions and state vectors of systems are “mathematical objects” used “...to represent the quantum mechanical state of a particle;...” — David Hodgson “The Mind Matters” (New York: Oxford University Press, 1991) p. 259

Schlegel’s brief descriptions of eigenvalues and eigenstates here are sufficient, but will be expanded on.

“The highly speculative nature of Planck’s ideas prevented them from receiving immediate acceptance; but around the year 1907, the remarkable successes of Planck’s theory in other realms of physics silenced all opposition, and from then on serious doubts were cast on the validity of rigorous causality in physical science.” — A. d’Abro “The Rise of the New Physics” Vol. 2 (New York: Dover Publications, 1952) p. 944

One important precursor to Planck’s work was Young’s ‘two-slit’ experiment in 1800, which first disclosed the nature of light as both particle and wave: ‘wavicle.’

Planck's constant, once known as the "quantum of action," was discovered in 1900 and started the quantum revolution, with its eventual stipulation that reality was, at least in one causal respect—granular. This was an immediate threat to the idea of rigorous causality, also known as 'hard determinism.'

"...three principal ontologies that have been proposed by quantum physicists. They are the many-worlds ontology of Everett, the pilot-wave ontology of Bohm, and the actual-event ontology of Heisenberg." — Henry P. Stapp "Quantum Theory and the Physicist's Conception of Nature: Philosophical Implications of Bell's Theorem" in "The World View of Contemporary Physics: Does it need a new Metaphysics?" (Albany NY: State University of New York Press, 1988) p. 40

The association of granularity with reality meant that causality became disjoint, rather than smoothly continuous. Ontologies were devised to explain, or deny, these puzzling conclusions that flew in the face of Newtonian classical physics.

The ontology adhered to here is Werner Heisenberg's actual-event ontology. It is compatible with Bohr's Copenhagen interpretation. The other two ontologies are attempts to move physics back to determinism: 1) Bohm's pilot-wave ontology is a 'hidden variable' theory and 2) Everett's many-worlds ontology simply accepts all possibilities as a solution.

"...we reject the many-worlds solution of the measurement problem...." — Schlegel (ibid.) p. 189

The measurement problem will occupy the second half of this part.

A good exposition and critique of the many-worlds ontology, ultimately agreeing with Schlegel's rejection, is in Hodgson (ibid.) pp. 329-42.

"Heisenberg's ideas are not out of line with, or incompatible with, the orthodox position. In fact, the orthodox position is defined jointly by the ideas of Bohr and Heisenberg...Heisenberg's ontology can be said to be the orthodox quantum ontology, to the extent that such an ontology exists at all...the quantum ontology includes...the actual event, which represents, in effect, a decision between various possible alternative, perceptually distinct courses of action....they must presumably be occurring wherever quantum processes are taking place within the context of macroscopic systems." — Stapp (ibid.) pp. 42-3

As said, this essay is continuing with Heisenberg. As said, the orthodox position is largely composed of Heisenberg's ontology combined with Bohr's Copenhagen interpretation—which interpretation is largely an epistemology, due to its emphasis on what-can-be-known.

"What we find,...are not elementary space-time realities, but rather a web of relationships in which no part can stand alone; every part derives its meaning and existence only from its place within the whole....The ontology most in harmony with the structure of quantum theory is the

ontology described by Heisenberg. It is similar to the ontology of Whitehead..." — Stapp (ibid.) pp. 54-5

In Whitehead's ontology, discussed also in section 1.6.4.10, the actual events are enmeshed in a "web of relationships" through the 'prehensions' defined as "Apprehension of something perceived that may or may not involve cognition; the interaction that exists between a subject and an entity or event." This is from the O.E.D. Supplement (ibid., excepting publication date 1987) p. 842. The web of relationships becomes the reality, as opposed to the quantum entities, in Whitehead's ontology. This essay does not go that far; here both the relationships and the entities are considered to be 'real.'

"...Bohr, Kramers, and Slater in 1924...tried to solve the apparent contradiction between the wave picture and the particle picture by the concept of the probability wave....the paper...revealed one essential feature of the correct interpretation of quantum theory....The probability wave...meant a tendency for something. It was a quantitative version of the old concept of "potentia" in Aristotelian philosophy. It introduced something standing in the middle between the idea of an event and the actual event, a strange kind of physical reality just in the middle between possibility and reality." — Heisenberg "Physics and Philosophy" (New York: Harper and Row, 1962) pp. 40-1

"...it is, to a certain extent, a transformation of the old 'potentia' concept from a qualitative to a quantitative idea." — Schlegel (ibid.) p. 171

The "probability wave" idea can be considered to lack a defining precision to this date, but looking at it as analogical to a probability distribution, similar to a bell curve—is not a bad metaphor for heuristic purposes. Schrodinger's wave mechanics (in 1926) also calculated statistical likelihoods. It should be noted that Dirac proposed a transformational theory (1927) which subsumed the two previous mathematical formalisms, and brought a new notation. All along, the purpose was prediction, but it all resulted in probabilistic prediction. It was quantitative if not precise.

"...when the momentum and energy of an electron are measured with a high degree of accuracy, with the result that the space-time position of the electron becomes uncertain, Heisenberg and Bohr would say that the electron has become diffused throughout a certain volume of space-time. Now, to say that an electron has become diffused implies that it can no longer be located at a definite space-time point." — d'Abro (ibid.) p. 952

Part of the Copenhagen interpretation is Bohr's "Complementarity Principle." It describes the mutual changing of the momentum and energy versus position (and other pairs of variables) of the electron (and other fundamental particles) in inverse uncertainty to each other. One of the unavoidable consequences is that, for us, the electron possesses neither exact location nor momentum outside of measurement. This, and its corollaries, result in the 'measurement problem.'

“Werner Heisenberg,...envisioned the wave function as a haze of potential existence. If it fails to pinpoint unequivocally where a particle is located, that is because the particle is not, in fact, located anywhere.” — George Musser “Is the Cosmos Random?” in “Scientific American” (New York: “Special Edition” Vol. 29, No. 2, 2020) p. 14

What is “potential existence”? Common sense would usually conclude that something, like an electron, either is or is not. Nonetheless, this is correct, as Heisenberg’s, Schrodinger’s, and Dirac’s methods all compute the same values from the same data, as does Feynman’s later “Sum over Histories” approach.

“According to the uncertainty relations, we cannot obtain simultaneous accurate information on the position of a particle at a given instant and on its momentum and energy. Since in mechanics, the position and the momentum of a particle determine its state, we conclude that the state of a particle cannot be determined. Consequently, we cannot decide whether or not a given initial state determines the subsequent states; and, as a result, the existence of rigorous causal connections and of rigorous laws cannot be tested in mechanics. Inasmuch as similar uncertainty relations hold in other fields of physical science, the conclusions which we have arrived at in mechanics must be extended to the physical world in general....the quantum disturbances are essential; they owe their existence to the non-vanishing value of Planck’s constant h .” — d’Abro (*ibid.*) pp. 948-9

Heisenberg’s uncertainty principle, a “mathematically precise” statement of which, in relation to expectation values, is derived in Hodgson (*ibid.*) p. 288. This is done “by considering commutators of observables” (position and momentum, in this case). It is through the commutator (to be defined below) that Planck’s quantity $\hbar$ (the “reduced” Planck’s constant: h divided by 2 times π) enters the calculations, and that creates indeterminacy, as calculations of variables result in discrete ‘jumps’ in values, as opposed to a smooth curve that an instinctive grasp of human expectations from the “zone of the middle sizes” (neither galaxy nor electron sizes) would mandate. This constant h truly is “non-vanishing”; it keeps turning up throughout the functions of the microphysical world. It is also worth noting that this writer (d’Abro) was very conservative while writing in the early 1950s—he typically concentrated on questions of what could be known or “tested,” in other words: epistemological questions rather than ontological conclusions.

“Bohr asserted, too, that the integrity of the quantum of momentum or energy that is transferred in the interaction-observation is at the basis of the indeterminism of quantum theory.” — Schlegel (*ibid.*) p. 171

The integrity of these quanta being transferred is guaranteed by the mathematics involving h , and results in the non-intuitive uncertainty about the microworld.

“It is a fundamental tenet of the Copenhagen interpretation that the information about a physical system contained in the wave function which describes it is the maximum information that we can have theoretically....we then know only the statistical likelihood for observed properties.” — Schlegel (ibid.) p. 169.

This statement is true: it comes down to statistical likelihoods. This is one very sound reason why physicists are often reluctant to extrapolate from physical theory to ontology: they only need practical results, and there is little reason for them to go further over uncharted territory.

“In the summer of 1925 Heisenberg...came up with matrix mechanics—the world’s first quantum theory.” “Heisenberg represents a quantum system by a set of matrices,...” “Each Heisenberg matrix represents a different attribute, such as energy or momentum,...” — Nick Herbert “Quantum Reality” (Garden City NY: Anchor Press/Doubleday, 1985) p. 41

In 1925,...the mystery egg of matter once again cracked and split open, to reveal an entirely different world within.

This exposition has been getting ahead of itself; among the innovators of quantum mathematical formalisms, Schrodinger and Dirac (and even Feynman) have been mentioned, but Heisenberg’s matrix mechanics, the earliest and easiest to explain, is going to be followed now. Important to note is that the ‘operators,’ which (among other things) are functions of functions, can be rewritten as matrices, and equate mathematically to the matrices, as they follow the same combinatorial rules. Each observable of the quantum entity in this case, meaning momentum and position here, is computable from its associated operator. Here is a short primer on simple matrix computation, drawn from a high school mathematics textbook.

“**Definition:** A 2 X 2 *matrix* is an array of the form $\begin{pmatrix} a & b \\ c & d \end{pmatrix}$.”

“**Definition:** $\begin{pmatrix} a & b \\ c & d \end{pmatrix}$ is equal to $\begin{pmatrix} p & q \\ r & s \end{pmatrix}$ if and only if $a = p$, $b = q$, $c = r$, and $d = s$.”

“**Definition:** The *sum* of two 2 X 2 matrices is the 2 X 2 matrix given by the formula:

$$\begin{pmatrix} a & b \\ c & d \end{pmatrix} + \begin{pmatrix} p & q \\ r & s \end{pmatrix} = \begin{pmatrix} a + p & b + q \\ c + r & d + s \end{pmatrix}.$$

“**Definition:** The *product* of two 2 X 2 matrices is the 2 X 2 matrix given by the formula:

$$\begin{pmatrix} a & b \\ c & d \end{pmatrix} \times \begin{pmatrix} p & q \\ r & s \end{pmatrix} = \begin{pmatrix} ap + br & aq + bs \\ cp + dr & cq + ds \end{pmatrix}.”$$

— Carl B. Allendoerfer “Principles of Mathematics” (McGraw-Hill; New York, 1963) pp. 101-2

As can be seen, by somebody following along with his/her finger, matrix multiplication does *not* follow the normal commutative rule in basic algebra (which is X times Y equals Y times X). In the last definition, that of the *product* of the two matrices, and unlike the *sum* of the two matrices just above it, the product changes depending on which matrix of the two is placed first in the mathematical expression on the left. $XY \neq YX$ for these matrices representing operators in quantum mechanics.

“In general, if X is an $m \times n$ matrix and Y is an $n \times q$ matrix, then the product $P = XY$ is an $m \times q$ matrix...” “In general, XY and YX need not be the same matrix; that is, matrix multiplication is not always commutative.” — “McGraw-Hill Concise Encyclopedia of Science and Technology” (Fifth ed.) article on “Matrix Theory” (New York: McGraw-Hill, 2005) p. 1339

“...in the summer of 1925...” “...Born, Jordan and Dirac showed that the matrices representing position and momentum of the electron do not commute. This latter fact demonstrated clearly the essential difference between quantum mechanics and classical mechanics.” — Heisenberg (ibid.) p. 39

Although the world at large took little notice, the summer of 1925 produced an earthquake in physics, overturning preconceptions that had held firm since Newton’s “Principia.”

“Basic in quantum theory and all modern physical science is the fact that multiplication of the ‘numbers’ involved is *not* commutative.

$$q \times p \text{ does not equal } p \times q$$

“And there is a famous formula:

$$qp - pq = \frac{ih}{2\pi}$$

“That is, the two products always differ by the same quantity. The symbols q and p are not everyday numbers. Each stands for a matrix...and matrix ‘multiplication’ has a special meaning.” — Edna E. Kramer “The Mainstream of Mathematics” (New York: Oxford University Press, 1955) p. 53

This quantity, ih divided by 2π , is the previously mentioned *commutator*. It brings uncertainty and indeterminacy through its inclusion of the reduced ‘constant of action’ ($\hbar$) in operators such as that of momentum.

“The association of operators with the matrices which represent a coordinate q and the momentum p may be extended to any number of dimensions.” — d’Abro (ibid.) p. 873 (note)

Various analytic geometrical ‘spaces’ can be constructed in many dimensions, rather than just two or three, and these configured spaces can thus be expanded to represent the complexity of the mathematics governing this universe.

“...Heisenberg’s uncertainty relations could be derived theoretically from the properties of wave packets. Now, had the wave treatment afforded the only theoretical means of obtaining the uncertainty relations, we might plausibly have attributed the uncertainties to the inadequacy of the wave form of representation. It is thus of interest to find that the transformation theory, which follows an entirely different method of approach, leads to exactly the same uncertainty relations.

“The matrix theory and the transformation theory show that the uncertainty relations arise because the numbers representing certain physical magnitudes do not commute. In these commutation relations therefore must be sought the source of the uncertainty relations.” — d’Abro (ibid.) pp. 888-889

It bears repeating that, regardless of the formalism chosen to calculate these numbers, the results are always the same. Formalisms such as these are tools chosen for practical utility rather than theoretical reasons. This is true for all of the above: Heisenberg’s matrix mechanics, Schrodinger’s wave mechanics, Dirac’s transformation theory, and Feynman’s sum-over-histories approach.

In $\hbar$ can be seen an analogue of Planck length, which is a distance so small that, beneath that size, the understanding of space and time breaks down into a situation similar to that of black holes under the event horizon. This situation is undefined by necessity, and it is impossible, given the current state of mathematical physics—to comprehend what it means. It may always be impossible.

The foregoing primarily involved “superposition” as defined above by the O.E.D.; what goes after now primarily involves “interaction” as used in ordinary language.

“I am referring to a definite, manifest eigenvalue of an object system as an event....there are events about which we can learn only by observing them, and...the possible further restriction that it is only by some action of an observer’s awareness that such events occur...The commonsense realism of most people would suggest, however, that the apparatus, after its interaction with the object, presents some classical reading g_n regardless of whether or not it is observed.” — Schlegel (ibid.) pp. 179-80

“Two alternative terms are commonly used for the transformation: “reduction of the wave packet” and “collapse of the wave packet.” Both have their origin in the concept of the localized particle

as a superposition of momentum states. On measurement of p (or Δp), the particle goes into a single (or narrow range) of p states;...Collapse” is pictorially vivid, but often not accurately descriptive...reduction seems to be preferable for describing what happens to the state function with observation.” — Schlegel (ibid.) pp. 168-9.

The “measurement problem,” surprisingly, grew out of the fact that, when measuring particle behavior as in a cloud chamber or a particle accelerator—humans were involved. This caused the fiercely conservative (because scientifically careful) physical theorists to postulate that human consciousness was a necessary ingredient, in fact the sole ingredient, causing the collapse (or reduction) of the superposition. Later, the word ‘human’ was dropped, and “consciousness” alone became necessary in the conceptualization—but that had an equal unlikelihood of being true.

Schlegel’s statement here, about the physical behavior of some automatic measuring device, exemplifies one side of the debate. In these two quotes, Schlegel is using the ‘eigen-’ terms the same way as he did in the first quote given in this section: 1) “eigenvalue” means the manifest properties of the system, and, 2) “eigenstate” means an individual micro-event of the system. Therefore, in Schlegel’s natural philosophy, an eigenstate is “selected” from amongst the eigenvalues, presumably produced in a configuration space by an eigenfunction—although Schlegel does not use that term in his book. Of all the terms here, “eigenvalue” seems to be used in the greatest variety of ways.

“Following Bohr’s emphasis on this point, we accept that in any measurement the quantum of energy or momentum is transferred as a unit from the object to the apparatus-observer system. The observation is taken as always involving an interaction—that is, a transfer of momentum p or energy E or both....

“We reject the conjecture that consciousness, in the form of awareness of an eigenvalue, is necessary for projection of a superposition into one of its component eigenstates...

“We accept that it is *only* in an interaction that the transition from a superposition to a single state does occur....” — Schlegel (ibid.) pp. 189-90

Schlegel lays down here three “postulates.” The first asserts, along with Planck, that energy transfers take place only in quanta, that is: specific numerical quantities. The second asserts that consciousness is unnecessary for causality to act throughout the universe. And, the third is best said in Schlegel’s own words, above. All of these postulates are considered correct within this essay.

“We shall maintain the postulate that the observed eigenstate is present as a physical state of the object system prior to the interaction-observation. That is, the process described by equation (7.32) is a “selection” of an eigenstate,...Our postulate may be expressed as a

statement that projection or reduction of a superposition in the act of measurement involves a selection of one state...and disappearance of all other states...” — Schlegel (ibid.) p. 191

However, part of this postulate, “that the observed eigenstate is present as a physical state of the object system prior to the interaction-observation,” is *not* considered correct within this essay. That eigenstate is considered as present only potentially. It should be understood that Schlegel was attempting to prove, at the time of this writing, a connection between quantum theory and Einstein’s special theory of relativity. This effort ended with an experiment testing the “twin paradox,” where two twins travel away from each other at relativistically significant speeds, and it is routinely found that one twin aged faster than the other at the experiment’s end. Schlegel had predicted no difference, and that turned out to be wrong. Part of Schlegel’s assumptions seemed to be that the consciousness differentiating persons from clocks, and thus from special relativity, involved the possibility of ‘simultaneity’ paradoxes.

Schlegel’s mention of his equation 7.32 (among many others in the book) is notable in that it (7.32) includes a variable not seen previously, “ I ,” which “indicates interaction.” The entire expression is: “ $I \times \Psi \rightarrow a \square \Psi$,” “where I indicates interaction and $\Psi = \sum a \square \Psi$ ” (ibid., p. 190). This procedure will be explored in more depth in the next part.

As should be clear by now, this essay takes the position that the electron is not “really” there when it is not interacting. The next quote grouping presents the three major contenders, as of AD 2020 (Old Style) for the resolution of the measurement problem—as quoted from the “Scientific American” magazine of that time.

“Collapse at Measurement

“One theory for how the universe crosses over from quantum to classical is that the act of measurement intervenes. Particles can linger in quantum superpositions as long as no one looks too closely, but once humans make a measurement, the particle is forced to ‘choose’ a specific state. How this happens, and why human measurement should take on such a significance in physics, remains mystifying.

“Decoherence

“Another theory posits that a particle’s environment is to blame for moving it from the quantum world to the classical. As long as a particle is undisturbed by any outside influence, so the thinking goes, it can remain in superposition. But when the wave functions of other particles or objects nearby meet with its own, they interfere, causing the particle’s many quantum possibilities to ‘collapse’ into a single classical reality.

“Continuous Spontaneous Localization

“Another possibility is that the collapse of the wave function to a single possibility is a random event, not caused by human or environmental interference. The chances of any one particle collapsing at any given time are extremely small, but in macroscopic objects containing multitudes of atoms, the collapse of at least one is inevitable, which then causes the entire

structure to collapse.” — Tim Folger “Crossing the Quantum Divide” in “Scientific American” (ibid.) p. 39

“Collapse at Measurement,” of course, refers to the original idea that only the effects of consciousness can cause superposition collapse. How this can be possible when superposition collapse is clearly part of the causal processes that go on all the time in the entire universe, as far as anybody can tell, is not known. If it is *human* consciousness, then how does that consciousness affect processes billions of light years away? And, if it is *any* consciousness at all, how do processes continue on in the centers of planets, stars, and galaxies? Panpsychism, the theory that all matter has at least some rudimentary consciousness, would be necessary and, in fact, has been proposed in this context. This essay takes the position of “Decoherence,” which is that the superposition (which no longer ‘coheres’) is collapsed into a single eigenstate by environmental influences, i.e.: normal physical effects.

“A second ground for accepting the existence of the unobserved eigenstate is the strikingly nonphysical consequence of not doing so. The interaction that involves the quantum transfer from object-system to apparatus may occur at time $t = 0$, and the reading of the apparatus for determination of the measured eigenvalue might be at a much later time $t > 0$.” — Schlegel (ibid.) p. 222

Here Schlegel restates his acceptance of the “unobserved eigenstate” by a more formal restating of the example from the beginning of this ‘measurement problem’ portion. Common sense realism would expect a classical reading g_n , regardless of observation status. That is also the position taken in this essay.

“Varying degrees of subjectivism (by which I mean dependence of the natural world on the knowing subject) have been asserted as established by quantum theory....” “We...discredit a widely suffused subjectivism which makes virtually all aspects of the experienced natural world dependent upon what particular states are manifested to the observer...” “We rest with a much more moderate subjectivism if we accept that in an interaction an eigenstate may form out of a superposition even though not observed....” “We appeal to the same universality of natural law that we assume elsewhere in physics...” “It will be my interpretation, then, that states with specific eigenvalues may be formed in measurement interactions with microsystems that are in superpositions of states, even though there is no immediate (or ultimate) human observation of the values. We need not therefore think of human beings as in any sense required for the occurrence of micro-events throughout the universe.” — Schlegel (ibid.) pp. 220-2

This is a summing up of the measurement issue: some subjectivism, but no panpsychism, and no universe-wide necessary initiation of all causal processes by consciousness.

“The very fact...that we can know of a given eigenstate of a system only by an observation of it suggests awareness is associated with a particular neurostate. That is, we *conjecture* that a state of consciousness is a micro-eigenstate of a biological neurosystem, the latter having been

prepared (by growth, experience, and education) into a superposition of many different states.”
— Schlegel (ibid.) p. 225

(Notice that, given the three variables Schlegel referenced here, this *conjecture* would support a Lockean ‘blank slate’ version of the properties of the consciousness at the time of nativity.)

“...because the observer has a part in determining what are the properties of a physical microstate, physics now has possibilities for giving understanding of consciousness in relation to physical-state disposition in a biological organism. In the natural world generally, systems achieve their existence as a specific eigenstate only in an interaction. Hence, only interaction-observation can give the scientist knowledge of individual microparticles or events, many of whose properties are determined in the interaction;...” — Schlegel (ibid.) p. 227

In these penultimate quotes from Schlegel, he makes a start on theorizing about how consciousness itself either springs from the transition, or, at least, is established as physically present throughout the transition.

“For all its paradoxes, quantum mechanics is the most powerful and exacting scientific theory ever devised. The theory’s predictions match experiment with ridiculous precision—to better than parts-per-trillion accuracy in some cases. By revolutionizing our understanding of atomic structure, it transformed every facet of science, from biology to astrophysics. Without quantum theory, there would be no electronics industry, no cell phones, no Google.” — Folger in “Scientific American” (ibid.) p. 38

In short: QM—works.

“...not only is a test of rigorous causality excluded for *practical* reasons, but it is also seen to be impossible *in theory*—at least in this world of ours.” — d’Abro (ibid.) p. 949

So the discussion has been moved from Newtonian hard determinism to a soft determinism, with the possibility of free agency, due to the inescapable conclusions based in the “new physics” of quantum mechanics. Out of mechanism, built of matter and energy in space and time, comes freedom. What consequences are here for the mind-body problem? First of all, if there is room for a thinking and efficacious mind, connected to the universe at large, then the notion of an epiphenomenal mind, lacking power to change anything, becomes unnecessary and, given the strong sense of free agency humans possess—also becomes very unlikely.

Secondly, as Schlegel said: “...it does not seem likely that the restrictions established in quantum theory will be found to be incorrect; the prior indeterminateness of the individual micro-physical event,...is deeply rooted in the quantum theory that virtually everywhere is successfully explaining nature to us.” — (ibid.) p. 288. This “prior indeterminateness” that reigns throughout the universe demolishes the last barrier thrown up by hard determinism to forbid free will. The production of this argument that this lack of determination exists literally everywhere

has been the purpose of this first part of section 2.5.4.2. There is no certainty of what is going to happen in *any* micro-physical event; the grip of rigid causality has been broken. In order for the mind to justify and even argue for its own existence, it first has to do something. It has to be an agent freely creating.

* * *

I am neither a physicist nor a mathematician, but I do have a notion of what these facts mean—especially after QM became “taught to the middle-schoolers” thousands of years ago. (I was just one of quintillions.) What the previous part showed was that the old notion of rigid causality, also known as hard determinism, was proved wrong by straightforward math and physics in 1925. Yet, humans didn’t get the lesson. Floating around in the group unconsciousness was a hint of old superstitions, not spoken of, not much liked, and exercising the kind of morbid fascination upon human creatures that made those humans bendable to the will of others.

The mind-body problem originated in the modern sense with Descartes. His “Meditations on First Philosophy” unambiguously included the postulate that the mind and the body had no elements in common: “...the mind (or soul of man) is altogether different from the body...” (New York: Macmillan Publishing Company, 1985 p. 82). Famously, in his thought, the body is something that *only* has extension and the mind is *only* something that thinks (ibid., pp. 25-6). It was seen almost immediately that, as a consequence, there were no mechanisms that could be thought of that could explain how the mind communicated with the body. Yet, neither could it be proved that such mechanism was impossible. This initial problem grew over time into the mind-body problem—which itself had three interesting facets.

The first was that rigid causality was a strengthening notion for a dualistic solution such as Descartes’, as the body was then ‘free’ to accept complete dominance by a causal process that could not be changed. The either/or of the dualities determinism/indeterminism and body/mind, with no possible ground in between, held an analogical likeness to near math—conceptually almost like white/black. Later proposed solutions moved away from dualism, but stumbled where monism seemed to demand strongly enough that free agency was to be made impossible (presumably due to the presumptions of hard determinism)—especially with the triumph of Newton’s deterministic physics.

The second was that the ‘initial problem’ of how the mind was supposed to move the body would not go away, and if the whole structure was not needed so badly to keep up people’s illusions, I’m sure they’d have been glad to give it up—but they did not do so.

The third was a matter that was given a great deal of thought in our latter time. People of earlier times, such as, say, the twentieth or twenty-first centuries, seemed to lack the idea that the body/mind problem was not just a matter of physics or philosophy, but also a question of human nature itself. Human nature minus the nonexistent “spirit,” whatever exactly *that* could have

been, ends up being perceived differently if the “spirit” is supposed to be something efficacious in the real world. Efficacy still has to exist somewhere and, with that “spirit” eliminated, it becomes clear that matter itself must be the source of agency. And, when the understanding of human nature changed, then also the perception of human psychology changed. It is necessary to be clear for the uninitiated: of course human psychology (and nature) itself did not change, it remained as it had been the day before. But, as human psychology is itself seen in the light of human nature, the perception had to change.

The reason, I think, for the lack of that idea for so long, was that physicalism (the notion that all that exists is composed *only* of matter and energy resident in space and time) had been a live option for some time, and, clearly, if everything is physical, including the “mind,” then the mind is part of the body, thus solving the second problem. However, free agency was not thought to be part of that overall solution, due to the generalized difficulty in moving beyond a belief in rigid determinism conjoined with a simultaneous covert belief in evil living spiritual beings and other such spooks—like “Satan.” The clarity induced by deciding that we were dealing with one phenomenon (matter/energy) rather than two (the second being mind/spirit) was not aided by something violating causal assumptions. So it was thought. Science and the individual seemed to be firmly opposed.

So, from the beginning of the recognition of the mind-body problem: 1) the major stumbling block to the acceptance of dualism (a material body somehow conjoined to and consequently influenced by an immaterial mind) was the sense that it just wasn’t possible to have causal interactions between matter/energy and something that was *only* defined as exclusively non-matter/energy, and, 2) additionally, it became clear that monism, in the form of physicalism, while solving that first issue (dualism), also ran afoul of questions about where does the consciousness exist and how can it do what humans generally expect it to do—which is to direct the body to act.

The fact that quantum theory had made room for an efficacious and purely physical consciousness, when fully understood by the non-scientists, once education had been enhanced to include sufficient mathematics and science for the non-specialist, caused significant changes over time, such that public attitudes evolved—with unexpected consequences for political and ethical behavior.

I had wanted to try my hand at deriving a formal logical proof myself of the impossibility of the interaction of two entities, both the opposite of each other by definition of the other. As mentioned previously, Schlegel had devised his expression 7.32, stated as: $I \times \psi \rightarrow a \square \psi_n$, which contained the I variable, that was defined as “interaction.” I figured that I, too, could devise something if I had a symbol for ‘causal interaction,’ so I went looking for such a symbol. This would be something like “ $\rightarrow$,” which refers to “material implication”—perhaps in the old Aristotelian sense. I discovered a symbol used by the Polish logician Stanislaw Kiczuk in his paper “The Logic of Causal Propositions” in the journal “Logic and Logical Philosophy” Vol. 23 (Torun, Poland: Nicolaus Copernicus University, 2004) p. 434. This symbol was “ $\rightarrow$,” which, say,

in the case “ $p \rightarrow q$,” was to be read “if p , then for that reason q .” This symbol seemed to have all the qualities I needed to produce the desired results, but it never worked: although it does seem that two entities which have nothing tangible in common clearly cannot affect each other in *any* way through the causal workings of our universe—I could not prove it, thus reproducing in my own behavior the frustration of centuries of dealing with this theory of Descartes.

In America of the 1990s to sometime in the next century, there was a philosophy known as “New Mysterianism.” One major proponent was Colin McGinn, mentioned in section 1.6.4.9. These New Mysterians proposed that the “hard problem of consciousness,” a term created by David Chalmers and rooted in epistemology, specifically around qualia issues, was never to be solved by human beings. In their skepticism, perhaps, they didn’t realize that they were more correct than they thought, because twelve thousand years later—we were still all but positive that we had not yet solved the hard problem of consciousness, as well as: the question of Planck length (why that number, and many other fundamental physical constants), why mathematics (almost) seems attached as some sort of formal structure to physical reality, what is causality and how exactly does it work. And, lastly, “the riddle of induction,” which “induction” Bertrand Russell said was “...incapable of demonstration.” — from Russell’s “The Problems of Philosophy” (New York: Oxford University Press, 1959) p. 112

All these and much more were almost universally avowed subjects of ignorance at that time. But the mind/body problem had been solved, in the sense that consciousness had been restricted to the Kantian noumenon. We knew then that consciousness was entirely part of the body, living at least almost entirely within the brain—if not *entirely* within the brain. We also decided that free agency (or: “free will”) was the likeliest solution to the causal issue—although that could *not* be proven through either deduction or induction. Physicalism also helped with the hard problem of consciousness, as qualia became merely subjective and of no use for proving theories. The effects of that perceptual change brought significant changes to political philosophy, politics itself, and public political outcomes.

* * *

Maelström: You, and you alone, are the one. It could only have been you.

2.2.2.1.

“...were it made a question, whether no law, as among the savage Americans, or too much law, as among the civilized Europeans, submits man to the greatest evil, one who has seen both conditions of existence would pronounce it to the last; and that the sheep are happier of themselves, than under the care of the wolves.” — Thomas Jefferson from “Notes on Virginia” in “Thomas Jefferson on Democracy” ed. Saul K. Padover (Penguin Books, Inc.; New York, 1939) p. 39

The “savage Americans” referred to here are the American Indians; there are a number of more reasonable restatements (eliminating the clearly expressed racism) of these words saying much the same thing, both in Jefferson’s writings and the writings of other persons of about the same time, including Emerson and Thoreau. These were precepts of their time, meaning generally: the less government the better. Of course, these are also founding precepts of libertarianism.

“I am for a government rigorously frugal and simple, applying all the possible savings of the public revenue to the discharge of the national debt;... — Thomas Jefferson from a letter to Elbridge Gerry in “Thomas Jefferson on Democracy” (ibid.) p. 31

A clear statement of fiscal conservatism.

“...it is proper that you should understand what I deem the essential principles of our government,...

“...economy in the public expense, that labor may be lightly burdened;...” — Thomas Jefferson from his first inaugural speech in “Thomas Jefferson on Democracy” (ibid.) pp. 32-3

Although quantitative economics was in its infancy in Jefferson’s time, there is a hint here of a recognition that taxes are always costly to the overall economy.

The antecedents of libertarianism as an American political philosophy are easy to see in Jefferson, who comes out foursquare for: 1) simplicity in government: “...no law...or too much law...the greatest evil...one who has seen both...would pronounce it [“too much law”]....” (Jefferson, as above.) 2) restraint in government spending: “I am for a government rigorously frugal and simple,...” (as above) 3) spending restraint leads to the opportunity to lower taxes for working people: “...economy at the public expense,...” is “...that labor may be lightly burdened;...” (ibid.) and 4) the: “discharge of the national debt” should be a prime purpose at all times, because “the discharge of the national debt” is the goal toward which “all the possible savings of the public revenue” should be directed (Jefferson; ibid., p. 31). It is appropriate to emphasize once again that lightly burdening labor means specifically lower taxes on those who work.

Of course, the quoting of one philosopher, no matter how eminent, does not prove anything at all. “Proof” is a matter of deduction, only, not induction. (These are the two ways humans try to solve problems through thought.) As a consequence: only mathematics provides proof, as tautology is the only thing certain—and thus proven.

“The object of this Essay is to assert one very simple principle, as entitled to govern absolutely the dealings of society with the individual in the way of compulsion and control, whether the means used be physical force in the form of legal penalties, or the moral coercion of public opinion. That principle is, that the sole end for which mankind are warranted, individually or collectively, in interfering with the liberty of action of any of their number, is self-protection. That

the only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others. His own good, either physical or moral, is not a sufficient warrant.” — John Stuart Mill “On Liberty” (Harlan Davidson, Inc.; Arlington Heights IL, 1947) p. 9

My liberty ends where your liberty begins. Generally, and inevitably, there’s always a gray area somewhere in the reality—which conditions these words. Nonetheless, the principle stands.

“...every one who receives the protection of society owes a return for the benefit, and the fact of living in society renders it indispensable that each should be bound to observe a certain line of conduct towards the rest. This conduct consists, first, in not injuring the interests of one another;...and secondly, in each person’s bearing his share...of the labors and sacrifices incurred for defending the society or its members...” — J. S. Mill “On Liberty” (ibid.) p. 75

One of the good, “old-fashioned” ideas, that each person must bear his share of the labors and sacrifices incurred for defense.

“The only just role for the government is to defend us against force and fraud.” — From a flyer by (The Marrou/Lord Campaign; Washington DC, 1992) p. 1

Marrou/Lord was the Libertarian Presidential ticket in 1992. Here we see an early example of political campaigning on the idea of a “night watchman” government—a notion which had been more extensively developed by Robert Nozick. The Robert Nozick/John Rawls debate, which was probably the preminent controversy in American political philosophy in the second half of the twentieth century, will be covered below.

“Government’s only role is to help individuals defend themselves from force and fraud.” — From a flyer “The Libertarian Party: Minimum government, Maximum freedom” (Libertarian National Committee, Inc.; Alexandria VA, date unknown, but likely in the 2010s) p. 2

This is another example from a later time, demonstrating that the Libertarian Party of the time consistently held to this particular formulation of an acceptable smaller governmental role in the nation.

“I understand that members oppose the initiation of force to achieve political or social goals.” — Statement accompanying signature line on application for membership in the Libertarian Party (The Libertarian Party; Washington DC, date unknown, but likely in the 2000s).

This statement of opposition to force as a means to political or social change is an indication of another thread of libertarian thinking: non-violence, which must be contrasted with pacifism. Libertarians are, generally, *not* pacifists.

“...‘Libertarianism’, as the term is used in current moral and political philosophy..., is the doctrine that the only relevant consideration in political matters is individual liberty:...” — Jan Narveson “The Libertarian Idea” (Temple University Press; Philadelphia PA, 1988) p. 7

The pre-eminence of personal liberty for citizens.

“...it is one *view* of justice that the only proper use of enforcement is on behalf of the rights of some or other individual(s). Libertarians certainly hold this view. For they hold that everyone’s sole fundamental right is the right to liberty, and the use of force, at least *prima facie*, contravenes that right.” — Jan Narveson “The Libertarian Idea” (ibid.) p. 49

The use of force is logically contrary to liberty in human life.

“Nozick proposes a right to acquire property in the ‘state of nature’ which is limited by a ‘proviso on acquisition’, deriving more or less from Locke. The general idea of this proviso is that you can acquire so long as you don’t worsen the situation of others.” — Jan Narveson “The Libertarian Idea” (ibid.) p. 69

Nozick provides an apologia for the unrestrained right to private property, however acquired—outside the use of force or fraud. However, this “unrestrained right” becomes less and less defensible when actual history is considered. As only one example: *everything* that occurred in The United States of America after some date in the 1800s was done over the slaughtered bodies of indigenous peoples. The obvious theft by force and fraud of the entire stretch of land means that *everything* else that took place later took place within a changed context that had far-reaching determinative causal effects.

“...David Gauthier...The rational person will not defect in the Prisoner’s Dilemma game. Instead she will adopt a *disposition to cooperate*, although not an unconditional disposition..., *provided* those with whom she interacts are similarly inclined. This Gauthier calls ‘constrained maximization’,...” — Jan Narveson “The Libertarian Idea” (ibid.) p. 141

Gauthier will be covered in the third chapter: Ethics. However, at this point—the Prisoner’s Dilemma is a basic game theoretic problem frequently used to evaluate ethical theories using utility estimates. Consequently, when talking about libertarianism, a ‘contract theory’ (which Narveson’s theory is), as a theory which allows for non-parametric evaluations, can be evaluated through utility, ‘rational man,’ economic-style analysis, in Gauthier’s view.

“Hobbes’s argument proceeds as follows.” [A paragraph long section detailing how a contractarian commonwealth could be instituted follows.] “...to the end, to live peaceably among themselves, and be protected against other men.” — Thomas Hobbes “Leviathan” (Collier Books; New York, 1963) p. 134. Also quoted in Narveson (ibid.) p. 208.

This essay does *not* follow the contractarian idea, as the notion of the all inclusive contract is simply too fanciful to ultimately succeed. It is impossible to firmly ground political philosophy (or ethics, for that matter) on some unfailing idea. This is due to the character of subjective, non-quantitative reasoning. Only mathematics can result in tautological conclusions. Wittgenstein's certainty, where doubt "loses its meaning" (Section 1.6.2.4.), is psychologically persuasive but scientifically lacking—as Wittgenstein himself points out.

"...the Silver Rule, which says: 'Go out of your way a bit to be helpful, and don't stop at just once or twice, because it might take a while for the others to get the idea—but don't make a fetish of it either...'" "The Silver Rule is where Prudence crosses paths with Morality." — Narveson (ibid.) p. 242-3

The Silver Rule regards Jesus' words (you must forgive "seven times seventy"—St. Matthew 18: 22) as not actually a deliberate statement of something that should be done a certain number of times, but rather as a guide to the unquantifiable. There are many other versions of the Silver Rule available on the internet. This version has the advantage in that it clearly sets itself apart from the Golden Rule and highlights the critical difference—a refusal to be exploited.

None of this is about hating government. Unless anarchism is correct, government is a necessity, if for no other reason than to defend the country in time of war, and consequently it should be both efficient and effective. The way to accomplish that is for government to do *only* what it should and is supposed to do.

These quotations cover the major points of pragmatic and effective libertarianism: 1) fiscal conservatism and, 2) social and/or cultural liberalism and, 3) non-violence.

* * *

"_____ did not cut spending to any reasonable extent (in my subjective judgment) while in office. Nor did he try to do so (by terminating programs) to any reasonable extent (in my, etc.). In my view, he made a simple economic mistake. It is true that tax cuts create wealth, which benefits all of us, but if there are not concurrent spending cuts the result is higher deficits, which (along with the interest) must be paid for through higher taxes. Only *permanent* tax cutting works—which is only possible through the actual termination of less necessary programs currently mandated in law, as mandated programs can be re-inflated at any time, imposing costs on the taxpayer throughout perpetuity." — Unknown ("The Unknown Blogger" Location #76492748Ω1=14Ω), 256.

As said: "the major points of pragmatic and effective libertarianism [are]: 1) fiscal conservatism and, 2) social and/or cultural liberalism and, 3) non-violence (necessarily distinct from pacifism, which pertains to non-participation in times of war)."

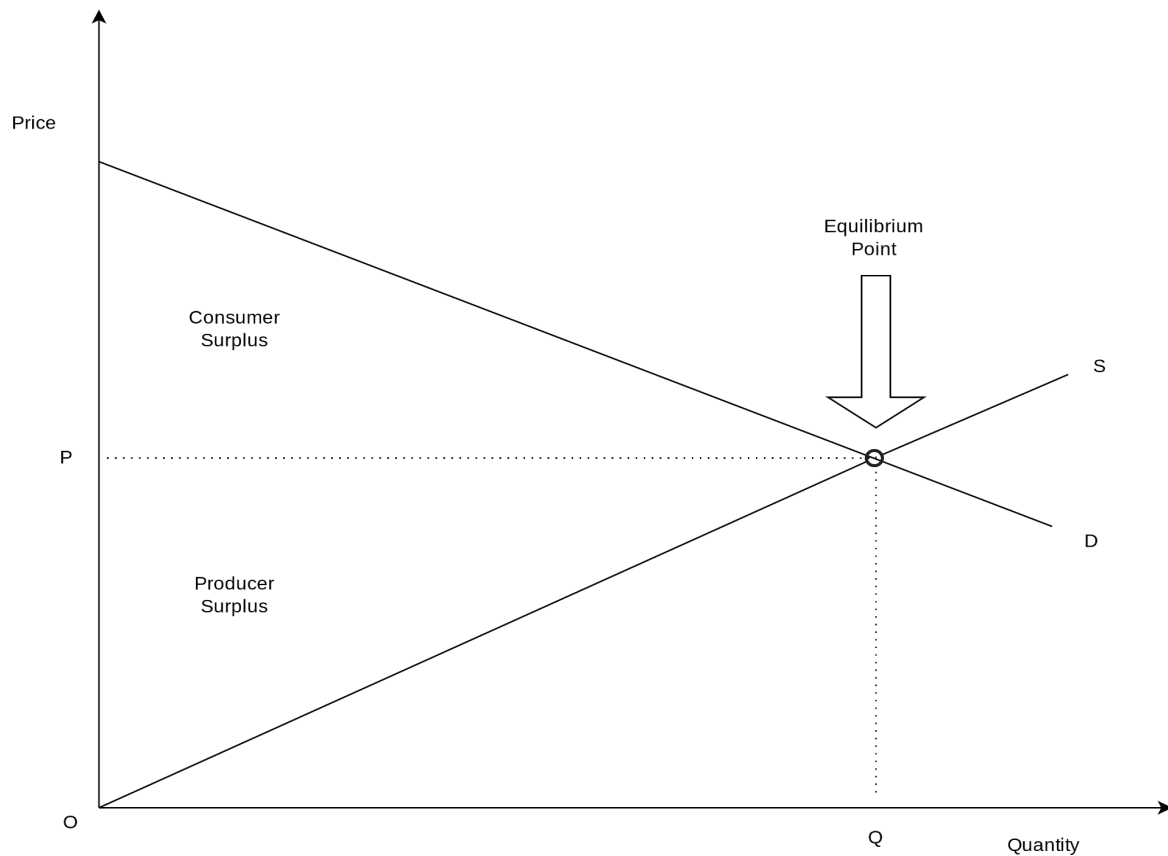
(By the way, one amazing fact about American politics in the twentieth-first century and beyond is that, somehow, the names of *all* of the Presidents of the United States after the year 2000 have been deleted (again, *somehow*) from *all* records, both public and private. We don't know who these Presidents were; the last American President we are actually aware of was a William Jefferson Clinton, who left office after the year 2000. "Records" includes physical and electronic records as well as audio and video records. The reach of this effort was astounding. When we arrived out in space far enough to intercept radio and television programming of the time, *all* mention of these unknown persons was deleted already. How was *that* done? Even more amazing, perhaps, is that, as far as we can tell: *no* other changes other than to bits of information sufficient, separately or in combination, to deduce those names can be found.)

Anyway, as the previous section concluded, libertarianism depends, at bottom, on two suppositions taken as fact: 1) the superiority of government existing in as small a form as possible (this includes the stipulation of maximization of individual freedom vis-a-vis the government, which leads to both fiscal conservatism and social liberalism), and, 2) the superiority of a nonviolent approach to governing. The first of these is susceptible to a technical evaluation, as size of government can be quantified in various ways. The second of these is susceptible only to informed and reasonable discourse, as it is an ethical supposition. So, the first supposition (freedom) shall be subject to technical evaluation now, and the second supposition (nonviolence) shall be discussed in the next section.

The technical evaluation of the first supposition is done through a form of utility modeling.

This is a supply and demand graph. It is a standard mode of economic analysis within neoclassical economics which, with tweaks from other perspectives, including Keynesian economics, was the mainstream economics in the western world in the twentieth and twenty-first centuries.

These graphs are based on Robert S. Pindyck's and Daniel L. Rubinfeld's "Microeconomics" (Prentice-Hall; Englewood Cliffs NJ, 1995) pp. 276-315 (Chapter 9: "The Analysis of Competitive Markets").



The purpose of this first graph is to familiarize the concepts and consequences of consumer and producer surplus through the modeling of one simple market.

As can be seen, the supply (S) and demand (D) curves (commonly called “curves” and drawn as straight lines when not plotting real-world data), intersect at one point of “equilibrium.” This is intended to model *exactly* what happens in the real world. As can clearly be seen, when price rises, suppliers (producers, sellers) are more willing to sell, and demanders (consumers, buyers) are less willing to buy. These desires, or lack of desires, generate the slopes of the curves. Of course, when using real-world data the resultant line is also based on those real-world data. When real-world data is used, the lines become actually curvy, but the general shapes remain (topologically speaking) the same.

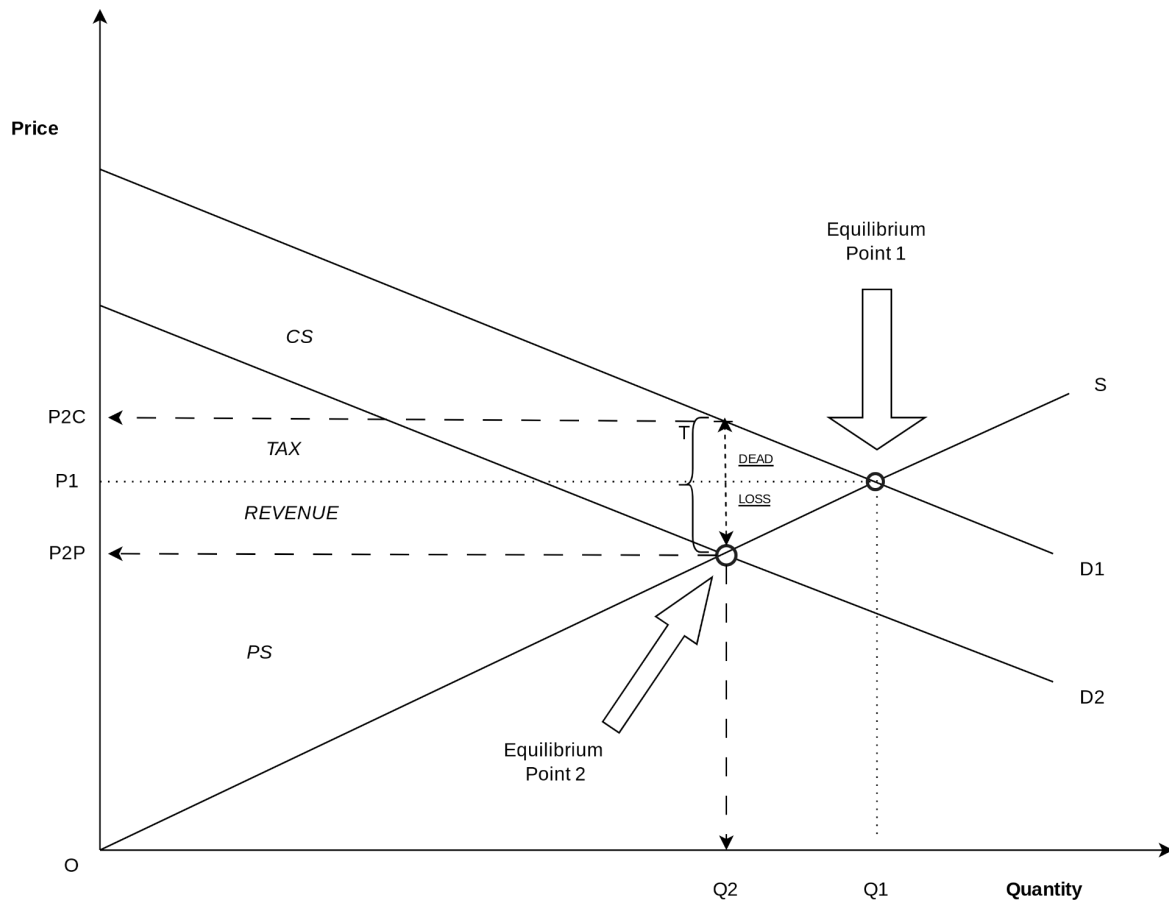
The point of equilibrium represents the expected resting point after the market clears. When the market is buying and selling at this price point and this number of units, it has reached one hundred percent efficiency, which means that its potential to generate new wealth is at its highest.

Note the two triangles designated as consumer and producer “surplus.” The notion of “surplus” here is equivalent (in the sense that it has the same perceived value) to that of newly created wealth. “Wealth” is defined in the Oxford English Dictionary (*ibid.*) p. 3718, as: (in definition 1.c.)

“Of the world, a country, town, community, its people or members; hence (the common or public) welfare.” The sum of consumer and producer surplus is total surplus, which amounts to total welfare (for the country, community, etc.), which amounts to wealth generated within this market at this time.

Producer and consumer surpluses are defined here as: 1) “...*producer surplus* of a firm is the sum over all units produced of the difference between the market price of the good and the marginal cost of production.” and, 2) “*Consumer surplus is the difference between what a consumer is willing to pay for a good and what the consumer actually pays when buying it.*” — Pindyck and Rubinfeld (ibid.) pp. 255 and 113 (respectively). Also on page 255: “Just as consumer surplus measures the area below an individual’s demand curve and above the market price of the product, producer surplus measures the area above a producer’s supply curve and below the market price.” Reading these definitions, it is clear that there is a subjective element in them that cannot be eradicated. This, of course, is a hallmark of utility estimation.

This next graph is the same graph with overlays of some new lines and new identified points. This is all due to the modeling of the economic impact of a type of sales tax; a ‘specific’ tax, such as a gasoline sales tax, that is imposed as a specific dollar amount per unit sold (such as a gallon) and paid by the buyer. Such a tax causes the demand curve to shift downward and to the left, as the tax is added into the price, causing a lowering of consumer demand, due to the numbers of potential customers who will have their purchase decisions affected negatively by the overall price increase.



Everything said generally about consumer and producer surplus, equilibrium, and wealth generation still applies within this second graph. However, the imposition of a tax distorts the market and its outcomes.

The tax T , graphically represented as the bracket, causes the demand curve to shift downward and to the left from line $D1$ to line $D2$. This is due to a certain percentage of buyers choosing not to buy, as the imposed tax increases the price past the limits of their preferences. Consequently, with fewer sales, a new equilibrium point is created at $(Q2, P2P)$. (Cartesian coordinates: the first number/variable is the reading on the x axis, which is 'Quantity' here, and the second number/variable is the reading on the y axis, which is 'Price' here.) This new equilibrium point determines the price line (as received by producers) at $P2P$, which runs under and parallel to the original price line at $P1$. That line also 'slices' off the top portion of producer surplus, thus indicating that producers end up paying part of the tax. Similarly, a new price line, representing what is paid in total by consumers, is established at $P2C$, and this 'slices' off the bottom part of the consumer surplus, thus indicating what consumers pay of the tax. Please note that, if the tax had been paid to the government before sale by producers, then it would have been the supply curve that was shifted, this time upward and to the left. However, mathematically, the outcomes would have been the same.

The area within the new rectangle, determined by the points $(0, P_2P)$, $(0, P_2C)$, (Q_2, P_2P) , and (Q_2, P_2C) is the tax revenue sent to the government. How much, relatively, each participant group (producers and consumers) pays of the tax depends on the elasticities of the supply and demand curves with respect to price. A large change in quantity purchased identifies an “elastic” response to price increases and decreases—the market is “sensitive” to price changes. The opposite case identifies an “inelastic” response. Elastic response behavior, relatively, pays less of the tax than inelastic response behavior. This is because the ability to change buying or selling behavior quickly in response to price changes caused by tax increases/decreases tends to limit exposure to the additional tax or, conversely, tends to yield opportunity when caused by tax decreases. The slopes of the curves themselves can give a sense of the elasticities involved, but are not exactly the same thing.

The two equilibria points plus the ‘consumer price’ equilibrium point define a triangle, frequently referred to as “Harberger’s Triangle.” The area of this triangle computes out to a variable known as “Deadweight Loss.” (Denoted as “DEAD LOSS” on the graph.) This loss can and should be interpreted as the potential gain in overall wealth which was aborted by the imposition of the tax.

Deadweight losses are variable across many different sets of circumstances, but have been much studied and are generally assumed to show an average loss of about thirty percent of revenue collected from taxes—based on real-world data. “A standard number for the DWL from many taxes is 30 percent of the revenue raised.” — David Henderson “CBO Estimates Huge Deadweight Loss from Increased IRS budget” (EconLib.org 09/06/2021). As a specific example: Martin Feldstein, Reagan’s chief economic advisor during his first term as President, estimated a deadweight loss of approximately one third of tax revenue from the personal income tax in 1994 for the United States in the article “Tax Avoidance and the Deadweight Loss of the Income Tax” (National Bureau of Economic Research; Cambridge MA, 1995) p. 31.

Fundamentally, deadweight loss is caused by a loss of trading activity. Loss of sales means loss of wealth creation, due to the nature of standard wealth creation through sales transactions. *Any* governmental interference in the private sector economy causes deadweight loss. This includes taxation and tariffs (a tariff is just a sales tax that affects two countries at once), business regulations, and other forms of interference. The fact that deadweight loss is related by process to tax revenue *does not* mean that the money is somehow just thrown into the black hole of governmental inefficiency losses. It is a potential and generally expected gain of wealth that is negated by market inactivity caused by inefficiency *within the market*.

So, when economic inactivity translates into deadweight loss, thus wealth loss—taxes and regulations must be evaluated for their costs to society as well as any putative benefits. Since taxation is driven by spending, and deficit spending in particular—governmental spending should be kept as low as possible to increase economic efficiency and maximize wealth creation, which ultimately is the source of military strength and the defense of the polity. This is

an existential issue. Governmental spending is the best and most meaningful way to proxy for “size of government.” This is the chief point of libertarian thinking about the necessity of keeping down the size of government. It was also, in the past, a chief point of conservative political thinking. A secondary point is that, as government grows, individual freedom lessens. This is also an important point of liberal political thinking. Freedom to determine what to do with your own money is a fundamental freedom. So is freedom to determine your own behavior and life chances.

Military spending and Social Security are clearly examples of socialism writ small: socialized spending funded by taxation for socialized purposes set by the government. Socialism writ large refers to government administrative and financial takeover of portions of the private sector, usually large and ‘necessary’ corporate entities. These entities are often thought, within this context, to be necessary for their outputs to the national defense.

* * *

It is morning. We both wake up at the same time. You have taken my advice on some problem, and it seems to have worked. We stretch, embrace, and rest comfortably for some minutes, talking about unimportant things. Tomorrow is my last day at work—and then I retire. The sense of achievement is palpable; the sensing of future happiness, with myself finding ways to serve your needs and yourself doing the same for me, is strong within me. That was yesterday—many yesterdays ago.

2.2.2.2.

“Do not depend on the hope of results.” [“...there is no point in building our lives on this personal satisfaction...” — Merton (ibid.) p. 325] “When you are doing the sort of work you have taken on, essentially an apostolic work, you may have to face the fact that your work will be apparently worthless and even achieve no result at all, if not perhaps results opposite to what you expect. As you get used to this idea, you start more and more to concentrate not on the results but on the value, the rightness, the truth of the work itself.” —Thomas Merton “Letter from Father Thomas Merton to James Forest” in “Non-Violence in America” ed. Staughton and Alice Lynd (Maryknoll, NY; Orbis Books, 1995) p. 325.

Any time you “depend on the hope of results” you commit to a transactional mode of thinking, that pressures you toward centering yourself as the beneficiary of the actions, rather than just the judge of their efficacy. Working toward justice (socially) and ethical behavior (individually) is both inhibited and confused by this attitude: that there must be results that gratify you in some way.

“Shri Bhagwan said, ‘...the real wise men do not grieve either for the living or for the dead. Never did I not exist, nor did you,...nor shall we cease to exist in the future.’ — “Bhagawad Geetaa” (New Delhi, India; Richa Prakashan, Undated) p. 39.

“‘The objects that are perceived by the senses give rise to pleasure and pain,...they are transient.’ — “Bhagawad Geetaa” (ibid.) p. 40.

“‘There is no existence for the unreal, and the real never ceases to be.’ — “Bhagawad Geetaa” (ibid.) p. 41.

“‘The Self is unborn, eternal, imperishable and ageless.’ — “Bhagawad Geetaa” (ibid.) p. 43.

“‘The Self is said to be unmanifest, unimaginable, and unchangeable.’ — “Bhagawad Geetaa” (ibid.) p. 46.

The Self, however, would seem to be manifest to itself.

“‘The self-controlled man, though enjoying the sensory objects with his senses restrained and free from attachment and hatred, obtains peace.’ — “Bhagawad Geetaa” (ibid.) p. 65.

“‘...perform your duties, without attachment to the fruits of action,...’ — “Bhagawad Geetaa” (ibid.) p. 80.

Perform your social obligations, without attachment to any benefits that might accrue to yourself. This does not quite mesh with what Merton was saying; what Merton and the Bhagavad-Gita have in common here seems to be that both are saying that “the value, the rightness, the truth of the work itself” is something that can be coordinated with a concurrent lack of attachment to the ‘fruits’ of concentrating on those values, rightnesses, and truths. In any case, both attitudes teach types of self-abnegation that don’t inhibit action.

“According to our vocabulary, anarchy is a state of society in which the only government is reason; a state of society in which all human beings do right for the simple reason that it is right, and hate wrong because it is wrong. In such a society, no laws, no compulsion will be necessary...Anarchy is a dream, but only in the present. It will be realized. Reason will grow in spite of all obstacles. Who is the man that has the cheek to tell us that human development has already reached its culminating point?...It is entirely wrong to use the word anarchy as synonymous with violence. Violence is one thing and anarchy another.” — Michael Schwab, speech in court during the Haymarket Trial, October 1886, from “The Chicago Martyrs” as reprinted in “Nonviolence in America” (ibid.) p. 44.

Nonviolence is another sort of inhibition of the passions, which, in anarchism, can be traced at least back to Tolstoy. From him, it made its way into libertarianism, where *all* forms of force (and

fraud) are denoted as illegitimate when directed at appropriating some other person's property. (Whether fraud is also to be denoted as a type of force gets debated.)

"From the moment you are liberated, all of you,..., you will understand that the cause of all your physical and moral sufferings has been within yourselves." — Leo Tolstoy "The Law of Love and the Law of Violence" (New York; Holt, Rinehart & Winston, 1970) p. 94.

Beneficial work depends on, firstly, acknowledging that everything you do must stem from yourself. "Satan" never made anybody do anything (nonexistence probably had something to do with that). So, this principle holds regardless of whether you do what you do for yourself or others or both together.

"Understand then, all of you, that you were born neither slaves nor masters; that you are all free but only so when you observe the supreme law of life....This law is love, and happiness is found in its observance. Understand that, and you will become really free;..." — Tolstoy (ibid.) p. 94.

Of course, Tolstoy spoke from within the Christian paradigm, as well as the anarchistic paradigm. However, it is not necessary to be either a Christian or an anarchist to grasp this truth.

"Understand then that the belief in the possibility of ordering the lives of others is a vulgar prejudice..." — Tolstoy (ibid.) p. 95.

Clear anarchism here—but Tolstoy's contempt for the urge to command others without their explicit consent, once understood, leads to the insight that force (and, ultimately, violence) inevitably leads to degradation of both the forcer and the forced, as well as the society they live in.

"Understand then, all of you,...that to want to impose on others by violent means a regime that you can only imagine is not only grossly ignorant but even criminal. Understand that such work, far from assuring the well-being of humanity, is only a lie,..." — Tolstoy (ibid.) p. 95.

Strong words well stated. Also, well proven by the history of Marxism in the twentieth century, among others. This is not a "left/right" issue. The right has plenty of offenses in history to atone for.

"Understand it, you men of tomorrow,...Pay attention to only one thing, which we need most,...the increase of love in us by the suppression of vicious passions...the least transgression of this law is disastrous for us." — Tolstoy (ibid.) p. 96.

Clear Christianity here—but Tolstoy had argued through other likely candidates for the 'prime principle.'

“This *supreme law*, alone, is the same for all of us and unites us all.” — Tolstoy (ibid.) p. 96.

Martin Luther King, Jr.:

“Since the philosophy of nonviolence played such a positive role in the Montgomery Movement, it may be wise to turn to a brief discussion of some basic aspects of this philosophy.

“First, it must be emphasized that nonviolent resistance is not a method for cowards; it does resist.

“A second basic fact that characterizes nonviolence is that it does not seek to defeat or humiliate the opponent,...

“A third characteristic of this method is that the attack is directed against forces of evil rather than against persons who happen to be doing the evil.

Again, this is getting “ahead of the narrative,” but King’s important point here is that evil is not a person or a thing, rather it is the result of a judgment concerning an action or result of an action caused *by* a person or a thing.

“A fourth point that characterizes nonviolent resistance is a willingness to accept suffering without retaliation,...

“A fifth point concerning nonviolent resistance is that it avoids not only external physical violence but also internal violence of spirit. The nonviolent resister not only refuses to shoot his opponent but he also refuses to hate him. At the center of nonviolence stands the principle of love.

“In speaking of love at this point, we are not referring to some sentimental or affectionate emotion... When we speak of loving those who oppose us,...we speak of a love which is expressed in the Greek word *agape*.

“*Agape* is disinterested love.

“In the final analysis, *agape* means a recognition of the fact that all life is interrelated.

“A sixth basic fact about nonviolent resistance is that it is based on the conviction that the universe is on the side of justice.” — Martin Luther King, Jr. “Pilgrimage to Nonviolence” in “Nonviolence in America” (ibid.) pp. 217-20

There is little to add to what King said, except: If the state kills—it gives weak-minded men permission to kill. This, of course, is a pseudo-permission; there is *no* actual permission; but within disturbed minds it can seem that way and therefore be sufficient for the killing to begin.

“If now—and this is my idea—there were, instead of military conscription a conscription of the whole youthful population to form for a certain number of years part of the army enlisted against *Nature*...numerous other goods to the commonwealth would follow.

“Such a conscription, with the state of public opinion that would have required it, and the many moral fruits it would bear, would preserve in the midst of a pacific civilization the manly virtues which the military party is so afraid of seeing disappear in peace... I spoke of the ‘moral equivalent’ of war. So far, war has been the only force that can discipline a whole community, and until an equivalent discipline is organized, I believe that war must have its way.

“The martial type of character can be bred without war. Strenuous honour and disinterestedness abound elsewhere...we should all feel some degree of it imperative if we were conscious of our work as an obligatory service to the state.” — William James “The Moral Equivalent of War” in Lynd’s “Nonviolence” (ibid.) pp. 73-4.

If William James had never written anything else on the subject, this eminently practical suggestion would mark him as a social theorist capable of uniting the disunited, both sides of which care deeply about their country, yet cannot seem to see the separate wisdom of the other. Please note that James is *not* saying that all work should be “obligatory service to the state,” rather that we should all feel some conscious imperative *if* it were that type of service. It would be fair and accurate to think of this as equivalent to some type of military service in wartime.

The “moral equivalent of war” was a phrase much used during the apparently tumultuous ‘sixties’ of the twentieth century. War was getting its first real criticism as something where all are but losers, with the survivors as those just a bit better off. This now iconic observation is predicated on the long view, rather than the short view, of course. Those whose style of ‘debate’ consists of routinely taking the short view and then insisting that only that view matters (“...yes, yes, you are right—but first we must win this war.”)—are disingenuous enough that many are duped down that path.

The “martial type of character,” comprising competitiveness, strength, and intelligence, and having become completely gender neutral, continued to be the kind of character needed when “the ____ hit the fan”—which has always occurred.

* * *

Like many other nine year old children, I had been very interested once in the economics of the immediate pre-Dark Age years. Although exact dates are impossible to get, some history is known. Overall, the governing concept is that collapse occurred in successive ‘layers,’ with single entities or behavioral groups going down while touching off the vulnerable near them. The key loss, however, seems to have been when the electric grid went down, taking the internet with it. At the time, virtually everything seems to have become ‘tied’ into the internet,

and its going down meant virtually everything mechanical went down with it—and then the war of each against all began.

One serious problem was the amount of debt owed by governments, small businesses and larger corporations, and almost all “consumers.” During a very long run of economic growth there was more than enough time to put our world-wide economic houses in order—at the household level, at the corporate level, and at the governmental level. At none of these levels was that done. We were in a very bad place for a crisis, and we should have known it was going to arrive sooner or later. Americans had been asleep, and there was consequently a reckoning beyond what the average American could handle. A sense of invulnerability based on fantasy should only be for teenagers to enjoy, not adults who could and should have known better.

The Constitution included freedom of speech to make possible freedom of thought. Demonizing particular political beliefs was un-American, pure and simple. It was this—demonizing and then punishing thought ‘crimes’—that brought the frightful violence of the Dark Age upon us.

After that time period, as space travel and colonization took hold, many variations of different political philosophies were tried. All in all, a greater percentage of these were of the ‘smaller government’ types, and these were found to lead to greater percentages of success. Therefore, of course, with communication and dissemination of data, the tendency became to try what had been found to work over and over, leading to more successes, and eventually a fairly consistent regimen, in terms of types of government and legal systems, across half the galaxy.

So I can say it: experience shows that, as classical economics predicted—libertarianism works in terms of wealth creation for the populace. The key is elimination of deadweight loss to the extent possible, and the resulting twenty to forty percent of wealth reclaimed from taxes and regulations is sufficient to drive many economies toward prosperity.

As for nonviolence, as long as it did not pertain to outrightly non-responsive pacifism, it, too, showed value for the polities, mainly in the way it acted as an example of governmental behavior toward the individual members of the populace, and as a consequent ‘player’ in the “prisoner’s dilemma” game of politics.

So, half the galaxy became libertarian (with a small “l”), and with a legal structure bearing many similarities to the ancient American Constitution that had existed from 1789 to what was believed to be some unknown year in the twenty-first century.

The great and fortunate circumstance that saved us when the Other(s) arrived was that, even though nonviolence was honored as an effective behavior in government, the lessons of millenia of warfare, killing our own people, brought us beyond the pseudo-necessity of choosing between an armed and aggressive society on one side and an unarmed and passive society on the other side. We maintained, over centuries, a professional and well trained military officer corps, open to our finest young citizens, whose graduates and practitioners were honored for

their capabilities (surpassing the vast bulk of their peers) regardless of whether they actually ever had to face enemy fire. And, as the centuries passed, the likelihood of this (“enemy fire”) occurring continued to shrink, as behaviors changed over those centuries, and the human race found other things to do. We also maintained research and development activities, and built fleets with armies to man them—always dedicating a carefully calculated percent of gross domestic product to the effort to avoid falling behind the probabilistically predicted future foe. This was certainly our good fortune.

Once upon a time, there was an American Libertarian Party. It was founded and run along lines much as have been argued in this essay. In 2022, a state Libertarian party was accused of posting racist messages on social media, and the accusation was also made that, earlier, the winning caucus (the caucus that won control of that state Libertarian party) showed in campaign behavior acceptance of and even insistence on the usage of some racist terminology, tropes, and ideas. If some or all of this is true, it must be said that racism could not logically bear any real relation to any party taking individual personal liberty seriously. However, although the ALP is gone (about twelve thousand years), libertarianism has now essentially conquered the known worlds: it creates more wealth, and it provides more freedoms. This is the only answer to the memory of the crackpot ideas (if racist—they were crackpot) that infiltrated the Libertarian Party back then—as they had previously infiltrated the two major parties—once upon a time.

* * *

From the day you met me, I was yours. You didn’t seem to know that, and, I admit that, unbelievably, I sometimes almost seemed to forget it myself—yet it is still true. There was something that bound us—is it still real? I know your Earthly body is dead millions, perhaps billions, of years—are we still together? Perhaps I was yours from the hypothetical dawn of time. I reach out for you; I cannot escape this feeling, nor do I want to—is it real or wishful thinking?

2.4.4.1.

With the initiation of the first tariffs in the U.S./China Trade War early in the twenty-first century, analyses quickly came out:

Names	Dates	Variable	Quantity	Citation
Liang, Ding	2018 and 2019	“...annual cost...to each US family...”	“US \$420”	a.
Congressional Budget Office	2018 and 2019	Reduction in “average real household income”	“\$1277” (projected for 2020)	b.

Fajgelbaum, Khandelwal	2018 and 2019	"Aggregate Welfare Loss"	"0.10% of GDP"	c.
York	From 2018 on	Percentile reductions in "long run GDP" and "capital stock"	GDP: "0.20%" stock: "0.10%"	d.
Fajgelbaum, Goldberg, Kennedy, Khandelwal	2018	"aggregate real income loss"	"\$7.2 Billion"	e.
Amiti, Redding, Weinstein	2018	"Deadweight Loss"	"\$8.2 Billion"	f.

- a. "The China-US Trade War" (London UK; Routledge, 2021) p. 74
- b. "The Economic Impacts of the US-China Trade War" in "The Annual Review of Economics" (Annual Reviews; annualreviews.org, 2022) p. 221
- c. "The Budget and Economic Outlook: 2020 to 2030" (Washington DC; CBO, 2020) p. 33
- d. "Tariff Tracker: Tracking the Economic Impact of the _____-_____ Tariffs" (Tax Foundation; taxfoundation.org, 2024) p. 1
- e. "The Return to Protectionism" (Cambridge MA; National Bureau of Economic Research, 2019) p. 27
- f. "The Impact of the 2018 Tariffs on Prices and Welfare" in "Journal of Economic Perspectives" Vol. 33, n. 4 (Pittsburgh PA; American Economic Association, Fall 2019) p. 208

Somewhere, somehow, in the twenty-first century, the idea took hold amongst the American populace that tariffing and protectionism rather than free trade was the wisest international trade policy for a government to follow. Free trade ideas had motivated political leaders on both sides of the aisle since World War II. The chief first effect of the new-*ish* notion was the tariffing of China by America during what became known as the "China-US Trade War."

From a quick look at these evaluating economists' works (a. through f.), three things become relevant: 1) all seem to be working through a general equilibrium model and, 2) all of the critical results are negative and, 3) a number, although not all, of these economists provided calculations supporting a finding of complete pass-through of the tariffs—"complete pass-through" would mean that Americans *entirely* paid the tariff/tax assessed on the item when purchasing at the retail level. "The findings imply complete pass-through of tariffs to duty-inclusive import prices, a finding that is systematic across products with heterogeneous characteristics." — Fajgenbaum, reference e. (*ibid.*, p. 4). In other words: world prices did not change.

This is important because the pass-through of tariffs from the American importer to an end consumer to pay the bill is a critical element in the loss of the tax money. The less pass-through of the tariffs/taxes from the importers to their next customer means the less taxes paid directly by end consumers. The more pass-through of these taxes means the more United States consumers were indirectly paying of the potential (and needful) Chinese-paid portion of the taxes. Without *some* portion paid this way, it is only at the second iteration (meaning: Chinese trade retaliation by instituting its own tariffs against American goods being imported) that China started paying some of the costs of the tariffs, when the American goods faced Chinese customs agents.

In section 2.2.2.1., an explanation of how it is necessitated that (almost) all taxes lose money for the entire economy of the taxing authority includes these words: “How much, relatively, each participant group (producers and consumers) pays of the tax depends on the elasticities of the supply and demand curves. A large change in quantity purchased identifies an “elastic” response to price increases and decreases—the market is “sensitive” to price changes. The opposite case identifies an “inelastic” response. Elastic response behavior, relatively, pays less of the tax than inelastic response behavior. This is because the ability to change buying or selling behavior quickly in response to price changes caused by tax increases/decreases tends to limit exposure to the additional tax or, conversely, tends to yield opportunity when caused by tax decreases.” The slopes of the curves themselves can give a sense of the elasticities involved, but are not exactly (in the mathematical sense) the same thing (because their outcomes are different).

This makes the question more interesting. Tariffs are sales taxes that affect two countries at once. One country decides to charge its importers taxes for doing business with particular international suppliers. (This is the way it is actually done.) As was said previously (Sect. 2.2.2.1.), both ad valorem sales taxes and unit specific sales taxes are paid mostly by the ‘winner’ of the price ‘dance’ between the buyers and the sellers. The ‘winner’ of the dance is the group with the relatively inelastic behavior; it is least likely to give in to price pressure and so change its buying or selling habits. (And, thus, it becomes the group most likely to ‘win’ the bulk of the tax for itself to pay.) Naturally, since we are here talking about buying behavior, we must then acknowledge that the wealthier people are, in general—the psychologically easier it is for them to spend their money. What this all seems to be saying is that, as a matter of comparative advantage, countries possessing high average wealth statistics would be at a disadvantage tariffing poorer countries, as the wealthier countries face the likelihood that their citizenries would not cooperate where their governments would like them to cooperate: by sufficiently boycotting the higher prices caused by the taxes—thus driving down the world price. Tariffs seem to be a tool that has its most favorable monetary effects benefiting the tariff-imposing country when the trading partners of that tariffing country are more wealthy (per capita) than it is.

They (these citizens/consumers of wealthier countries) have a tendency to merely go on, as a matter of their comparative higher average wealth and consequent higher average sense of

financial security, as the Americans did in droves during the early years of the Chinese-American Trade War, purchasing whatever they wanted, unable to say “no” to themselves in the smallest matters. This, of course, makes it possible for the importers to “merely” pass along the taxes to these “somebody elses”; this resulted then in no effective pressure being placed upon the Chinese, and as a consequence—there were few alterations of the terms of trade (which include, most importantly, the world prices). Altering terms of trade, specifically lowering the world price in particular markets (to affect the Chinese exporters), was the stated original idea that America used to justify the initiation of the tariff war. Most of these evaluating economists seem to be saying that the reason America got little or no economic benefit from these tariffs early in the trade war was that world prices for goods did not materially change quickly enough, and then retaliation had time to set in...at that point, it must have been that simply not losing in some obvious way became the goal for the American administration. It was certainly fortunate for the Chinese that, by then, very few Americans ever read or discussed economics in any serious sense.

It should be noted that what is said here shadows well an ‘old’ method of explaining tariffs, which depended on distinguishing how economies react to tariffs (both imposed by the economy and imposed on the economy) based on the comparative size and relative development of the given economy to its trading partners. Tariffs are at their best as trade tools of developing economies. That is why they are mostly used by such economies and not much used by ‘first-world’ countries.

To boil down and repeat: inelastic (relatively non-changing because non-responsive) buying behavior causes the largely inadvertent and unnoticed purchase of items that have tariffs included in the price, and therefore the tax ends up being paid by the end consumer. Since that “pass-through” of that tax was highly successful, no further action by the Chinese suppliers (or the Chinese government) was necessary (because they were still getting their price) and the ‘tariff to make change’ didn’t make change.

The meaning of all negative results for the critical variables variously discussed is limited. Obviously, this helps to prove the general outlines of a thesis, and unanimity is (in practical terms) usually necessary to prove that thesis. But, while it is true that taxation causes, in most cases, roughly thirty percent deadweight loss of tax revenue (2.2.2.1., first part), outliers exist and it is possible to realize a net welfare gain economically for a country through tariffs. So, again, this scenario is not to be automatically considered impossible upon its first presentation. (Although, it is certainly unlikely.) However, the historically standard reason given for imposing a new tariff, or increasing an existing tariff, is to protect nascent industries while they are new enough to be vulnerable to sudden market shocks. Unfortunately, imposing and/or increasing tariffs can do little to help long established industries if the wage gap or some other crucial resource gap is too large—which was the case with China, which was essentially a large while still developing nation with average wage rates about one third to one fourth of those in the United States at the time. When the lowering of the world price (which also could be called the “foreign price”) of the tariffed good is frequently the prime effect (or, at least the first effect)

hoped for to cause beneficial changes in trade patterns for the tariffing country, and then the world/foreign price does not change—the strategy has failed. If the terms of trade are not changed, it is difficult to see how the offending producing country, China in this case, was getting punished and being put in a mood to change its behavior.

Lowering of world prices for a specific good works to protect new industries; its value is harder to quantify for older industries. It is also likely that protecting established industries from competition renders them and their American economic sectors less competitive. This would be a fundamental conclusion from capitalist thinking.

What would have benefited Americans, instead of taking a truculent ‘we’ll steamroller them into submission’ attitude, would have been a leader who encouraged a small portion of sacrifice for the greater good of the country and its economy. This is apparently not what happened. If there had been more discipline among the American populace, including an understanding of what was at stake, tariffs would not have been such money losers for those American consumers who already were in financial difficulties. Sometimes, “buy, buy, and buy some more” is not the most financially responsible course of action.

As another way of looking at the data, a study entitled “Tariff pass-through at the border and at the store: evidence from US Trade Policy” utilized microeconomic data from individual sales transactions rather than aggregated macroeconomic data for the calculations — this was by Cavallo, Alberto, Gita Gopinath, Brent Meiman and Jenny Tang in the American Economic Review: Insights; Volume 3(1), 2021.

The data utilized for this study were: 1) “...product-level data from the Bureau of Labor Statistics...” (p. 20), and, 2) “...data from the private firm PriceStats as well as from the Billion Prices Project...” collected by “scraping” daily “...the online web pages of over 30 large multichannel retailers in the United States.” (p. 27)

It should, therefore, be obvious that analysis of such data would be very unlikely to provide the same results (or, for that matter, the same accuracy) as the macroeconomic analyses shown earlier in this section, as the sample universe (or, better yet, the ‘sampling frame’) of Cavallo’s data would be a small subset taken from the larger universe of, say, Amiti’s or Fajgelbaum’s data—which were, of course, utilized within the confines of a computable general equilibrium model.

Additionally, a microeconomic study would not be able to calculate the aggregate macroeconomic losses, such as deadweight loss, as it is not taking the entire society or country into account. All of the previous studies considered were macroeconomic studies—and they all showed losses country-wide. This is only as expected, as pass-through to the American economy was essentially complete at the import stage, and therefore the Chinese exporters got the price they were asking. Lowering the price these exporters got was to be the first step

toward lowering the world price, but that did not happen as these exporters got their price at the outset.

That said, Cavallo, et al., found one wrinkle that was not seen in the authors considered previously in this section; this was that, while pass-through of the tariffs was essentially complete at importation, this pass-through tended to get partially blocked at the retail stage, where retailers (for reasons of their own) “ate” part of the extra cost, thus cutting into their profit margins. This phenomenon, while interesting in its own right, does not affect the conclusions above (in this section of this essay), because the incidence of tax payment still stayed within the US economy. As Cavallo, et al., said: ““Given the nearly complete pass-through of tariffs to the prices of US imports from China and the relatively modest impact of those goods on consumer prices, retailer profit margins likely declined.” — (ibid.) p. 30

“We find that tariffs passed through almost fully to US import prices, implying that much of the tariff’s incidence rests with the United States. In these same data, we find far lower rates of pass-through from exchange rate shocks into import prices,...we find more mixed evidence regarding retail price increases, which suggests that many US retailers reduced the profit margin on their sales of the affected goods.” — Cavallo (ibid.) p. 32. It is also possible, if not likely, that this delay in getting the cost of the tariffs to the consumer (who will ultimately be responsible) was additionally responsible for a “lag” in inflation—which, of course, was connected directly to the consumer through the Consumer Price Index.

However, what is not clear is how large a causal relationship existed between tariff promulgation and currency devaluation. There are many factors that go into currency value; tariffs would be only one of them. To state one’s assumption that the tariffs were responsible for the change in value without adding that caveat leaves a false impression. The normal procedure to show a reasonable chance of being able to decide that causal efficacy exists with regard to one particular factor is to run a standard regression with a well-specified model. To try to make that case without measuring and reporting the actual impact of the tariffs alone on the exchange rate is to commit the fallacy of *petitio principii*, or “begging the question.” If there isn’t a sufficient causal effect from the tariffs, directly or indirectly or both—then it isn’t possible to honestly and therefore effectively claim the intervention (tariffs in this case) worked in this particular way.

Standard economic theory recognizes some tariff outcomes that are different from the normal tax outcomes; these stem from the fact that tariffs are taxes that affect the economic outcomes of both countries—the tariffing country and the tariff ‘recipient’ country. (The reason it is necessary to place the term “recipient” in quotes is to remind that the “recipient” is not always a payee.) Generally, if a “small” country is tariffed by a “large” country (‘small’ and ‘large’ both determined by relative economy size), the small country is at a disadvantage.

What if the tariffed country also possesses a large economy as well? China’s 2024 GDP was about \$18.7 trillion, while the US 2024 GDP was about \$29.2 trillion. This is a ratio of approximately 0.64, which is close to two thirds. China’s economy, by the most common way of

measuring economic size, was about two thirds the size of that of the United States in 2024. It seems likely that that percentage was relatively large enough to 'compete' effectively with the larger economy over tariffs. Retaliation alone, when it came, was sufficient.

In short, at least the first part of the China-US Trade War seems to have been lost by the Americans, as they lost money and made no progress to speak of on the terms of trade. The tariffs were mostly just regressive taxes paid primarily, as expected, by those on the lower rungs of the socioeconomic ladder.

* * *

In neoclassical economics, which was the dominant economic metatheory in the Western capitalist world, the theory of the rational man (*homo economicus*), who makes his buying and selling decisions based on both price and quality for both his resources and his purposes, was also dominant. This was and is a utilitarian point of view, as seen in assumptions behind and calculations of such variables as "consumer welfare." As noted before, the relative elasticities determine how much "the needle moves" to result in welfare gain or loss for the different groups.

"The effects of a tariff can be examined either in a partial or a general equilibrium context.

"...all the effects of the tariff are included, and can be made explicit as follows:

- 1) *consumption effect*. Domestic consumption of the commodity decreases...
- 2) *Production* (or protective) *effect*. Domestic output increases...
- 3) *Import effect*. Imports decrease...
- 4) *Fiscal revenue effect*. The tariff represents a fiscal revenue for the government of the levying country....
- 5) *Redistribution effect*. Since the price has increased, there is a *redistribution of income from consumers to producers....*" (My italics.)

"Actually, it can be said that consumers subsidize the domestic production of the commodity....This is also called the *subsidy-equivalent* of the tariff; in other words, if the government directly subsidized the domestic production, instead of imposing a tariff, the total cost of the subsidy to obtain the same amount of protection would be exactly equal to the subsidy-equivalent...."

"But consumers do not only pay out the subsidy-equivalent: they are also taxed by an amount equal to the tariff revenue which accrues to the government, because this amount ultimately comes out of their own pockets. We can therefore define a *consumer tax equivalent* to the tariff as the sum of the subsidy-equivalent and the tariff revenue....As a matter of fact, the tariff has the same effect as a consumption tax (with the same rate as the tariff), the revenue of which is used by the government partly to subsidize domestic producers and partly to increase its fiscal revenue." — Giancarlo Gandolfo "International Trade Theory and Policy" (New York; Springer, 1998) pp. 149-51

So, "...there is a *redistribution of income from consumers to producers....*" (My italics.)

Government redistribution of income from one population group to another for reasons unrelated to economic imperatives and incentives is generally considered, at least in the United States of the time, as socialistic.

As said, the economists considered here used (computable) general equilibrium models. These were models that simultaneously solved large systems of equations, calculating the results of variables that spanned the five types (or "effects") listed above by Gandolfo. (As well as others if proven to be relevant.) These procedures can be informally thought of as looking for the quantitative point that is simultaneously common as a specific price level to all these 'dimensions' of input and outcome variables.

So much for the theory end of it. However, as a matter of historical outcomes, I know what happened with the "tariff your way to prosperity" idea. It is remembered that there was once a particularly powerful and wealthy nation that had reversed itself from that free trade position, and so had ended up depending on that economic philosophy of protection, long after most nations had tried and then given up on the 'tariffing' concept as usable because of its lack of productivity—and I know what happened to that nation. One of the problems with economic isolation is that, even if the nation is already prosperous, the elimination of some opportunity to compete can only hurt the native industries, as they fail to "keep up" without being continually tested. That is a core concept of capitalism, and that is how it should be. Also, at some time in the future, new technologies *will* come in and be obviously better than the old technologies, such as in the case of electric battery power supplanting gasoline engine power for automobiles. And, the constant drain of deadweight loss from over-taxation sucks life from the economy, seen by changes in such indicators as gross domestic product when they are analyzed for cause. That now nearly forgotten country I mentioned (and still love) shrank economically over time as it myopically watched for only its own well-being and consequently lost its strength to others through its self-cultivated lack of ability to adapt to competition. It was decades before its populace woke up to what had happened—and then it was too late.

In our era, I noticed, reading the history, that tariffing had been used as well in later millennia, when polities had needed to support new industries. The automatic calculation of all sorts of economic outcomes by the "big data" science of the time had demonstrated the inherent uselessness of tariffs for purposes outside the norm. Taxation had removed money from economies, and impoverished the citizens; the conclusion became that it therefore must be justified by need rather than desire. Economic activity, seen as the action of buying and selling, is the sole engine that increases wealth, and limiting it limits the value of capitalism.

"Beggar thy neighbor" trade policies went out of fashion thousands of years ago with the (tardy) public realization that free and fair trade, rather than merely reshuffling the distribution of wealth,

actually causes the generation of wealth that had not previously existed. If one could ignore the work necessary for results—it could truly seem to be the creation of something from nothing.

The note d. above (in the table at the beginning of this section) utilizes the standard notation required when an American president in the twenty-first century is being referenced: five blank spaces. As said before, all American presidents of the twenty-first century have had mention of their names obliterated from all pertaining sources throughout the durations of their times and consequently all the subsequent times as well. As is well understood, the last American president we know by name was a William Jefferson Clinton, who was President up to January 20th, 2001. Although we do not know *how* it was done, we do have a notion of *why* it was done, as the twenty-first century was when the downfall of the American empire began in earnest—and a great deal of hatred was being expressed in the country toward the person(s) deemed responsible for the failure and the shame.

Don't forget to vote ad hominem!

* * *

What is love at first sight? "Love at first sight" is literally that, but also a sudden *knowing*, at least for some, of another person. One knows; he knows; you know.

*

From this point on, during the rest of chapter 2 and all of chapter 3, but not including chapter 4, there will be a scheme for the introductory asterisks that uses them to indicate the point of view existing in that particular part they introduce. One asterisk will be used for "first person"; two asterisks for "second person"; and three asterisks for "third person."

2.6.2.5. (Reference)

* * *

"Epistemology: (Gr. *episteme*, knowledge + *logos*, theory) The branch of philosophy which investigates the origin, structure, methods and validity of knowledge." — "Dictionary of Philosophy" Dagobert D. Runes, Ed. (Littlefield, Adams, and Co.; Totowa, New Jersey, 1968) p. 94

In this section, the primary concern, as is appropriate to a pragmatist outlook, will be "methods and validity of knowledge." Questions regarding the origin and structure of knowledge are here seen as part of Chalmers' "hard problem of consciousness" (mentioned in sect. 1.6.4.4.), along with some matters of ontology.

“Epistemology, or the theory of knowledge, is that branch of philosophy which is concerned with the nature and scope of knowledge, its presuppositions and basis, and the general reliability of claims to knowledge.” — “The Encyclopedia of Philosophy” Volume 3 (New York; Macmillan Publishing Co., 1967) p. 8-9 (in article “Epistemology, History of”)

“...the general reliability of claims to knowledge” is similar to “...validity of knowledge” but can, if pursued, more appropriately focus the analysis on important “...claims to knowledge” made by politicians, who tend to make many such claims, but with a very poor record for honesty. This is in no sense an excuse made for politicians who lie (usual quoted excuse: “they *all* do it”), as somebody else’s guilt *never* excuses one’s own guilt. There is no doubt whatsoever that politicians have a clear-cut obligation to be honest with voters, who are depending in many ways on the truthfulness of what they are being told in order to make sound decisions at the ballot box. This includes the avoidance of lies of omission, where partial truths about the matter of interest are included but truths needed for reasonable understanding of the matter are deliberately left out. From the logical point of view, it does matter that lies of omission are technically not falsehoods. From the ethical or moral point of view, however, the intent to deceive that is fronted by that incomplete statement still makes the action wrong.

“**Epistemology** (from Greek *episteme*, ‘knowledge’, and *logos*, ‘explanation’), the study of the nature of knowledge and justification;...” — “The Cambridge Dictionary of Philosophy” Robert Audi, Gen. Ed. (New York; Cambridge University Press, 1995) p. 233

“**Epistemology** [f. Gk. ἐπι-στημο-, comb. form of ἐπιστήμη knowledge + -λογία discoursing (see -LOGY).] The theory or science of the method or grounds of knowledge.” — “Oxford English Dictionary” (ibid.) p. 884

*

Another old definition of ‘epistemology’ I remember is “What can be known, and how do we know that?”. This definition turned into a question sounds rhetorical, but is not—because the sub-questions are open-ended. While “what can be known” is largely a speculative question, and I’ll have to refer that one back to consideration of Chalmers’ unsolved problem, the question of “how do we know that” is answered in this section through examples of reasoning appropriate to the pragmatic assessment and solution of the problem at hand.

These letter identifiers are in no particular order, and will be mentioned in the text when appropriate, quoting section number and letter identifier.

A. There is an issue around “certainty” (Sect. 1.6.5.4.). Yes, words that denote names for numbers *could* be specific—when it is completely clear that *all* meanings in the particular context refer to the number alone. However, in most normal situations, it is reasonable to say that certainty is only known or achievable when you have an equation, stated in numerical symbols and/or variables that refer only to numbers. These, of course, are mathematical

equations. When you have a *logical* equation, it is only reasonable to accord a general chance of being true on a percentile basis, as the 'variables' are made up of words—which are, as a group, innately imprecise—as meaning will usually depend on word interactions. The calculation or determination of these percentages based on empirical observations and resulting inductive reasonings can be difficult or impossible—depending on the circumstances. Many of the certainties based on deductive reasoning turn out to be trivially true (i.e.: without practical import), and so while it would be invaluable if we could base certainty on some form of induction, it is still important to draw the line—induction can *never* establish certainty.

There is another kind of certainty worth mentioning, which is that of a committed believer. While this is a belief that cannot be communicated (as a belief)—it cannot be denied that the outcomes for that type of believer (of all sorts of beliefs) are not much worse than the relevant outcomes for those who are performing statistical induction “in their heads” (meaning: the species of probability calculus most humans use—basically “guessing the odds,” a type of Piercean abduction). Truth, of course, is a different matter, and, while it cannot be guaranteed to the believer by human reasoning that his truth is true, yet, during his life, he has that assurance.

The *Nyaya* system, representative here as one of the six classical systems of Indian thought, sees testimony (*sabda*), both verbal and written, as one of the *pramanas* (ways to and/or means of knowledge), “...and defines it as the testimony of a trustworthy person (*apta*)—one that knows the truth and communicates it correctly.” — M. Hiriyanna “Outlines of Indian Philosophy” (London UK: George Allen & Unwin, 1968) p. 258. Within the *Vedanta*, this standard interpretation of verbal testimony is expanded, firstly through Samkara, who “...admits *sabda* to be a *pramana* outside the *Veda* also; but he does not restrict its independent logical validity, within the *Veda*, to injunctive statements (p. 318). Assertive propositions found there may be equally valid, so that there is nothing in the nature of verbal testimony to preclude it from treating directly of matters of fact (*bhuta-vastu*) like Brahman or the highest reality.” — Hiriyanna (ibid.) p. 358.

So, the acceptance of testimony from another considered to be trustworthy is taken to its logical conclusion in the *Vedanta* (the philosophical underpinning of Hinduism) secondly through Ramanuja: “...the purpose for which we enter on the consideration of the *Vedanta*-texts is utterly to destroy what is the root of that error, i.e., ignorance, and thus to obtain a firm knowledge of the oneness of *Brahman*,...” — Sarvepalli Radhakrishnan and Charles A. Moore, eds. “A Sourcebook in Indian Philosophy” (Princeton NJ: Princeton University Press, 1967) p. 543. It is necessary to point out that, once the believer attains this belief, however it is accomplished, God, as Creator and with whatever other attributes, instantly becomes the most credible source.

The major conclusion I draw from this is that testimony as a way to valid knowledge works particularly well when the reading believer is reading about a monotheistic God, as the imprint of that God would be on *everything*. Realistically, this means that the Abrahamic faiths plus Hinduism would constitute four different “peoples of the book” (“the book,” in each case, being

different) and those adherents have strong reasons for insisting on the literal renderings of meanings when using current editions of their various books.

Hinduism, like Christianity, is a revealed religion. That being so, it is unsurprising that some Christians, like some Hindus and other priestly types, attempt to confer omniscience through outside inspiration onto the specific words of the Bible (or the Vedas or Qu'ran or Torah) that may be in any disputes at any time. God is omniscient, but words alone cannot be so, unless they can change themselves instantaneously to conform minutely to the current reality—and continue doing that indefinitely—so forth and so on, for ever and ever.

“Proof” is associated with certainty, and this mandates that it (proof) is only possible in the context of certainty, thus: deductive reasoning is necessary for that outcome as well.

B. The next issue is “truth” (Sect. 1.6.5.5.), and here (meaning: in this essay) truth is seen as a relationship between words and a putative reality, which relationship then falls largely into two categories: correspondence and coherence. Both ideas have had theories of truth developed from them. Both have an element of the truth in them. “Truth” is ultimately undefinable, as such a definition would have to account individually for the meanings of relationships.

C. “Regression” or “regression analysis” is a method of measuring the strength of the correspondence relation between independent and dependent variables (or, in economics: input and output variables). Regression can take both parametric and non-parametric variables (D.) and is susceptible to Bayesian statistical analysis as well as ‘frequentist’ statistical analysis (E.). Regression is used in both the ‘hard’ sciences and the ‘soft’ sciences.

Examples of regression equations include:

“In the general multiple regression equation, the dependent variable is seen as a linear function of more than one independent variable, $Y = a_0 + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_kX_k + e, \dots$ ” — Michael S. Lewis-Beck “Applied Regression” (Sage: Newbury Park CA; 1980) p. 48.

“...a population regression equation of $Y = \alpha + \beta_1X_1 + \beta_2X_2 + \dots + \beta_kX_k + \epsilon, \dots$ ” — William D. Berry and Stanley Feldman “Multiple Regression in Practice” (Sage: Newbury Park CA; 1985) p. 10.

It is obvious that these two equations are related, simply by looking at their similar forms. Greek letters are used for population parameters and English letters are used for sample statistics. Look at the two equations again: the second equation uses the Greek ‘betas’ to represent the population parameters—calculated estimates of weighting that ‘fit’ the data together with the Greek ‘alpha’ and ‘epsilon’ all involved to determine the shape of the curve relating the ‘Xs’ (independent variables) and the ‘Y’ (the dependent variable).

Let us remember at this point that the subjects of the next chapter are racism and war, two linked subjects that may turn out at bottom to be the same thing. They were putatively linked by “hatred,” a nebulous variable that, unsurprisingly, bore an oppositional relationship to “love”—another variable impossible to define. Of course, any measurement of “hatred,” as a data variable, would be non-parametric. Definitions within the analysis are stipulated, but can never equate the “correct” definition—as there is no such thing existent.

D. “A statistic is a summarizing property of a collectivity when that collectivity is considered to be a sample.” — Lawrence B. Mohr, “Understanding Significance Testing” (Sage Publications: Newbury Park CA; 1991) p. 11—consequently, statistics are predicated of samples.

“A parameter is a summarizing property of a collectivity when that collectivity is *not* considered to be a sample.” — Mohr (ibid.) p. 12—consequently, parameters are predicated of populations.

“So, a statistic is used to estimate a parameter.” “The process involved is statistical *inference*.” — Derek Rowntree “Statistics without Tears” (Charles Scribner’s Sons: New York; 1981) p. 83

So, a statistic pertains to the sample, and a parameter pertains to the population from which the sample is either putatively drawn or actually drawn.

Statistical inference is a form of inductive inference.

E. “Bayesian statistical analysis” refers to a type of mathematical analysis (statistics being part of mathematics) utilizing Bayes’ Theorem, which starts from standard probability theory and attempts to measure uncertainty on a percentile basis. “‘Frequentist’ statistical analysis” refers to a type of mathematical analysis utilizing the concepts of Fisher and Neyman/Pearson, with the familiar hypothesis-testing regime primarily credited to Fisher. The frequentist point of view, like the Bayesian point of view, ‘grows’ out of the probability calculus.

Bayesianism has been in existence since the eighteenth century, when his Theorem was published. But the outcome (‘posterior probability’) calculations were too involved and lengthy to be useful until the advent of personal computers, when such computing became available to all. Now, the choice between the methods is determined by the research needs.

“Bayesianism” has been given credit for the optimization of computer processes in such a way that data capture for necessary facts (facts that affect human lives in critical ways) is estimated at close to ninety-nine percent. That is pretty good for the full reach of half of the galaxy. Useful facts (facts that have practical effects on human lives) are captured approximately ninety-five percent of the time. With Bayesianism, a particular model of human inference was regularized, and insights into causality were achieved mostly through regression analysis that made possible advances in criminology, education, medicine, social work, and many other fields.

“...the Bayesian,...is at liberty to revise estimates with steadily accumulating data: indeed, there is an obligation to do so.” — Colin Howson and Peter Urbach “Scientific Reasoning: The Bayesian Approach” 3rd Ed. (Open Court: Chicago IL, 2006) p. 220.

In frequentist statistics, a sample is drawn from a population, it is analyzed, and hypothesis testing is used to see if the hypothesis counterfactual can be supported by the data to the pre-chosen degree. Bayesian analysis, as used after thousands of years of development, is employed, in contradistinction to ‘frequentism,’ as part of a continuous process, utilizing all data available over time—rather than repeated separate tests. Since new data is always arriving, no new ‘prior probabilities’ need to be input; the previous ‘posterior probability’ suffices for the starting point, and the new posterior probability is calculated. This probability is expressed as a number from zero to one, with one minus that number expressing the uncertainty within the calculation—meaning the proportion of ‘action’ within the sample not accounted for by the analysis.

When determining the method of drawing the sample and the elements and measurements of any survey, it is also necessary to determine a ‘conceptualization’ of the variables which addresses the problem at hand through outcomes and what the researcher thinks (or “conceptualizes”) may possibly illuminate that problem and its possible solutions. Also, it is necessary to ‘operationalize’ the outcomes—which means to determine a practical means of approaching those outcomes with the intention of measuring for relevant detail and appropriate accuracy.

It has long been postulated that the basic multiple regression equation is essentially a model of inductive reasoning, as well as a way of determining the relative influences (under examples of current measurement) of possibly causal factors. It should be clear that this is *not* an exact model; the coefficients of correlation merely identify whether the factor/vector acted in the correct direction, and the extent to which the strength of the data in this particular sample showed the effects as an outcome.

“Prior probabilities are personal measures of uncertainty...” — Gudmund R. Iversen “Bayesian Statistical Inference” (Sage Publications: Newbury Park CA, 1984) p. 17. And these variables had been the greatest source of criticism of Bayes’ Theorem for two hundred years before the personal computer became the liberation of the genius of the theory. Assigning a prior probability at the beginning of the calculation smacked of the guesstimate, and, it was a guesstimate. However, as a one-time personal estimate by a knowledgeable person, it became of miniscule influence and consideration in a rising tide of endless data on all sides. (This, by the way, is “...what is known as the principle of *stable estimation*, which states that even a somewhat informative prior distribution has little or no effect on the posterior distribution in the face of large samples.” — Iverson (ibid.) p. 69.) Many centuries ago, our civilization started measuring *everything*, and surveillance equipment was put up *everywhere*; the consequent loss of personal freedom, also and *not* coincidentally, the resultant degradation of the economy—were long-remembered effects. However, there were also useful effects, and these

included a better mathematical understanding of causality, still essentially a paradox on the microcosmic scale, and the surprising finding that *asymptotes* (“F.”), specifically, played a role in elucidating causality at the practical level.

As in early fractal analytic geometry, with its representations of mathematical object boundaries in the Mandelbrot and Julia sets that later came to be seen as programmable asymptotes—the social reality that emerged over time was astonishingly effective in remaking policing, court systems, regulation, and the entire means of earning money, among other social policy matters. For centuries, capitalism and socialism had been seen as opposites, which could not co-exist. This was despite the obvious fact that they had co-existed for centuries, as long in fact as socialism had existed (essentially: since the creation of professional armies on the foreign policy side and social security programs on the domestic policy side—both of which are examples of socialized authority: taxing and spending), and postulating otherwise would be merely foolish. There always had been an important disparity in the two economic philosophies, which was that capitalism had been better suited to solving the “scarcity” problem, as it was capable of producing a useful flood of products which could alleviate scarcities, while socialism had been better suited to solving the “distribution” problem, which had also dogged humankind seemingly since the beginning. Many societies had solved one or the other of these problems for a while, but few had solved both for any length of time.

What the invincible flood of data, along with greatly more sophisticated and accurate analysis, had accomplished in the case of general remuneration for useful work was a means of ascertaining the true economic value of the individual labor (“physical” or “mental,” as colloquially described) that went into the production of the values realized in any particular case. This, of course, had been made possible by the new results in causality theory and the ability to trace causal lines. The outcome, perhaps surprising, at least to the people alive at the time, was that of a notable and *permanent* semi-equalization of earnings throughout half of a galaxy. This, of course, is nothing more than a simple realization of the fact known to all children of some minimum age: that *all* people, within certain broad definitions, are capable in reasonably equal terms, when differences of skills are considered. Is it possible for one human being to be worth twice as much, in terms of economic production, as another? Yes. Fifty times as much? Probably. One thousand times as much? Maybe. But,...one trillion times as much, or “you-pick-your-number”? No. Earnings in those ranges are simply not justified by economics, but rather by coercion.

Of course (again), with a solution to the financial earnings congruence problem accepted by the great majority of citizens—it is, again, not surprising that many major social problems were solved by this alone. (By the way, the ease and acceptance of *electoral* determination of both important policy and high officials, through the availability of accurate user identification at *any* computer terminal across the galaxy along with the concomitant crackdown on political cheating, meant a return of political power to individuals, and they performed admirably in comparison to the pretensions of professional politicians.)

F. “*Asymptotes.*’ As the point $P(x, y)$ on a given curve moves farther and farther away from the vicinity of the origin, it may happen that the distance between P and some fixed line tends to zero. In such a case the line is called an *asymptote* of the curve.” — George B. Thomas, Jr. “Calculus and Analytic Geometry” (Addison-Wesley Publishing: Reading MA, 1966) p. 439.

This corresponds to the intuitive and causal notion that certain processes, with sufficient repetition, display performance lines that converge toward a boundary, which is consequently approached infinitely close over infinite time, but those lines never actually touch the boundary. This can include “curve-fitted” lines constructed from sample regression data and the generated equations with estimated parameters dictating form.

Areas under or enclosed by asymptotic curves can be calculated using the integral calculus.

4.5.5.1.

“When the universe embarks on the inflationary phase, the density changes dramatically, and in fact the theory predicts that it rapidly approaches the critical density.” “...the approach to the critical density during inflation occurs exponentially fast, so the final value of the density is likely to be exceedingly close to the critical value,...” “Much more likely is that inflation continued for many more ticks than the minimum, resulting in a density very close indeed to the critical value. This means that if the universe is going to contract it won’t do so for an enormous length of time yet—very many times the present age of the universe.” — Paul Davies “The Last Three Minutes” (New York: Basic Books, 1994), pp. 80-81

“...during the inflationary period the universe is driven very quickly and very powerfully toward a critical mass density. So a very short period of inflation can drive the value of Ω accurately to 1, no matter where it starts out.” — “Encyclopedia of Cosmology” article on “Inflationary Universe” (New York: Garland Publishing, 1993), p. 317

“The second peculiar feature of our universe that inflation does a wonderful job of explaining, and for which there never was a prior explanation, is the flatness of the universe—the fact that the geometry of the universe is so close to Euclidean.” “In terms of the evolution of the universe, the fact that the universe is at least approximately flat today requires that the early universe was extraordinarily flat. The universe tends to evolve away from flatness,...” “Inflationary theory gets around this flatness problem, because inflation changes the way the geometry of the universe evolves with time. Even though the universe always evolves away from flatness at all other periods in the history of the universe, during the inflationary period the universe is actually driven towards flatness incredibly quickly.” “The mechanism that inflation provides that drives the universe toward flatness will in almost all cases overshoot, not giving us a universe that is just nearly flat today but a universe that’s almost exactly flat today.” — Alan Guth in “The Universe” (New York: Harper Perennial, 2014), pp. 25-27

The “critical density,” as Davies says, is when $\Omega = 1$. This, as Davies defines it, is “the critical value at which collapse just fails to occur” (ibid.) p. 80. But,...”collapse” of what? Why, the entire universe, of course. The mathematics is clear: universes with ratios of matter/energy density to the critical density that are more or less than unity will, respectively, either collapse to an infinite density or expand to zero density. These two outcomes correspond to the “closed” and “open” universes. In both of those cases, there is curvature to space, as opposed to Euclidean flatness without curvature. In the open universe, the curvature is negative and the universe will expand forever. In the closed universe, the curvature is positive and the universe will eventually collapse upon itself.

* * *

In my local area of the universe, it seemed evident that deceleration had been going on for some time. This means that the “fleeing” of matter from itself, locally, was slowing down. I did not know if the universe as a whole was decelerating; I did not know if the universe was negatively curved and infinite or, through positive curvature, closed into a finite but boundary-less space.

I extended billions of light-years—a thought took in excess of billions of years. However, psychological time seemed the same.

Ten to the five hundredth wouldn’t capture the number of years in the future I had traveled. The protons had decayed a long time ago. Wasn’t this like oblivion, approaching nothing?

Then suddenly, something changed. I perceived something different.

It was as if space itself was stretched to the breaking point, which is, of course, impossible.

And then, there were...wavicles(?)—in clear violation of the law of conservation of matter and energy—filling space, and contraction, at least here, was starting.

I could feel consciousness slipping away, after all this time, from the pressure of the new physical reality, and I knew the disorganization of myself, whatever “myself” was—was upon me. Death was finally imminent.

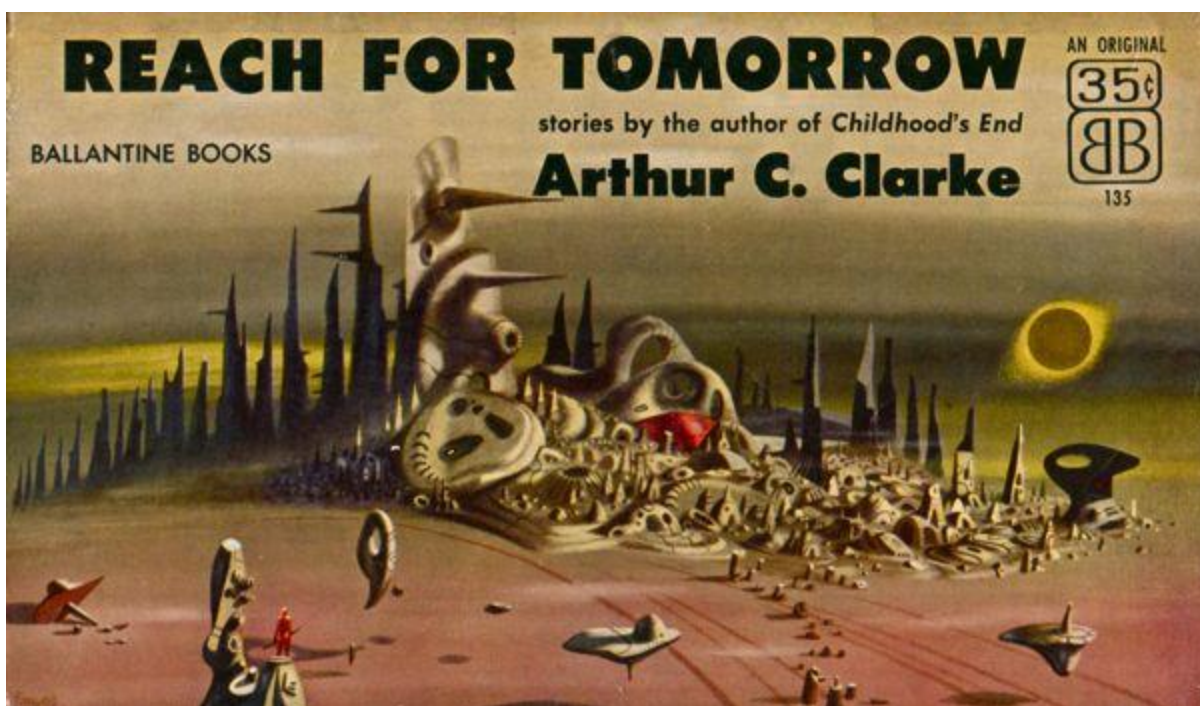
* * *

Will I see you again?

My love is eternal.

This document is free: with the exception of the Richard Powers painting at the end of the essay, which is under copyright, it can be downloaded, disseminated whole or in part, quoted from—etc. Quotations should be attributed—this means that the source should be identified.

“I found the home planet Earth. The ruins were magnificent—but it was impossible to tell what had happened—although it was logical to postulate that the end was caused in some way by the war.” (Sect. 1.2.1.1.)



(Used by permission of the Richard M. Powers estate, © 2024.)

“Reach for Tomorrow” painting by Richard M. Powers, as shown on the front cover of the collection of Arthur C. Clarke short stories (New York; Ballantine Books, 1956). The scene seems to be taken from pages 9 to 12 of the story “Rescue Party.” The small red figure in the bottom left quadrant of the painting may be interpreted as the only human figure.