

A Modern View of
Creation:
Making Peace with
Empirical Reality

Making Peace with Empirical Reality

Loyd L. Fueston, Jr.

Published by Loyd L. Fueston, Jr.

© 2012, Loyd L. Fueston, Jr.

Rights reserved according to Version 3.0 of the Attribution-Noncommercial-No Derivative Works license as written and published by Creative Commons Corporation. This license can be found at <http://creativecommons.org/licenses/by-nc-nd/3.0/>. A copy is also appended to the end of this book.

Contents

Contents	i
Preface	iii
Samplers of Writings	vi
Introduction	vii
1 Hellenistic Metaphysics is Too Small	1
2 God as the Creator of Truths	7
3 Staking Your Faith	11
4 The Metaphysics of Position	15
5 Don't tell God what to do!	19
6 Theory of Knowledge	21
7 Broadening the Horizons of Reason	25
8 Inattention to God's World	29
9 Old Philosophers' Tales	33
10 Reason Comes from Empirical Reality	37
11 Better Explanation of Scientific Issues	41

Appendices	47
Other Writings by Loyd Fueston	49
Why Speak of Other Writings?	49
Nonfiction Books	49
Novels	50
Other Writings to Come	51
Bibliography	53

Preface: Why Do I Continue Recycling Essays?

I've released two editions in book-form of lightly edited versions of the essays I've posted on my two blogs since 2006: primarily *Acts of Being* at <http://loydfueston.com/> but there are a fair number of essays from my inactive blog *To See a World in a Grain of Sand* at <http://loydf.wordpress.com/>. That book, *Acts of Being: Selected Weblog Writings From 2006 to 2011* is available for free download at <http://loydfueston.com/downloads/acts.pdf>. It's very large and contains more than 350 chapters, probably more than 400 up to this month of May in 2012, though I'll not release another update until the end of the year.

I thought to make it easier for others to dig into my writings by making them available in smaller groups, with themes which will sometimes correspond to the seven parts in *Acts of Being*:

1. Making Peace With Empirical Reality
2. The Human Mind as a Re-creation of God's Creation
3. Love and Stuff
4. What is a Universe?
5. Freedom and Structure in Human Life
6. The Narrative We Know as a World
7. What Means It All?

Those parts seem to have separated my writings into somewhat manageable sets but those remain large. I also plead guilty to being digressive within individual essays and across those parts, call them categories if you wish. It's likely that most of the smaller collections of essays I hope to release will have more specialized subcategories, maybe even different from those I've used to know.

There is the additional problem that, having laid something of a foundation for a way of understanding Creation, I've moved on to building upon that still incomplete foundation. This is a necessary step. The foundation can't ever be completed, in the way that the human mind in Thomistic thought is the sort of entity which can in principle encapsulate the world but no actual, individual human mind is capable of such. There is a more complex statement I'd now make because of my newly gained appreciation for the communal mind. As the historian Carroll Quigley told us in *The Evolution of Civilizations: An Introduction to Historical Analysis* [9]:

The truth unfolds in time through a communal process.

In *The House of Intellect* [2], Jacques Barzun speaks of the intellect as:

Intellect is the capitalized and communal form of live intelligence; it is intelligence stored up and made into habits of discipline, signs and symbols of meaning, chains of reasoning and spurs to emotion—a shorthand and a wireless by which the mind can skip connectives, recognize ability, and communicate truth. Intellect is at once a body of common knowledge and the channels through which the right particle of it can be brought to bear quickly, without the effort of redemonstration, on the matter in hand.

The creation and maintenance of a “capitalized and communal form of live intelligence” is clearly an ongoing process, or at least an ongoing movement up or down. That process of building and maintaining a civilization, or at least pieces of one, will be relatively successful at some times and a disaster at other times. The 20th century, from that effort at civilizational suicide we know as World War I, has been a period of decay dominated by weak leaders such as the recent American presidents or strong leaders such as Churchill and de Gaulle but mostly even the best of those leaders

have been clueless about the dangers faced by the West. Even so well-read, well-traveled, and highly-experienced a man as Churchill was worried about German land-power threatening the British Empire and never seemed to realize that the tightly related baptism and civilization of the Germanic and Celtic masses of Europe were being shed. They hadn't taken so well as popes and kings and poets might have thought.

Back to naked earth to start work on new foundations, though it would be nice to save and build into some of the old foundations.

We need a fresh understanding of God's Creation. It's a bit surprising, though noted decades ago, that while moral and social structures have been decaying and art and literature have been a bit troubled, science and some of the scholarly fields in the humanities have been advancing rapidly.

We don't know how to protect our families or how to raise our young. We don't know how to order our economies or our political communities. We Christians seem a bit incompetent at evangelizing or even at passing on our faith to the youth in our own families.

Yet, we've explored time and space to find they are best described as a single structure of spacetime. We've explored matter to find that it is strange stuff and if it weren't it wouldn't have stable existence. We know more about ancient Greece than Plato and Aristotle did. We know more about the Bible than the ancient rabbis or St. Jerome did. It would seem to me that modern Jewish and Christian scholars know more about the Hebrew of Isaiah than did the Medieval sage Moses Maimonides and perhaps more than did the great rabbi and scholar Gamaliel, teacher of Saul who became St. Paul.

Oddly enough, I, along with many others, have the sense that all of these great accomplishments have truly been carried out in that decaying house we know as Western Civilization.

What's to be done?

I do what I can do. First, I've made peace with God by taking up with a stronger faith than I was raised in, first a strong form of Protestantism and then Catholicism. Second, I've made peace with empirical reality, those parts of God's Creation we can directly perceive and explore with our minds, far greater realms than even the greatest of modern scientists and poets and metaphysicians seem to realize.

Samplers of Loyd Fueston's Weblog Writings

As of 2012/06/21, I've published two samplers, including this one:

1. *A Modern View of Creation: Making Peace with Empirical Reality* at <http://loydfueston.com/downloads/acts-emp.pdf>.
2. *A Modern View of Creation: The Human Mind* at <http://loydfueston.com/downloads/acts-mind.pdf>

Introduction: Making Peace With Empirical Reality

As a man of the 21st century, I desire to have an endless stream of sequels, despite the fact I don't actually make any money from any of these books. Still. . . We must plow forward when work needs the doing in God's Creation as Isaiah and Jeremiah taught us. I haven't seen a lot of evidence that God is impressed with the gospels of success. Be that as it may, I've started work on this series I've titled *A Modern View of Creation* and I present this book with the subtitle of *Making Peace with Empirical Reality*.

From the next paragraph on, I steal the introduction from Part 1, *Making Peace With Empirical Reality* of that larger collection: *Acts of Being: Selected Weblog Writings From 2006 to 2011*, downloadable at <http://loydfueston.com/downloads/acts.pdf>. I do make a few editorial changes to suit the new context. I have also included in an appendix a chapter about my writings from that book.

In *Twilight of Authority*, Robert Nisbet quotes "the great bishop Butler":

Things and actions are what they are, and the consequences of them will be what they will be; why, then, should we desire to be deceived. [7]

In this book, I've collected essays or articles from my weblogs, *Acts of Being* at <http://loydfueston.com/> and *To See a World in a Grain of Sand* at <http://loydf.wordpress.com/>, in which I deal with the issue which is the title of the chapter. Usually, our responses to reality are at second-hand, that is, we respond to our own bodies or to our environments as perceived according to our "cultural assumptions", taking this term in a vague sense to be explored by other thinkers if they think it necessary. For

good or bad or indifferent, these “cultural assumptions” are mostly implicit. So far as I can tell, even seemingly well-educated men and women have no clue that their view of physical reality or human history or human moral nature is a speculative construction built up over a number of generations. My goal in the writings collected in this chapter is to argue in favor of a more active, courageous, and faith-filled response to God’s Creation, starting with those empirical realms which we can explore by our own senses or other empirical means.

1 Hellenistic Metaphysics is Too Small

[The original version of this essay was published on the blog-site, *Acts of Being*, found at <http://loydfueston.com/?p=45>. It was finished and uploaded on 2006/10/29.]

Recently, Pope Benedict XVI caused a bit of a stir in his address at the University of Regensburg (Sept. 12, 2006). I'll address the true thrust of his speech and not those remarks which were taken out of context. Specifically, I intend to work in line with his stated intention:

The intention here is not one of retrenchment or negative criticism, but of broadening our concept of reason and its application.

Along those lines, I will argue for an enlargement of Hellenistic metaphysics. I believe that this enlargement is possible because of empirical knowledge, knowledge which points to the reality which shapes the human mind and may shape the human being into a truer image of God. My belief in this regard is shaped by modern scientific knowledge as well as the plausible forms of speculative knowledge based on the rapid progress in physics, mathematics, geology, evolutionary biology, and neuroscience over the past few centuries. We also have learned more than some people would appreciate from the human events which have occurred since the days of the ancient Greek thinkers. Even in literature, we now see greater possibilities for the movement of the human mind and spirit than the Greeks could have realized. All of this knowledge can be pulled into a surprisingly coherent Christian worldview if we have faith that God truly is all-powerful, that the physical universe is the way He intended it to be and not the result of some primordial fall from a state of grace. With this faith, we can begin

to understand the universe, which becomes the world when seen as morally ordered, as a place of linear development and not the static or cyclical cosmos which was part and parcel of Hellenistic metaphysics. This is not to deny reason nor even to deny the truths given us by the ancient Greek thinkers. It is to say that Hellenistic metaphysics is too small for the God of Jesus Christ, a Creator who has been shown through modern empirical knowledge to have greater freedom than would be indicated by the systems of mathematics and logic which gave birth to the thoughts of Pythagoras and Plato and Aristotle. He is not even limited to the systems of mathematics and logic which gave birth to the thoughts of Cantor and Einstein and Planck, Heisenberg and Schrodinger and Dirac, Godel and Turing and Chaitin.

Hellenistic metaphysics is too small for modern empirical knowledge and for modern speculative knowledge such as the theories which make partial sense of our physical universe and those which have expanded our ideas of what number is and what mathematics is. And those physical and mathematical theories are entangled in surprising ways, though I only note that so the reader doesn't think there is an ultimate division between speculative, or theoretical, knowledge and empirical knowledge. I addressed the issue of human knowledge in my first published book, *To See a World in a Grain of Sand* [4], and went more deeply into the subject in a book available for free download: *Four Sorts of Knowledge: Revealed Knowledge, Speculative Knowledge, Scientific Empirical Knowledge, Practical Empirical Knowledge* [5]. Ultimately, the only two sorts of knowledge are: knowledge of God and knowledge of Creation. Even that split might be somewhat artificial from God's viewpoint but it's a necessary division in knowledge from a creaturely viewpoint. But the four-fold division in knowledge is forced by our ignorance and by the frailties of the human intellect.

The Greeks gave us much we should appreciate and much that underlies even the most radical forms of modern speculative knowledge, that is, the more rational forms of modern speculative knowledge and those which are empirically supported. I'll not try to differentiate between speculations formed by rebellion against what is and speculations formed by efforts to move with the grain of the universe, though I will say that some thinkers, notably Nietzsche and Foucault are examples of thinkers whose books give interesting mixtures of both false insights and profound insights. Some other famous radical thinkers of recent centuries appear to worth reading only as examples of human pathologies.

Let me turn to an area where powerful forms of reasoning have clearly led to an expansion well beyond Greek thought. Modern mathematics has not proven that Euclidean geometry was wrong but it has proven that it is not the only possible geometry. There is plenty of evidence that our universe, at the large-scale, does not have a physical structure fully describable in Euclidean terms though the true structure is not yet known. At the relatively small-scale, such as the objects at the center of all known galaxies which are likely black-holes, the structure of space time is definitely non-Euclidean.

The geometry of this universe have been so complicated and complexified that it seems unlikely that we can even settle on a single geometry for all of physical reality. Any broad and realistic view of physical reality now involves multiple forms of geometry to describe that one reality. Roger Penrose's book *The Road to Reality* [8] is a good example of such a view – that book is a tangled maze of geometries and various mathematical systems which must be employed to describe that one reality. Greek metaphysics, and all the non-Thomistic metaphysical systems I know of, assumed that physical reality must be describable by one speculative system of thought employing one mathematical model, or at least a single family of models. Now it seems that reality is unified but no one human system of thought can cover even the purely physical aspects of that reality.

Concrete reality does not seem to be the sort of entity which is being built the way a child builds a bridge with an erector set or even the more complex way an engineer builds a bridge in a busy city. Concrete reality is rational and well-ordered but its rationality seems to be more complex than the thoughts that can be credited to the Greeks, though they are the fathers of the later thinkers who have expanded the range of human thought. Concrete reality has mathematical aspects but those aspects are far beyond anything the Greeks could have recognized as mathematics, though Euclid can be seen as the father of Cantor and Cauchy, Gauss and Kolmogorov.

In the same way, Plato and Aristotle can be seen as the fathers of St. Augustine and St. Thomas Aquinas. It was Aquinas in particular who gave us the foundations of a truer Christian metaphysics which seems to be immensely greater in scope than anything the Greeks could have imagined. St. Thomas Aquinas expanded the possibilities of metaphysics more than he probably expected by noting that metaphysics uses the specific sciences and by endorsing Aristotle's claim that the human mind is shaped by its physical environments, though even Aquinas didn't suspect there was also a

shaping of the human mind, in a species sense, over an immense amount of time. It's interesting that it was the simple Christian faith and the empirical leanings of Aquinas which were responsible for his most important insights, though he used the disciplined forms of reasoning he inherited from the Greeks by way of Christian Neoplatonists.

The differences between Greek metaphysics and modern metaphysics bear some similarity to the differences between Greek mathematics and modern mathematics. By this I mean that the enlargement of scope creates a variety of seeming contradictions that mask our Greek heritage to those who prefer reductionistic or surface views. There was a seeming contradiction between Euclidean geometry and others discovered in the late 1700s and early 1800s but that was caused by Euclid's fifth axiom which that ancient Greek himself apparently knew to be doubtful: parallel lines never meet and never diverge. In fact, consistent geometries can be developed using other assumptions about the relationships between lines that are 'parallel'.

In a roughly similar way, Greek metaphysics assumes that any existing entity has to have some underlying substance at least analogically similar to creaturely substance, the stuff of this universe. This is because substance is considered primary, the real point of those seemingly silly proposals that all stuff is made from water or air or fire or earth or perhaps some combination of those four. Yet, all that the ancient Greeks knew was made of substance or was the result of relationships between entities made of substance. Modern sciences, especially physics, have given us serious reason to raise relationships to the primary status. Substance is necessary for creatures to exist but some sort of relationship, primarily God's love, brings about some act-of-existence which precedes that substance.

Let's be fair to the Greeks. The Hebrews received the revelation that God is 'I-am' at about 1000BC though it probably meant something closer to: I am present for you. In any case, the Jewish thinker Philo read the Hebrew scriptures through Platonic eyes and he was followed in this by some of the early Christian Fathers. They understood God's 'name' of Yahweh as an existential claim. This was apparently a misreading but I think a very fruitful one. And so it is that we Christians had something of an existentialist understanding of God from the start. We also had the revelation who was the incarnate Son of God as well as the revelation that "God is love". We were even told that God loved us before the world existed. And yet neither we nor the Jews ever asked if maybe relationships

could be primary and substantial being might be brought into existence by relational acts. At that, substance seems to be necessary for us to have the limited independence from God that allows us the freedom to become His companions.

We knew the world was brought into existence by God's love and yet we speak as if substance is primary. As if God Himself must be made of stuff, divine stuff to be sure but still stuff. As a consequence of our faith in the primacy of substance, we believed that many aspects and relationships required a different stuff than flesh and blood, dirt and water. Mind-stuff and soul-stuff were purer and more ethereal substances, but they were substances. God was divine stuff and our thoughts were mind-stuff.

No. With less reason than the Greeks, we literalized relationships, including those which appear as 'mind-like' or 'soul-like' aspects. God is made of stuff. He looks like a dignified but gentle old man who sits on a throne. His Son sits at His side while a Divine Dove hovers over their heads. The three of them looked down upon countless numbers of human souls or minds entrapped in decaying and sin-laden stuff.

We need to break out of the prison of substantialism or essentialism (as most philosophers would call it) and see the importance of relationships, especially of God's primary relationships to us which I call acts-of-being.

2 God as The Creator of Truths

[The original version of this essay was published on the blog-site, *Acts of Being*, <http://loydfueston.com/?p=60>. It was finished and uploaded on 2007/01/13.]

It sounds strange to speak of God creating truths – even God, but I have two lines of reasoning that lead to this conclusion that God has created the truths of our universe, mathematical and metaphysical, as well as the things of our universe. I discuss this claim in my book, *To See a World in a Grain of Sand* [4] though I’m still working on a richer and deeper understanding of my own claim. I’m going to present a rough outline of the reasoning behind my claim rather than a complete argument, the initial form of which was the text of my book. It might not be clear even to me for a while if this presentation moves towards that richer and deeper understanding of my claim.

In this first installment about the creation of truths, I’ll address some aspects of the theological and metaphysical reasoning. Basically, the reasoning falls out naturally from Thomistic existentialism though that ‘naturally’ part depends upon an expansion of Thomistic existentialism in response to modern empirical knowledge. Our understanding of the universe, this phase of God’s Creation, has widened and deepened, leading to new possibilities regarding other phases of Creation, and new possibilities regarding the greater totality of Creation.

The first line, and more important line, of reasoning comes from my basic beliefs: an expanded and updated version of Thomistic Existentialism. God has no substance, not even something that could be labeled as ‘divine substance’. God is a pure act-of-being, His own Act-of-being. He is the supreme Act-of-being. As such He is the only being who truly exists. He

is being itself. This is the line of reasoning I'll be exploring in this entry. Soon, I'll be posting an entry discussing the second line of reasoning which involves the modern discovery as to the true nature of random numbers and the questions it raises about the nature of human mathematics and the truths which seem to be its foundations.

St. Thomas Aquinas upset a lot of thinkers over the past seven centuries with the claim: things are true. I would say that this claim makes him the most consistent empirical thinker in history amongst the more famous philosophers and theologians. This led me to a crazy line of thought culminating in the speculation that not only are things true, but truths are thing-like in a sense. This is not to say that all truths are thing-like but only those manifested in the underlying, abstract stuff of this universe – the Primordial Universe as I called it in my book. These manifested truths must include all those accessible to human thought, which is mediated through mostly the brain but through the entire human animal and its relationships with other physical entities. Even revelations of truths beyond Creation, those regarding God Himself, have to be expressed in terms of truths which are manifested in the Primordial Universe and then are included in the stuff which God shaped into this universe.

Things are true. They have to be true. How could something exist if it were not true? Well, that might be possible under pagan conceptions of physical reality where matter co-exists from eternity along with any possible Creator, more accurately – a shaper. There is — possibly – a realm different from the realm of concrete beings and there might even be a realm of untruths. So why is it different for a Christian? A simplified explanation is:

In a Christian worldview, God creates all that is not Him from nothing. Any creaturely entity – quark or rock or porpoise – is a manifestation of a thought of God. A thought of God is necessarily true.

God told us Creation is good. It's also beautiful and true. Since this phase of Creation, our universe, develops over time, the goodness and beauty and truth can sometimes be obscured or under development and appearing to be quite grotesque.

It's important to note that a Thomistic-existentialist viewpoint can handle a developing universe – still a great difficulty for philosophies, Christian

or other, which accept the pagan claim that matter exists co-eternally with any Creator – who might Himself be the universe. More importantly, distortions come in the dualistic concept that there are separate realms of truths and concrete being.

Some might be surprised that I say there are Christians who accept that pagan claim that matter co-exists with God. This pagan, or paganistic-Christian, God is really a Shaper and not a Creator. Or else Himself the universe. Unfortunately, many of the philosophies of Christian history, including that of St. Augustine, took pagan philosophies based on that view and then patched them crudely with the valid but inconsistent claim that God created this universe from nothing. You can't patch up a metaphysics that undervalues the act-of-being, or slights it completely, by pasting on vague statements about the acts-of-being which are God's acts of creating from nothing.

Yet, there is a truth in this view of God as shaper, a truth easily absorbed into a Thomistic existentialist worldview. God is seen as both He who created the Primordial Universe from nothing and He who shaped this universe from that Primordial Universe.

Things are true. There is another way to argue to this claim and that is simply to note that any metaphysics which separates thing-ness and truth is inherently and dangerously dualistic. If truths are not in the things of this universe, where do we get them? Our very thinking organs are things. If we can have thoughts which are true, especially thoughts about very abstract mathematical objects, then we are all forced to be dualists or to fall into a state of mute stupidity before a universe which has no contact with truth.

The computational philosophies of intelligence have produced, as an accident, the realization in clear-headed observers that these sorts of pseudo-empirical philosophies merely replace a brain and mind duality with a brain and software duality. The mind and the software have to somehow live in an immaterial realm of truth while being able to show up in the brain or computer or sunspots as I vaguely recall from my days of reading science-fiction. The unanswerable question, one known to the supposedly muddle-headed Medieval Scholastics is:

How does the brain interact with mind or software if they are truly different sorts of stuff? Or non-stuff?

Computer software should be viewed as states of a certain type of or-

ganized matter – ‘circuits’ which are electronic or optical or other sorts of devices. The same is true of human thoughts being states of a certain type of organized matter – the human brain.

This is not to propose a reductionistic form of materialism. Quite the opposite. I’m saying that all the truths which humans can perceive or conceive are embodied in some deep sense in the very matter and organization of the human brain. As a Thomistic existentialist, I am willing to have the courage of my Christian convictions:

Matter is not ‘mere’ matter, it is sacramental stuff, manifestations of thoughts of God. As such, this universe in its totality somehow embodies all those truths which are accessible to human thought.

And that raises the question: What is human thought?

3 Staking Your Faith on Gaps in Empirical Knowledge

[The original version of this essay was published on the blog-site, *Acts of Being*, <http://loydfueston.com/?p=69>. It was finished and uploaded on 2007/02/16.]

BrainWork is a free newsletter distributed by *The Dana Foundation*, with a website at <http://www.dana.org>. This foundation is run by some of the most prominent neuroscientists, geneticists, and other biologists in the United States and – I believe – Canada. In the July-August, 2006 issue, there's an interesting article, *Out-of-body but in the Brain*.

The article tells us:

At every moment, the brain effortlessly integrates information from the body into a strong seamless sense of self. The proprioceptive system, for example, sends signals to the brain that allow you to know, without looking, where your hands, legs and feet are. The vestibular system in the inner ear relays information about your orientation to gravity. (Are you vertical, horizontal, or somewhere in between?)

The brain's synthesis of this and other information creates a sense of being inside your body. The out-of-body experience, in contrast, produces a sensation of consciousness floating upward, providing a view of the body from an elevated perspective. It results from a breakdown of the brain's ability to synthesize signals from the body.

It seems that near-death experience:

... involves a disruption of the sense of body integration, says Kevin Nelson, a neurologist at the University of Kentucky, but this disruption has a different cause. It involves rapid-eye movement (REM) sleep intruding into waking consciousness.

The final paragraph in the article reads:

Although recent research undercuts the notion that consciousness can exist apart from the body, it also demonstrates that consciousness is a tenuous creation of the brain. As Blake says, out-of-body experiences “show that the perception of our own body and self are prone to illusion.”

In my book *To See a World in a Grain of Sand* [4], I raised the claim that Christians should have enough confidence in the Creator to accept the results of empirical investigations, in history as well as biology or physics. If God created us as bodily creatures without a separable soul, what does that matter to us? Why would we settle such a matter independent of an investigation of man’s nature?

Too many people have staked their faith on beliefs which actually arose as speculative understandings of the best empirical knowledge of past centuries. Human speculation will often be seen as wrong, perhaps in the sense of incomplete or simplistic, in future ages. Much of the knowledge which fleshes out traditional Christian theologies is such speculation from past ages, based upon outmoded understandings of God’s Creation. Most Christians, and ex-Christians, seem incapable of recognizing the difference between the parts of their beliefs which are revealed truths and those parts which are speculative or even tied directly to empirical knowledge. As a result, many have lost their faith – especially in younger generations; surely, the Big Bang and all those bones in Africa prove the Bible is wrong. Not really, but they do prove that much of our inherited stock of speculative and empirical knowledge is wrong. Others have retained their faith by the bad strategy of either rejecting modern empirical knowledge or – more often – believing in both those bones in Africa and also in the literalistic interpretation of the story of Adam and Eve.

Given the great progress of empirical knowledge, in various fields of study and not just the physical and biological sciences, the opposition of many Christians to the best theories of the empirical world, including human nature, seems to put Christians in opposition to facts and plausible

theories. Those Christians seem to be in opposition to the truth. True it is that empirical investigation can only discover partial truths or even false truths about the physical universe. But, on the whole, empirical investigations point towards real truths about this physical universe and – in my terms – real truths about the world which is this physical universe understood in light of God’s purposes in creating it. It even seems true that pure physical facts and theories might give us some clues to God’s work as Creator, that is, His purposes in making this world.

There are not two truths and there is not your truth and my truth. Human beings either have souls separable from their bodies or they don’t. Right now, there is growing evidence that the various events of the human mind and human soul, that is – soulish aspects of our physical natures, are tied directly to physical events in the brain. That shouldn’t bother us Christians at all. We should move on, accepting the best empirical knowledge of our day and trying to understand it in light of the more important truths revealed to us in the Gospels of our Lord Jesus Christ.

4 The Metaphysics of Position, Momentum, and Missed Field-goals

[The original version of this essay was published on the blog-site, *Acts of Being*, <http://loydfueston.com/?p=125>. It was finished and uploaded on 2008/01/01.]

After discussing a use of Heisenberg's Uncertainty Principle to understand the results of experiments in the fairly straightforward case of the polarization of light-waves and of individual photons, Alastair Rae speculates:

[If] we understood properly what the concepts of position and momentum mean on an atomic scale we might find it... illogical to possess definite values of these quantities simultaneously. [10]

The point to be made is more general and can be more understandable in light of one of the biggest errors that history records on the part of a brilliant thinker: Kant tried to turn his understanding of Newtonian dynamics into a metaphysically necessary system. In fact, Kant died thinking he'd succeeded in presenting physical reality as necessarily existing in a Euclidean three-space with an absolute and uniformly moving time dimension.

Einstein knew better not because of metaphysical reasoning but rather because he knew the literature of important experiments and he had a deep understanding of Maxwell's work on electromagnetism. To cut to the chase, Einstein speculated that our physical environment seems to be a four-space with three dimensions of space and one of time and found he could develop a new dynamics (special relativity) which was consistent with Maxwell's equations. (Time retains its own properties as do the spatial

dimensions, but they can bend each other in various sorts of interactions that can't be explained so much as accepted as raw facts of how things are.) Over a period of years, by way of hard work and with the help of a mathematician friend who helped him learn differential geometry and tensor calculus from research papers, Einstein also restated gravitational theory to include his understanding of spacetime and his belief that a gravitational field is impossible to distinguish by way of experiment from an accelerated frame of reference. This means that, if you're in a sealed box, you can determine if it's accelerating but you can't tell if you are in an elevator in free-fall or a box being accelerated through space by a smoothly operating rocket.

Einstein's gravitational theory would eventually lead to an understanding that matter shapes the four-dimensional spacetime, even creating spacetime in a sense by stretching it out. The American physicist John Wheeler told us that matter shapes space which then tells matter how to move.

We probably don't have the best possible understanding of these matters but we have more understanding than in those centuries without radio telescopes, those centuries during the slow maturing process of mathematics.

Philosophers, theologians, and other thinkers don't make the best possible use of our modern empirical knowledge because they refuse to remember what Aquinas told us: metaphysics uses the specific sciences. This isn't a purely instrumental 'uses' but rather a fundamental interaction. Metaphysics truly is what its name implies: an abstraction from our empirical knowledge of physical reality, including the mathematics we develop as we explore that reality. Metaphysics isn't just an ivory-tower activity which is done independently of empirical reality and then applied to judge that reality. It's our way of creating a language, including the words for complex concepts, that we might talk about reality.

God is multi-lingual. When He works to shape this universe and to tell the story I call a world, he speaks the languages of quantum physics and chemistry and chaos theory and biological evolution – including moral evolution. When God creates from nothing, creating the basic stuff of this world and the world of the resurrected, He speaks the languages of transfinite set-theory and algorithmic complexity theory and metaphysics. Don't take these analogies too seriously – they won't bear up under much weight, but I do intend to point the reader towards a new view of the relationships between this universe and the more abstract foundation of

Creation which I call the Primordial Universe. I intend to point towards a new view of the relationships between different fields of knowledge as well.

But not entirely new. Alastair Rae seems to have some substantial understanding of the possibilities. In my way of thinking, thing-like reality is shaped from more basic levels of reality. Speaking very vaguely: the various elements of this universe must be derived in some sense from the elements of the Primordial Universe, but that doesn't tell us immediately what those elements are or even what sorts of entities they might be. The underlying stuff of our thing-like universe are abstract and the difficulties in quantum mechanics come from our inability to understand how this abstract and well-determined stuff collapses to the concrete stuff of this universe, concrete stuff which seems to have some freedom not found in the underlying stuff. If we are to understand that underlying stuff, the truths God manifested as the foundations of Creation, we must study those levels and aspects of Creation which we can and explore and analyze. We must understand the more contingent levels of created being to be able to generalize to the more abstract levels.

Position and momentum aren't metaphysically necessary parameters and aren't even necessary – so far as we know – at the level at which quantum effects occur. At the same time, there is something corresponding to position which shows up when we try to measure position but in such a way as to destroy the possibility of measuring something corresponding to momentum at the same time. A crude analogy: when we look at copper ore, we shouldn't expect to find all the attributes of finished copper piping and valves. When we look at the more raw components of created being, we shouldn't expect to find all the aspects or attributes which exist at the level of this concrete realm of rocks and rats and robots.

We live in exciting times and the open possibilities for human thought and action have unsettled us a little more in these turbulent times, these times when much is being destroyed in one way or another and the new societies and political structures are but dream-like and nightmarish possibilities.

Modern man has piled up mountains of as-yet undigested empirical facts and theories. Many of these facts and theories are very disturbing, casting in doubt our post-Kantian intuitions that the sort of time and space that we experience are necessary foundations of any sort of reality, casting in doubt our traditional understandings of what numbers are and what logic is, casting in doubt our belief that there is an infinite chasm of sorts between

us and other sorts of animals, casting in doubt much that gave us the illusion that we understood God's Creation in certain important ways.

We need to show the courage and creativity appropriate to our opportunities to gain richer understandings of our human selves and our world. As it is, many Christian leaders and scholars seem determined to see these opportunities only as problems, refusing to do their duty to lead their flocks towards good pastures because of the rocky trails that lie between us and those green meadows.

5 Einstein and Bohr: Don't tell God what to do!

[The original version of this essay was published on the blog-site, *Acts of Being*, <http://loydfueston.com/?p=126>. It was finished and uploaded on 2008/01/01.]

Alastair Rae adds a wrinkle to a famous comment by Einstein:

When Einstein said that “God does not play dice”, Bohr is said to have replied, “Don't tell God what to do!” [10]

He notes that there's some doubt as to the ‘historical accuracy’ of this exchange, but there's an important point to be raised about Bohr's response. I don't know that Bohr was much more disciplined in his metaphysical thought than Einstein was, but Bohr seems more clearheaded than Einstein in metaphysical matters, at least from a Thomistic viewpoint. St. Thomas told us that metaphysics uses the specific sciences, and that would certainly include the most fundamental of physical sciences – physics.

Metaphysics uses the specific sciences, not slavishly as Kant did with Newtonian dynamics. It was Kant, and not Newton, who derived a metaphysical system founded upon the parameters and operational principles of Newtonian dynamics and the absolute time and space in which that dynamics was set.

Metaphysics uses the specific sciences to discipline itself to reality. When a philosopher or anyone else tries to understand reality using too many *a priori* principles, he's essentially trying to impose his speculations upon reality. The proper use of knowledge from the specific sciences will supply the dose of reality which fights against this wrongful human tendency.

“Don't tell God what to do!” Wise words though there might be some doubt whether Bohr actually said them and much doubt as to whether he

would have understood the full significance of that advice.

Listen to God. Listen to His direct words in the Bible and pay close attention to the Story and the stories He tells in that Holy Work. Listen to God in the traditional worship and prayer practices of His Church. Listen to God in your experiences of His world and in the results of hard thought and contemplation and empirical research as recorded in the best works of men.

Don't tell God what to do, listen to Him when He speaks in the Bible and when He speaks in the experiments and theories of the quantum physics. Listen to Him even in that story which is your own life.

6 Theory of Knowledge

[The original version of this essay was published on the blog-site, *Acts of Being*, <http://loydfueston.com/?p=128>. It was finished and uploaded on 2008/01/11.]

Pope Benedict has an appropriate respect for the human mind and its products, cultural and intellectual and spiritual. Yet, there's a big gap in his thought that could be filled only by a proper appreciation for modern empirical knowledge, including in a very explicit way the problem areas of mathematics, physics, and evolutionary biology. I also question if he's being given good information about some of these areas, such as evolutionary theory and chaos theory – both of which he seemed to dismiss as sources of any sort of truth in *Jesus of Nazareth*, his first book of a series on the Lord Jesus Christ. But the real problem is the fundamental gap in his thought about human knowledge: he speaks openly and carefully of speculative knowledge and revealed knowledge (or truths) but doesn't seem to have an explicit view of how empirical knowledge fits in to the total picture.

In many of my writings, I'm primarily interested in creatively viewing God's Creation, viewing it as clearly as possible given our stock of knowledge, revealed knowledge and speculative knowledge (such as metaphysics) and empirical knowledge (separated in one of my books [5] into scientific and practical). Pope Benedict doesn't seem to take seriously enough the work of empirical thinkers who work in the domain of physics and mathematics and evolutionary biology and other such-like sciences, but this might simply be a problem of not having a way of relating the results of those fields of study to revealed and speculative knowledge.

Aquinas told us that metaphysics uses the specific sciences. I've gone beyond that, noting that Hellenistic metaphysics was a Siamese twin of Hellenistic mathematics. Our idea of what mathematics is has expanded greatly, implying that we should expand our ideas of what metaphysics is in

a parallel way. (See Chapter 1, *Hellenistic Metaphysics is Too Small*, for a discussion I posted after Pope Benedict's well-publicized speech at Regensburg.) In an argument that a couple thinkers found fascinating (one well-known mathematician and one theologian), I used modern understandings of randomness as being a high level of algorithmic complexity – factuality – to argue that only God could make a random number, only God could act in a random way, a truly personal way. I leave it to the reader to draw the meanings of this way of thought, perhaps by exploring my posts at my major website, *Acts of Being* [3], or in my first published book *To See a World in a Grain of Sand* [4].

There's more too it than that, such as the realization that modern physics points to the likelihood, at least as I see matters, that physical matter ¹ and energy and fields are shaped from a strange stuff that is almost abstract, almost a ghostly manifestation of mathematical truths and metaphysical truths and 'arbitrary' facts. Speaking somewhat poetically and vaguely, matter is frozen soul-stuff.

For the current discussion, the point is simple and clear: modern mathematics and physics point to richer possibilities for metaphysical understandings of created being. In addition, the shaping processes which turn that abstract stuff into thing-like matter are more a narrative than a tinker-toy construction using pre-formed components. In terms of Hellenistic metaphysics, this implies that the *Timaeus*, the only dialog Plato wrote to deal directly with the God and His creative acts, needs to be used as a strong corrective to the more prosaic, and pantheistic, views of Aristotle as well as Plato's more 'philosophical' dialogs in which matter and human souls seemed more god-like than the gods and the God seemed much in the background. Aquinas, of course, had the Bible as a corrective to his use of Aristotle, a use which Etienne Gilson thought to be a complete reshaping of Aristotle's thought. It's also interesting to note that Plato the religious believer denied that any creature, human soul or god, could be immortal but only the God, the Father and Creator of all. ²

¹In many of my writings, I'm a little careless about distinguishing between the loose term 'matter' when I should use the term 'mass' which is well-defined in physics. It doesn't bother me much. Readers knowing the distinction can adjust accordingly and those who don't won't be bothered by what might seem a pedantic and distracting point.

²I have subsequently learned that some scholars think that Plato, when speaking of the immortal human soul, was referring to an entity which existed at the level of Man, the entire human race and had no connection to an individual human being.

Though many Christians who fret over empirical knowledge are mostly worried about evolutionary biology, it's actually a trivial intellectual maneuver to talk even about the evolution of moral nature once the basic story of the physical universe is in place, a universe shaped from some strange stuff, manifested truths, into thing-like being.

We Christians need to pay close attention and give proper respect to all sorts of human knowledge. In a book I've published on the Internet for free download, *Four Kinds of Knowledge* [5], I classified (true) human knowledge into four categories: revealed truths, speculative knowledge, 'scientific' empirical knowledge, and practical empirical knowledge. I went on to claim that this is a division made necessary by our creaturely perspective. Ultimately, there are only two sorts of knowledge: that of God in His necessary and transcendent Being and that of God in His chosen role of Creator making contingent decisions about the stuff and events of created reality. And that leads to an understanding of the importance of physics which is not the study of some sort of neutral stuff upon which the drama of salvation will take place. The basic stuff of our universe, including energy and fields as well as matter, is an active part of that drama. Again, I recommend the interested reader explore the posts at one of my websites, *Acts of Being* found at <http://loydfueston.com/>, or read my first published book *To See a World in a Grain of Sand* [4].

My philosophical and theological writings aren't always easy to read but this is because I eschew the textbook style and also the modern rules about separation of different 'realms' of knowledge. Believing that many of our wrongful views of even mathematics and physics are due to our moral problems, I'll intertwine discussions of moral issues and the birth and development of stars.

Our empirical knowledge tells us how it is that we receive and understand even revealed truths. We have no truth-organs in our bodies upon which God stamps those truths. We have brains which, ideally, shape themselves to encapsulate our environments (which we can pray to include a morally well-ordered human society), the universe as a whole if things go well, and God's world (the universe seen in light of God's purposes) if things go very well. From there, we can even move on, by way of mathematics and metaphysics and revealed truths, to an understanding of Creation as a whole – including the world where the resurrected live for time without end with the Lord Jesus Christ. Not only is our speculative knowledge and our stock of revealed truths mediated in the human body through mundane

things such as brain-cells and hormones, but our understanding of speculative possibilities and our understanding of revealed truths can be enriched by a better understanding of empirical knowledge, knowledge of God's universe, knowledge of some of the decisions God made in shaping the raw stuff of Creation into the thing-like stuff of this world.

To complete his system of thought, Pope Benedict, perhaps along with a co-worker, needs to consider empirical knowledge in addition to revealed truths and speculative knowledge.

7 Broadening the Horizons of Reason

[The original version of this essay was published on the blog-site, *Acts of Being*, <http://loydfueston.com/?p=159>. It was finished and uploaded on 2008/06/09.]

I've included the entirety of an article from the Vatican Information Service. Pope Benedict XVI has spoken publicly about an important issue he addressed in some of his earlier books: Christian philosophy must respond to modernity and theology must also respond, though he apparently believes – plausibly enough – that theology will respond first to an updated philosophy.

Pope Benedict tells us, “Modernity is not simply a historically-datable cultural phenomenon; in reality it requires a new focus, a more exact understanding of the nature of man.” This is a good start though I would say that an understanding of man, a creature of this universe whatever our fate might be beyond the grave, requires some substantial understanding of the universe. Christian philosophers need first to deal with the work of Einstein, Gödel, and their successors. Then they need to deal with Darwin and his successors, especially the current generation of brain-scientists. General relativity and quantum mechanics and, likely, string theory, and many fields of mathematics, tell us much about the nature of the being that God shaped into this universe and also some speculatively much about the underlying being which was the raw material God created from nothing. History and other fields of empirical knowledge also have much to say but we have to start with the basics of the pesky stuff we're made from before we can more fully understand the story God is telling with this stuff.

Like it or not, geometries of space-time and the facts of electrons and electromagnetic fields provide the most certain knowledge we have of created

being. A whole variety of empirical fields, from history to transfinite set theory, provide us with a more complete view of this universe, one which could then be disciplined to a Christian understanding of this universe as a world – which I define as a universe seen in light of God’s purposes. A world is much like a morally ordered narrative. But it will require a lot of work to build a philosophy founded upon being rather than “myth” or the “gods of religion”. And we have to realize it will be not only a great effort but also a disorienting effort. See Chapter 1, *Hellenistic Metaphysics is Too Small*, for a discussion of this issue. Note I say Hellenistic metaphysics is too small, not that it’s wrong.

If anyone wishes to see a first shot at just such a system of thought as Pope Benedict would desire, they can check into my first published book, *To See a World in a Grain of Sand* [4]. I’ve also completed a book on the nature of human knowledge which can be downloaded for free, *Four Kinds of Knowledge* [5]. And I’ve gone beyond the thoughts in those books in the short essays posted on my weblog, *Acts of Being*, found at <http://loydfueston.com/>.

POPE HIGHLIGHTS THE VITAL ROLE OF PHILOSOPHY

VATICAN CITY, 7 JUN 2008 (VIS) - This morning in the Vatican, the Holy Father received participants in the sixth European Symposium of University Professors, which is being held in Rome from 4 to 7 June on the theme: “Broadening the Horizons of Reason. Prospects for Philosophy”.

The symposium has been promoted by university professors in Rome and organised by the Office for Pastoral Care in Universities of the Vicariate of Rome, in collaboration with regional and provincial institutions and the local city authorities.

In opening his address to them the Pope mentioned the fact that this year marks the tenth anniversary of John Paul II’s Encyclical *Fides et ratio*, and he recalled how when that document was published “fifty professors of philosophy in Roman universities expressed their gratitude to the Pope with a declaration underlining the importance of re-launching the study of philosophy in universities and schools”.

“The events of the years that have passed since the publication of the Encyclical have”, said the Holy Father, “delin-

eated more clearly the historical and cultural stage onto which philosophical research is called to enter. Indeed, the crisis of modernity is not a symptom of the decline of philosophy; on the contrary, philosophy must embark upon new lines of research in order to understand the true nature of that crisis”.

“Modernity is not simply a historically-datable cultural phenomenon; in reality it requires a new focus, a more exact understanding of the nature of man”.

Benedict XVI indicated that since the beginning of his pontificate he had received various suggestions “from men and women of our time”, and that “in the light of these I have decided to offer a research proposal which I feel may arouse interest in a relaunch of philosophy and of its unique role within the modern academic and cultural world”.

Quoting his own book, *Introduction to Christianity*, he said: “The Christian faith has made a clear choice: against the gods of religion for the God of the philosophers, in other words against the myth of custom and for the truth of being”. And he went on: “This affirmation . . . is still fully relevant in the historical-cultural context in which we now live. Indeed, only on the basis of this premise - which is historical and theological at one and the same time - is it possible to respond to the new expectations of philosophy. The risk that religion, even the Christian religion, be surreptitiously manipulated, is very real even today.”

“The proposal to ‘Broaden the Horizons of Reason’ should” he proceeded, “be understood as a request for a new openness towards the reality to which human beings in their uni-totality are called, overcoming old prejudices and reductive viewpoints in order to open the way to a new understanding of modernity”.

“The new dialogue between faith and reason which is needed today cannot come about in the terms and the ways it did in the past”, said the Pope. “If it does not want to see itself reduced to the status of sterile intellectual exercise, it must start from the current real situation of mankind, and upon that build a reflection that embraces man’s ontological and metaphysical truth”.

In closing, Benedict XVI referred to the need to “promote high-profile academic centres in which philosophy can enter

into dialogue with other disciplines, in particular with theology, to favour new cultural syntheses capable of guiding society". In this context, he expressed the hope that "Catholic academic institutions may be ready to create true cultural laboratories" and he invited the professors to encourage young people "to commit themselves to philosophical studies by facilitating appropriate initiatives" to guide them in that direction.

AC/.../UNIVERSITY PROFESSORS VIS 080609 (620)

8 The Practical Consequences of Inattention to God's World

[The original version of this essay was published on the blog-site, *Acts of Being*, <http://loydfueston.com/?p=519>. It was finished and uploaded on 2009/06/09.]

Americans, perhaps most human beings of the Modern Age, don't perceive what's inconvenient to their desired worldview. This is hardly a new observation – Tocqueville was puzzled by this trait back in the 1830s and others since, including Hawthorne and Melville and Solzhenitsyn and Ray Bradbury have at least spoken of this problem. Perhaps Tocqueville in *Democracy in America*, a book mostly complimentary to Americans, and Solzhenitsyn in his critiques of the West including the forward to the abridged edition of *The Gulag Archipelago* [11], were the most direct in their observations. Solzhenitsyn was forced into a renunciation of his almost unqualified high opinion of Americans by one specific spree of systematic criminal behavior committed by the U.S. Army according to agreements involving Roosevelt, Churchill, Truman, and Stalin – see *Operation Keelhaul* found at http://en.wikipedia.com/wiki/Operation_Keelhaul for a summary discussion of the brutal betrayal of many Soviet refugees and even some descendants of refugees from prior generations. All the betrayed human beings were tricked or forced back to the Soviet Union where they were sometimes sent into slave labor camps and sometimes executed right in front of the Allied soldiers. Solzhenitsyn was forced to realize that Americans had been able to walk away from their crimes and to even wash their own memories of the horrors they'd participated in. We walked away with an unchanged view of our moral purity as a people – strangely enough, this is true even of those who have a good sense of their own nature as personal

sinners.¹

Maybe we should be careful in condemning the young soldiers who were probably confused about what was going on, but we have to place full responsibility upon the older and more experienced American and British participants in this crime, including chaplains and medical personnel and senior officers and State Department officials, who would have known pretty well what was happening. They kept their mouths shut in the same cowardly manner as the nice middle-class Germans who served Hitler rather than risking punishment or loss of respectability. Yet, we still have to ask even of those young soldiers: how many of them were paying enough attention to be suspicious at least when they saw the brutal executions of ex-POWs whose crime had been to be captured when Stalin had ordered them to fight to the death? Did they remember what they'd helped to do or had at least witnessed?

What frightens me about talking to those just older than me, Vietnam veterans, is the small percentage who were observant enough to notice, for example, the almost total lack of Viet Cong or North Vietnamese soldiers in the villages invaded by American troops. Some were deeply disturbed to find themselves fighting teenagers and old men who were fighting in front of their family homes and others didn't notice the suspicious demographics, if that's a proper word for the age and sex distribution of corpses. Still others just echoed the government line that these people defending their villages were commies who didn't place any value on human life. They deserved to be shot down because they were trying to kill Americans who were only there to help the Vietnamese. Those who wish to read an account from a Washington perspective of an awakening awareness of the criminal nature of the war against the Vietnamese people can get hold of a copy of *In Retrospect: The Tragedy and Lessons of Vietnam* by Robert S. McNamara and Brian VanDeMark. This book speaks about some of the policies set in Washington which led to American soldiers waging war upon Vietnamese civilians and also speaks of the willful ignorance of those managing the war when McNamara was able to confirm by his early access to the libraries of Kennedy and Johnson that the facts of a criminal war were sitting right

¹My copy of this abridged version of Solzhenitsyn's classic is from 1985. A more recent version on the shelves of my public library is lacking the powerful and bluntly honest forward. We Americans don't take to insult so easily and we are experts of various sorts of quiet censorship and self-delusion – the point made by the gruff Russian and the other thinkers mentioned in this paragraph.

in front of them during their many meetings where government officials crossed items off their to-do lists and worked towards their career goals before heading home in their nice cars to their nice homes with their nice families.

The sheep can't be deemed totally innocent but the primary blame belongs to the shepherds. Our moral and spiritual leaders, our so-called thinkers, clergymen and philosophers, theologians and poets, political and business and civil-servant leaders have refused to pay attention to the world around us. Empirical reality has created problems for our established moral views to be sure and it's just when empirical knowledge threatens to be inconvenient that we human beings are strongly tempted to misperceive or ignore even the most obvious of facts. We need to pay attention most intensely just when empirical reality is most bothersome or most painful.

In fact, empirical knowledge seems to always come into conflict eventually with any set of ideas, political or economic, scientific or philosophical, technological or domestic. The Creator's thoughts lie always above and beyond us and those thoughts are best seen by way of human thoughts and human behaviors which are active responses to Creation and which prove to be appropriate responses. Even those few doctrines which we Christians claim to be revealed truths have had to be re-understood under the pressure of changing knowledge of empirical reality. For example, we believe God has promised a resurrection into life without end for those who belong to His Son, Jesus Christ. He didn't give us detailed instructions and we should pay more attention to modern biology, including evolutionary theories, as part of the process of understanding those promises of resurrection. After all, our inherited understandings of those promises were partly drawn from (often misunderstood) doctrines of pagan philosophers attempting to understand man's nature and his situation in the Cosmos. For example, the idea of the immortal soul held by the Christian Fathers came largely from Plato though there's no reason to believe that Plato's 'immortal soul' had anything to do with individual human beings.

To see truth, we first must pay attention to the things around us, to reliable histories of the West and of our own particular parts of it, to the best knowledge gathered by physicists and chemists and engineers, to the needs and desires of those around us, and to other aspects of empirical reality. In these early years of the 21st century, our environments include the abstract domains of modern mathematics as well as our best views of the spacetime regions when the universe first expanded out from an

extremely dense state. The environments of anyone who reads regularly or even watches decent documentaries on television also extend to ancient Egypt and to the highlands of Kenya.

Pay attention and think if you would ascend towards some plausible view of the nature and meaning of Creation and all the individual creatures it includes.

Right now, we Americans are paying a price for not paying attention because our economy has been gutted by the various criminal activities, domestic and foreign, of our political and big-business leaders. This isn't the place to discuss those details and there are others far better informed about the details than I am. I'm merely pointing out that we could have stopped this disaster years ago as it was developing but we didn't pay attention. As for me...I haven't voted for a major party candidate for President of the U.S. since 1988 and few other major party candidates for any political office in these past two decades. I even turned in a blank ballot once when there were no acceptable alternative candidates. For what it's worth, I also gave up any hope of ever receiving significant Social Security or Medicare benefits back in the late 1980s. These problems with our political and economic systems were not so hidden except to those who were willfully blind.

In any case, a morally well-ordered society, and all the attendant practical advantages, comes into being by actions that can only be proper if they are in response to a properly perceived world, a world to which we pay attention.

9 “Values Can’t be Drawn from Facts” and Other Old Philosophers’ Tales

[The original version of this essay was published on the blog-site, *Acts of Being*, <http://loydfueston.com/?p=676>. It was finished and uploaded on 2010/08/13.]

We’re told that David Hume proved that values can’t be drawn from facts. Most recently, I read of this alleged proof in an interesting and mostly unobjectionable book about the relationship between Protestant ways of reading texts and the origins of science, Peter Harrison’s *The Bible, Protestantism, and the Rise of Natural Science* [6]. I’ll pass over the issues of defining ‘facts’ or ‘values’ or ‘proof’ and go directly to an rough explanation of how it is that we do, in fact, draw values from a factual world. Sir Isaac Newton once said said:

I keep the subject of my inquiry constantly before me, and wait till the first dawning opens gradually, by little and little, into a full and clear light. [Sir Isaac Newton]

I understood him to say that truth is found, and a ‘true’ mind is formed, as an honestly and constantly lived response to reality as we can best know it. Such an intensely lived response will reshape our thoughts and minds. It will form our moral characters.

In my writings, I’ve been developing an understanding of created being, a subject to which I’ve recently returned as I’m trying to develop an understanding of moral and social and political aspects of human life. This short collection of essays doesn’t have any of my recent efforts of that sort, so I’ll simply refer the interested reader to the more complete collection, *Acts*

of Being: Selected Weblog Writings From 2006 to 2011, downloadable at <http://loydfueston.com/downloads/acts.pdf>. Alternatively, you can wait until I issue some smaller collection of essays covering those issues.

The process of shaping the mind in response to Creation ensures that we gain values which are found in Creation in its entirety, including the world of the resurrected as well as this world. Creation is the totality of created being and includes not only created being but also various levels of abstract being going right back to the thoughts God manifested as the basic, or raw, stuff of this Creation. The concrete values proper for men, flesh-and-blood creatures that we are, can be drawn from the narrative which is this concrete world in its movement towards an unknown future, but we can rise to higher moral levels by proper formation and use of our minds. This doesn't mean we transcend Creation but rather that we can begin to understand the purposes, let us even say the values God intends for His created works.

Movement. Evolution of species or classes. Development of individual entities.

Our moral instincts aren't a direct vision of some transcendental realm of truths. They come first from behaviors and attitudes which evolved in the human genetic line over millions of years. In fact, that process of evolution of moral nature started in pre-human lines of social mammals and, to some extent, in still earlier lines of living creatures.

At some time, the moral characters of our ancestors seemed to come into a tighter and more conscious state, partly because of a useful error in human thought. Once our ancestors had ascended, or descended as Darwin would have said, to a greater self-awareness, they concluded that our moral behavior is under direct, immediate control of those aware selves. In fact, we are creatures of moral action and it's been shown that, at least for certain easily measured actions, we start to act before the more conscious, higher regions of our brain show any sign of activity. I've written of this issue before and written a little about its practical effects, though arguably R.L. Stevenson spoke more graphically in *Dr. Jekyll and Mr. Hyde* about the dangers of the illusion that we can directly control our 'inner selves'. In fact, true values are useful as guides to human animals in strengthening their moral characters but, for the most part, self-aware thinking plays a role by shaping our selves so that we act properly in the future, not by turning us into some sort of creature which can transcend by a heroic exercise of the will, for example, the powerful urges caused by a genetic problem. Values,

moral abstractions in general, are necessary for the conscious shaping of our selves or our children, but our moral character is in that behavior, it is realized in our embodied selves and our actions. It's not just our 'good' feelings.

In my effort to communicate a view at odds with most views of human moral nature. I've spoken in past years of two sets of processes which have formed the human mind, including its moral aspects. In 2011, I realized that the communal aspects of our moral natures have to be considered separately, and so the list becomes:

1. We are born with certain tendencies toward behaviors and attitudes which are our 'moral instincts'. These are the results of selection processes working over many thousands of years upon particular genetic lines of highly social creatures with other characteristics such as an opportunistic attitude.
2. We are shaped as individuals as we respond actively to our environments. If there's a harsh side to my views on human nature, it's the implication that passive human animals never develop towards the state of human personhood.
3. We live in communities which teach us moral behaviors and values and those communities go through processes which I think to be similar to those of the evolution of biological species and also some processes similar to those of the development of the individual.¹

These three processes exist at the concrete level of created being and the events which occur in the narrative which is this world. The second process, formation of the human mind, also exists at more abstract levels of created being. The third process involves communities of various types and sizes and abstract relationships are certainly involved. The entire process of understanding our own moral natures starts from awareness of the factual aspects of our own physical nature and continues when we begin to deal with those factual aspects through our intellectual faculties, that is, when we begin to draw abstractions from our concrete moral natures.

We place a high value on human life because we evolved as human beings in human societies, even though those societies might have been often no

¹There is some insight to be gained by contemplating the claim of the historian Carroll Quigley: Truth emerges in time through a communal process.

more than families. We have instincts against killing other human beings and most men even have great trouble killing another man, face-to-face, when it seems morally allowable. A humbling fact, which emphasizes the animal foundations of human moral nature, is that wolves seem to have stronger instincts than human beings against killing other members of their own species. A wolf will place higher value upon the life of another wolf than a man will place upon the life of another man. Human beings have developed higher moral principles, absolute principles, despite starting from a lower moral level of concrete behavior than wolves, in some respects.

In this brief survey, I'll also mention a problem which arises in the Gospels of Christianity. Jesus of Nazareth imposed some very difficult demands upon us, particularly His demands in the *Sermon on the Mount*. It's not clear why creatures in a world of Darwinian processes should love their enemies and not clear how to actually shape ourselves or our children to the higher demands of Christ, but we could – in principle – understand these matters. Some would say we should simply obey Christ but He called us to imitate Him, even to be perfect as God is, and didn't call us to simple, mindless obedience.

As St. Thomas Aquinas told us:

[J]ust as a disciple reaches an understanding of the teacher's wisdom by the words he hears from him, so man can reach an understanding of God's wisdom by examining the creatures He made. . . (Page 17 of St. Thomas Aquinas' commentary on *1 Corinthians* [1].)

By understanding how the Creator worked, we come to understand the thoughts He manifested in Creation. Within those divine thoughts, are what we call values, and we can make those thoughts our own by proper exploration of empirical reality and proper active response to it. Values can come from facts because the Creator chose the facts which surround us, like the abstractions, manifestations of God's thoughts. Even those sometimes nasty facts which deal with the evolution of moral species and the development of moral individuals are part of the story God is telling.

10 Reason Comes from Our Interaction with Empirical Reality

[The original version of this essay was published on the blog-site, *Acts of Being*, <http://loydfueston.com/?p=755>. It was finished and uploaded on 2010/12/28.]

All reason is from God and of God. There is no immaterial reasoning agency part of or attached to the human creature. There is no mind or soul as many imagine, nor can we directly access even the manifested truths underlying Creation, let alone any transcendental truths which exist beyond this particular Creation. All reason is from God and of God and the more abstract forms of reason are part of the abstract being from which the matter of this world was shaped. When the mathematical laws of physics operate, or the narrative laws of biological evolution or those of human history, we see reason at work and we shape our brain's operations to correspond to this reason. Even perception of our environments requires us to actively engage the objects and deal with the relationships in those environments. This active engagement is part of the shaping of what we call our minds.

We can state one of the 'laws' of biological evolution in this rough way: "Those lines of creatures better succeed in reproduction which can better adapt their bodies and actions to what lies around them." Human beings have moved to a higher level of adaptation – that of mind-formation, though still remaining creatures in all senses, having more refined skills of abstract reasoning than found in chimpanzees and other creatures, but not different sorts of skills than those elicited from chimpanzees under laboratory conditions and sometimes found in chimpanzees in the wild. Chimpanzees have

some of the brain structures for forming a mind but I'd be reluctant to say that mind-formation rises above a hint in our apish cousins.

We can generalize from the physical bodies and the actions of living and non-living creatures to the more abstract sorts of mental events. I'm not speaking only of academic philosophers or even mostly of them. I'm speaking of German and Japanese farmers who carry their habits and general knowledge about soil and weather to new lands and take just a few years to become better farmers than the natives. I'm speaking of poets responding to new things or new regions of earth or new experiences. I'm speaking of hackers on a computer trying to find new ways to solve problems and sometimes working by writing code which doesn't correspond directly to preplanned or even known methods. I'm speaking of inventors trying to build internal combustion engines where the entire engine is basically one piston-chamber or other inventors working towards some goal they can't even state.

We trap ourselves when we try to limit our activities to those which can be planned or to any foreseeable activities because those, by definition, can only correspond to known forms of reason. We can learn new forms of reason if we're willing to explore our world courageously and without too many preconceptions, even when we tinker with things or ideas in a seemingly arbitrary way. If our tinkering produces something worthwhile, then we should sit back and contemplate our actions and their results, whether we're dealing with a new way of picking a banjo or a new way to sort records on a computer. From these contemplations we might derive new and richer understandings of Creation. We can even be said at times to have entered into more abstract realms of being.

In fact, it seems quite possible to read the history of human thought in a manner quite consistent with this. We have to try to temporarily set aside our modern viewpoint formed during centuries when a certain type of rationality allowed for extraordinary progress in understanding many aspects of Creation, gathering mountains of knowledge of this concrete world and abstracting from that knowledge to derive various sorts of physical laws and theories as well as less rigid ways to understand history and to understand living creatures in general. Seen in proper historical context, the earlier form of reasoning developed by the Greeks, 'rationalistic' or 'Euclidean' but not tied tightly enough to empirical reality, also had a good run of allowing progress in understanding Creation in its concrete and abstract realms. Similar statements can be made of the mythical reasoning devel-

oped in the centuries before the early Greek scientists and poets prepared the ground for the philosophers.

Will we move on from here? Is the reason of the modern world the end-all of human thought? I doubt it. Our children will not only know things about reality which would amaze us – they will reason with power that might frighten us.

We could ask, “What form of reasoning might someone discover?” I can’t even make a guess though I think there are hints in my writings and in the writings of other modern thinkers, especially mathematical physicists, mathematicians, brain-scientists, and theorists in evolutionary biology. Undoubtedly, there are historians, novelists, poets, musicians, visual artists, and some of those tinkerers in mechanical matters who are also developing new forms of thinking about Creation by active exploration of that same Creation. They are learning how to think about Creation from Creation.

Even as creative thinkers, at least truly creative thinkers, we don’t always know what we’re thinking until we’re thinking it. We don’t always know where the story is going until it gets there. A good tinkerer doesn’t always know what the danged thing is until he builds it.

We can’t respond with a pure freedom to Creation because of our creaturely natures. Even the wildest and most open of creative efforts needs to work within some forms, some disciplined structures, but those called to work at the frontiers of human thought or art or technological innovation should be willing to step outside of the forms of reasoning or acting which they inherited. In some periods of history, the call to this sort of creative work is a beckoning to step outside of their own minds formed to established ways of reasoning.

Speculating, telling stories, or tinkering, we respond to God’s Creation, thereby sharing in God’s own thinking and acting – though the two aren’t really separable for God. We share also in God’s freedom, the freedom He exercises as Creator and Narrator. In these ways of sharing, we mold our minds, souls if you prefer, to the shape God wishes for us, the shape He wished when He manifested a certain body of thoughts as the stuff of a story, this world, and then brought into being a race of creatures capable of responding to Creation in this general way.

The human mind is an entity which can, in a strong sense, be all created being. It isn’t just an entity which can understand created being in the traditional way where he who would understand brings with him tools which are independent of created being. We do create such tools by shap-

ing our minds to deal with, even encapsulate, parts of created being, but those tools should be seen as that – images of parts of created being rather than truly independent tools for analyzing or explaining from outside. You could even say that one generation’s mental tools will melt into the lower levels of understanding of the next generation where I speak of intellectual generations, such as pre-Socratics and classical Greeks and so forth up to the broader spectrum of modern thinkers.

11 Better Explanation of Scientific Issues Isn't Enough

[The original version of this essay was published on the blog-site, *Acts of Being*, found at <http://loydfueston.com/?p=1020>. It was finished and uploaded on 2011/09/13.]

This article, *Rebalancing the Nuclear Debate Through Education* found at <http://www.sciencedaily.com/releases/2011/09/110909111444.htm>, tells us:

Better physics teaching with a particular emphasis on radioactivity and radiation science could improve public awareness through education of the environmental benefits and relative safety of nuclear power generation, according to leading Brazilian scientist Heldio Villar. He suggests that it might then be possible to have a less emotional debate about the future of the industry that will ultimately reduce our reliance on fossil fuels.

This is true enough but I think there is a more fundamental failure of our modern educational systems. Before we can reason effectively using any sort of knowledge, before we can even take in any sort of knowledge as knowledge, we need to shape our minds so that we have the proper respect for what lies outside of us.

As I noted recently, Thomas Jefferson thought – rightly in my opinion – that a “perverse literacy” would lead to an “invincible ignorance.” This is to say that knowledge, even blunt and undeniable facts, will be either ignored or squeezed into a weird shape to protect our preferred view of reality. I’ve noted before how Christians can read St. Augustine’s *City of God* and miss his jokes about farting – they expect holiness and purity

and light in a book by a saint, not hard-headed attitudes about embodied human nature. I could add that I've read even popular histories and found hints, but strong hints, that American leaders have committed major war-crimes or have purposefully squandered the lives of American soldiers, perhaps even preferring many American deaths to upset the American public and sucker them into stronger support for wars just or unjust. In a more scientific vein, we could point to the almost deliberate misreading by many wannabe Christians of, say, the writings of evolutionary biologists. Those practitioners of "perverse reading" miss the dynamic nature of this field of science and take questioning, qualifications, and expressed uncertainties of many sorts as being evidence that biological evolution is a false theory.

It is hard to read difficult works in an intelligent way. How many can read *Moby Dick* and realize that Melville is presenting Captain Ahab as being a more self-aware and courageous American, that is, as a morally insane human being who is in rebellion against God, upset that God has put constraints upon us?

We need reading and thinking skills to be able to read or hear even the best of knowledge and to make it our knowledge, that is, knowledge to which we have responded and have made our own, made a part of our thinking processes.

I'd like to go even further, to point towards what might be called my overarching goal: We need to be able to see all humanly-accessible knowledge, including that of our own technology, as being part of a unified body of knowledge of God's Creation. In my freely downloadable book, *Four Kinds of Knowledge* found at <http://loydfueston.com/downloads/know.pdf>, I write about humanly accessible knowledge being of four kinds for practical reasons but being of only two kinds ultimately: knowledge of God acting freely as a Creator of a particular world and knowledge of God in His transcendence. We know God in His transcendence only so far as He reveals Himself.

Knowledge of Creation, physics as well as evolutionary biology and human history and literature and all other fields of knowledge, is knowledge of thoughts God manifested. By struggling to understand, as St. Thomas Aquinas pointed out more than 700 years ago, we begin to shape ourselves as better images of God. We become children picking up sticks and pretending to do what our Father does as He goes about His work of creating and sustaining and telling the story which is this world.

Western Christians once had a story of this sort and then we learned

much that told us that story had always been no better than plausible speculations, no more and no less than an attempt to explain each level of created being by way of a narrative which held all of those levels and each entity in those levels in place. We learned a lot of reasons why that narrative was defective and we learned the wrong lesson that such narratives aren't possible. Such a narrative is possible and creating that narrative, however implausible it will prove to be to our descendants, is perhaps the most important part of building, or rebuilding, a civilization.

Somewhere, Wendell Berry, the poet and farmer, told us that if we find moral ways to make our livings, we'll more or less automatically solve our ecological problems. That claim can be enlarged to cover many more sets of problems, but – as he knew well – we can't find moral ways to make our livings, including moral ways to generate power, until we recover an understanding of Creation as such. And that will require a far greater effort than pushing a few technical words and diagrams into the heads of our children.

Appendices

Appendices

Other Writings by Loyd Fueston

Why Speak of Other Writings?

My work is of a whole though I've been told that my writing style, at least for fiction, changes a lot to fit the story I'm telling. I think I tend to write theological and metaphysical works, and the occasional political piece, in the style of a novelistic philosopher – such as Plato or Nietzsche. I also write novels in the style of a philosophical novelist, such as Melville, or a theological novelist, such as Flannery O'Connor. Those novels are an integral part of the development of my worldview, my understanding of the Creator and His Creation, including that unique part of Creation – man.

Nonfiction Books

In 2006, my first published book appeared due to the kindly intervention of the theologian Stanley Hauerwas and the generosity of Jon Stock at *Wipf & Stock*, a republisher of Christian works of merit and a first publisher of works marketed in the academic community. That book was *To See a World in a Grain of Sand* as described at http://loydfueston.com/?page_id=17. Only a paltry number of copies have been sold. A follow-up book about struggling through a difficult period, *The Peace of Christ* as described at http://loydfueston.com/?page_id=89 did no better.

I set out on a different path and published my next book, *Four Kinds of Knowledge*, on the Internet intending to allow personal use though I reserved derivative rights, first under my own – perhaps unenforceable – wording and then under a Creative Commons license. This book is available

for downloading at <http://loydfueston/downloads/know.pdf>.

Recently, I expanded and radically revised an article I'd written about human rights. The book, *Human Rights: An Evolutionary and Christian Perspective*, can be downloaded from <http://loydfueston/downloads/rights.pdf>. There is also a short article, *Justice: The First Step Towards God*, which can be downloaded from <http://loydfueston/downloads/rights.pdf>.

In 2011, I typeset and published as a pdf file a majority of my blog entries from both *To See a World in a Grain of Sand* at <http://loydf.wordpress.com/> and *Acts of Being* at <http://loydfueston.com/> and this year I updated that ebook. *Acts of Being: Selected Weblog Writings From 2006 to 2011* is downloadable at <http://loydfueston.com/downloads/acts.pdf>. This book is part of a set of samplers of essays from that collection. The goal is to produce books which are more focused and much smaller. I am myself sometimes intimidated by the sheer volume of writings I've produced. Below, I list the samplers published to date:

1. *A Modern View of Creation: Making Peace with Empirical Reality* at <http://loydfueston.com/downloads/acts-emp.pdf>.
2. *A Modern View of Creation: The Human Mind* at <http://loydfueston.com/downloads/acts-mind.pdf>.

Novels

Consistent with my view of the unity of human knowledge, at least true knowledge, I consider my fictions to be part of the same effort as my non-fictions. As a possible aid to the reader, I'll simply mention that I've made four novels available for free download under a Creative Commons non-derivatives license:

- *Corporate Sex* at <http://loydfueston.com/downloads/corpsex.pdf>;
- *A Man for Every Purpose* at <http://loydfueston.com/downloads/aman.pdf>;
- *The Hermit of Turkey Hill* at <http://loydfueston.com/downloads/hermit.pdf>;

- *The Open Independence of the Seas* at <http://loydfueston.com/downloads/open.pdf>;

Other Writings to Come

I'm back to working, sporadically but seriously, on several novels and one short story. I'm also planning to put some additional writings from the blog, *To See a World in a Grain of Sand* at <http://loydf.wordpress.com/>, in book form(s). In particular, I wrote some Lenten meditations which I consider to have some worth. The intent was to write meditations in a spirit of peace with modern empirical knowledge rather than 'spiritual' meditations with pre-modern understandings of the world. I don't know if I succeeded but I plan, God willing, on getting back to organizing them into book form.

I've also done a substantial amount of work on books where I think I might be able to add newer insights on specific topics, such as the nature of the human mind – tentatively named *The Human Mind as Re-Creation*. Others are partially written or scoped out or have appeared in my dreams.

My major desire is to return to completing some of the fragments of novels stored on my computer and to write new novels. I'm also returning to some experiments with the short-story form. All my earlier, 1990ish, short stories have been disappeared and I'm not sure myself if that was all done purposely or sometimes by accident.

In my opinion, we can't move forward in developing better and richer understandings of God in His role as Creator, of His manifested thoughts (Creation), or man until we have a body of words and concepts which are drawn from current understandings of Creation as we can perceive and explore it. Those understandings would have to then be developed in a more or less freely creative style into a narrative which is an image of God's story which is this world. Homer and the great lyric poets of ancient Greece are said to have blazed the paths followed by the ancient Greek scientists and philosophers. We also need poets and novelists to do this sort of work though I suspect they would nowadays have to follow Einstein and Darwin, if only to catch up.

Bibliography

- [1] St. Thomas Aquinas. *Commentary by St. Thomas Aquinas on the First Epistle to the Corinthians*. Ave Maria University Website, 1240. translated by Fabian Larcher, O.P. in unknown year and made available at website of Ave Maria University.
- [2] Jacques Barzun. *The House of Intellect*. Harper & Brothers, 1959.
- [3] Loyd Fueston. *Acts of Being*. Loyd Fueston, 2006. Main web-blog for discussing more technical issues of philosophy and science. Found at <http://loydfueston.com/>.
- [4] Loyd Fueston. *To See a World in a Grain of Sand*. Wipf & Stock, 2006. Search for Fueston at publisher's site – <http://wipfandstock.com/>.
- [5] Loyd Fueston. *Four Kinds of Knowledge*. Loyd Fueston, 2008. Downloadable at <http://loydfueston.com/downloads/know.pdf>.
- [6] Peter Harrison. *The Bible, Protestantism, and the Rise of Natural Science*. Cambridge University Press, 2001.
- [7] Robert Nisbet. *The Twilight of Authority*. Liberty Fund, Inc., 2000. First published in 1975 by Oxford University Press.
- [8] Roger Penrose. *The Road to Reality: A Complete Guide to the Laws of the Universe*. Alfred A. Knopf, 2005.
- [9] Carrol Quigley. *The Evolution of Civilizations: An Introduction to Historical Analysis*. Liberty Fund, 1979. A reprint.
- [10] Alastair Rae. *Quantum Physics: Illusion or Reality*. Cambridge University Press, 1994.

- [11] Aleksandr I Solzhenitsyn. *The Gulag Archipelago, Abridgement by Edward E Ericson, Jr.* Harper & Row, Publishers, 1985.

Colophon

This book was typeset using the LaTeX typesetting system created by Leslie Lamport and the memoir class written by Peter Wilson.

The LaTeX typesetting system is a set of macro commands using the TeX typesetting system written by Donald Knuth. The body text is set 10/12pt on a 33pc measure with

Computer Modern Roman designed by Donald Knuth. Other fonts include Sans, Smallcaps, Italic, Slanted and Typewriter, all from Knuth's Computer Modern family.

