

SPIRITUAL CURRENTS: THEISTIC SCIENCE, SCIENTIFIC MATERIALISM, AND THE NEW JERUSALEM COME DOWN TO EARTH

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Emanuel Swedenborg entered the Western intellectual tradition at a time of unprecedented cultural upheaval. The Renaissance had provided the power of human reason to fuel yet another revolution, this time of science, engineering and empiricism, that would produce the blessings and afflictions of the Industrial Revolution, along with a new sense of skepticism that would shape the modern world. Born in 1688, he is a pivotal figure of this Enlightenment, first as a receiver of Francis Bacon’s *Novum Organum* of 1620, second as a contemporary of the freedom movements inspired by the Natural Law Philosophy of Rousseau, Montesquieu and Locke.¹ Less obviously but most significant of all, he was a participant in the greatest upheaval of the previous 2,000 years: it was Swedenborg himself who proclaimed 1757 as the year of the long anticipated Last Judgment, foretold in the *Revelation* of John as the descent of the New Jerusalem. But this Last Judgment was a spiritual phenomenon, taking place in the spiritual world, and not the natural world of Christian expectations. These cataclysmic changes on three fronts came together in the consciousness of this remarkable man, whose research and writings would set about to interpret their meaning and purpose. We cannot fully appreciate his ambition or his achievement without a thorough understanding of this momentous event.

¹Natural Law, *Britannica Online Encyclopedia*, retrieved January 10, 2013, from <http://www.britannica.com>

THE CASE FOR THE LAST JUDGMENT

The search for signs of the New Jerusalem in the natural world following the Last Judgment of 1757² cannot begin with that event. We must start with a prologue to establish the natural world context into which this event descended. Without this perspective the Last Judgment makes no historical sense, and might appear to have no logical cause at all.

We start not with the Last Judgment of 1757, and not with Lord's³ first advent into the world either, but at the beginning of the human narrative, with the first "last judgment," of *Genesis* Chapter 3 – the fall of the human race into the knowledge of good and evil. After being reassured by the serpent that she "would not surely die" were she to eat of the tree of the knowledge of good and evil, Eve does just this; and the die is cast for the long redemptive struggle of the fallen human race.

...the Lord God said to the woman, "What is this you have done?" The woman said, "The serpent deceived me, and I ate." So the Lord God said to the serpent: "Because you have done this, You are cursed more than all cattle, and more than every beast of the field; on your belly you shall go, and you shall eat dust all the days of your life. And I will put enmity between you and the woman, and between your seed and her seed; He shall bruise your head, and you shall bruise His heel."⁴

²This refers to the Swedenborgian doctrine of a spiritual Last Judgment, foretold in the *Revelation of the New Testament*, as an accomplished event which occurred in the spiritual world in 1757, as reported by Emanuel Swedenborg in *The Last Judgment* (1758) and other works.

³Based on Swedenborg's explanation of the Godhead as a trinity of three essentials of a single God, "Lord" becomes a technical term of sorts, which can mean either God the Creator or Christ the Redeemer. Since both represent the same divine entity, the term applies to both. This does not present confusion once the concept is fully understood. See Chapters 1-3 of Swedenborg's *True Christian Religion* (1771) for a complete explanation of this doctrine.

⁴*Genesis* 3:14-15 (NKJV)

Swedenborg explains the spiritual meaning of this passage as the earliest prophecy of a Redeemer⁵ who would come into the world, in answer to the devolution, over time, from the “knowledge of good and evil” to immersion into evil itself.⁶ What happens here will eventually require the first advent of the Lord; and we find that something like this will happen again, at the end of the Christian Church, necessitating yet another coming of the Lord into the world. These first two events are described in Swedenborg’s *Arcana Coelestia*, n. 2034:

After everything celestial with the human race perished, that is, all love to God, so that as a result the will for what is good existed no longer, the people were separated from the Divine. For nothing other than love effects conjunction, and when love has been reduced to nothing, disjunction has taken place. And when the latter has taken place destruction and annihilation follow. At that point therefore a promise was given concerning the Lord’s Coming into the world, who was to unite the Human to the Divine, and by means of this union was to join [to the Divine] the human race that was abiding in Himself through faith grounded in love and charity. From the time of that first promise given in *Genesis 3:15*, this kind of faith in the Lord who was to come was conjunctive. But once faith springing from love did not remain any more in the world the Lord came and united the Human Essence to the Divine Essence so that these were completely one, as He Himself states explicitly. At the same time He taught the way of truth to the effect that everyone who believed in Him, that is, who loved Him and what was His, and who abided in His love, which is a love directed towards the entire human race and so towards the neighbor, would be conjoined and thus saved.

With the addition of the Last Judgment of 1757 to these two other spiritual branch points, the idea of redemption emerges not as a single historical event, but as a cyclical phenomenon over time, with smaller cycles within the larger ones, of falling away and covenant renewal. In order to square with human experience, our spiritual history is better viewed from the perspective

⁵See *Arcana Coelestia* nn. 250-260 for Swedenborg’s exegesis of *Genesis 3:15*, with a detailed exposition of the internal, spiritual sense, by means of the spiritual-literal correspondences embedded in the passage.

⁶For an explanation of this descent into evil along a “slippery slope” from doubt, to denial, to defiance of what is good and true, see Swedenborg’s *Conjugal Love*, n. 444.

of this complex process. According to this interpretation, the Last Judgment of 1757 was not an isolated event, but was rather the culmination of a chain of identifiable spiritual and natural events from the earliest days of human history.

THE EFFECTS OF THE FIRST ADVENT

The most fundamental outcome of the first advent was the Glorification of the Lord's Human, occurring at his resurrection.⁷ Returning to *Arcana Coelestia* n. 2034, we learn the significance of this event.

Once the Human had been made Divine, and the Divine made Human in the Lord, an influx of the Infinite, or the Supreme Divine, took place with the human race which could not possibly have manifested itself in any other way. Also by means of that influx the dreadful false persuasions and the dreadful desires for evil were dispersed with which the world of spirits had been filled and was constantly being filled by souls streaming into it from the world; and those who were actuated by such persuasions and evil desires were cast into hell and so separated. Unless this had been done the human race would have perished, for it is by means of spirits that the Lord rules the human race. They could not have been dispersed in any other way because there was no activity of the Divine by way of a person's rational concepts into their inner sensory awareness, for these are far below the Supreme Divine when not so united.

This Last Judgment brought about a housecleaning in the spiritual world: the world of spirits was cleared of its overflowing stock of evil denizens, and a separation between heaven and hell ushered in a new spiritual order. This produced a beneficial effect on the natural world as well, as peoples' minds were no longer subject to the involuntary influence of evil spirits. Of equal importance was a development that is often overlooked: a higher degree of freedom was a

⁷The enormity of this fact of Glorification startled Anglican minister John Clowes (1743-1831) into an almost Pauline conversion to the New Jerusalem Church. A spiritual epiphany on the significance of *Divinum Humanum* led him to become a patriarch of the early church in England. This story was related in an address by the Rev. Samuel Noble in 1831 and preserved in Tafel, R. L., *Documents Concerning the Life and Character of Emanuel Swedenborg*, Swedenborg Society, London, 1877, Vol. II, Part II, pp. 1166-1168.

part of this new order – an emergent human trait that would play an essential role in a spiritual judgment yet to come.

The Glorification served as a major preparatory step for this judgment to come. “Heaven and earth” were now truly conjoined, the “earth” no longer a level of spiritual-natural reality in potential, but brought fully into the contiguum of Creation. The mechanism of this conjunction was spiritual influx, with natural afflux in reciprocation.⁸

What changed? In the natural world, all the earth, from its subatomic particles to the human mind, as a result of this change in natural matter itself. This is a pivotal concept without which we cannot proceed, best explained by means of a series of premises: We learn first that there are three discrete degrees of operation in God the Creator. Swedenborg calls these “degrees of height,” although this allusion to geometry is just a teaching aid; they could just as well be degrees more and less interior.

There are three infinite and uncreated degrees of height in the Lord, and three finite and created degrees in people. These three elements constitute the three degrees of height in living entities. The three are analogous to the first end, the intermediate end, which we

⁸ “Spiritual Influx is the Divine Proceeding, and is the Lord Himself, Omnipotent, Omniscient and Omnipresent. This process is implied by the term “flux,” which means ‘to flow’; from this are formed such words as ‘afflux’ (flowing toward) ‘efflux’ (flowing from), ‘transflux’ (flowing through), and ‘influx’ (flowing into), all of which are applied to the Divine Proceeding. (Rev. T. S. Harris, *New Church Life* in 1938, p. 345.) There is an essential spiritual mechanism at work here that will become important in the discussion of the emergence of organic forms to follow. Swedenborg in very many places speaks of the inflowing of spirit (*influx*), into non-living nature, into living organisms and into human beings on both natural (body) and spiritual (mind) levels. In other places he describes a reciprocal, natural-to-spiritual attraction, called *afflux*. The spiritual importance of this to humans is the equilibrium this dynamic affords for the maintenance of free will. On the subhuman level, this reciprocal dynamic is implicated in the emergence and maintenance of form, as a reciprocation of natural matter at its minutest level “rising” to meet “descending” spiritual substance, one essential of which is form.

call the cause, and the last end, which we call the effect.⁹ (DLW n. 230)

Then we learn that these same degrees are inherent in human beings, as creatures made “in the image of God”:

That in humans there are these three degrees can be seen from the elevation of their minds even to the degrees of love and wisdom in which angels of the second and third heavens are; for all angels were born people; and people, as regards their interiors pertaining to their mind, are each a heaven in least form; therefore there are in the human being, by creation, three degrees of height as are heavens. Moreover, a person is an image and likeness of God; consequently these three degrees have been inscribed on them, because they are in God-Man, that is, in the Lord.¹⁰

At issue is how these degrees of spiritual-natural reality appeared before and after the Lord’s advent into the world, and then after his Glorification, at the resurrection. This is central to our understanding of how not only human nature was changed, but how Nature itself was transformed, from being an intermediate receiver of spiritual influx, through the angelic heavens, to a receiver of direct influx from the Lord himself.

Before the Lord from eternity (who is Jehovah) took on a human nature in the world, the first two degrees existed actually, and the third degree potentially, as they do also in the case of angels. But that after assuming a humanity in the world, He put on in addition the third degree as well, which we call the natural, so that He became in consequence a man like any other in the world. Indeed, the Divine which previously filled every space and interval of space in the universe independently of space did enter into and permeate even the outmost levels of nature. Before His assuming a human form, however, the Divine influx into the natural degree was conveyed indirectly through the angelic heavens, whereas after His assuming a human form it flowed directly from Him.¹¹

The *Arcana Coelestia* extends this progression by explaining the nature of this pre-advent state.

⁹Swedenborg, Emanuel, *Divine Love and Wisdom*, n. 230

¹⁰Ibid., n. 231

¹¹Ibid., n. 233

Prior to the Lord's Coming the Divine Human was Jehovah in the heavens; for it was by His passing through the heavens that He presented Himself as a Divine Person before the eyes of many on earth. In those times the Divine Human was not so much one with the Divine Himself, called the Father, as when the Lord had made the Divine Human within Himself completely one with the Father.¹²

What was lacking here was the fulness of ultimates; what remained to be accomplished was the complete structural and functional series of end, cause and effect, linking *Esse* above the heavens with *Existere* (*Esse* going forth in Creation), and finally, this same Lord a natural man.

Before the Lord's Coming, whenever Jehovah passed through heaven He appeared in human form, as an angel; for heaven as a whole resembles one entire human being, called the Grand Man. When therefore the Divine Himself passed through heaven He appeared in human form, as an angel, before the eyes of those to whom He spoke. This was Jehovah's Divine Human before the Lord's Coming. And the Lord's Human, having been made Divine, is also Jehovah's Divine Human, for the Lord is Jehovah Himself in the Divine Human.¹³

Hindmarsh¹⁴ touches on the significance of this principle when he explains, by way of a discussion of human spiritual regeneration, how new substances and forms – untainted by the imperfections in the natural person – are necessary to produce the “new man.” Considering the above principles, there is an analogy here for the coming- into-being of new natural substances and forms as well.

¹²Swedenborg, Emanuel, *Arcana Coelestia* n. 6000:7

¹³Ibid., n. 6831

¹⁴Robert Hindmarsh (1759-1835) a printer, was the founder of a Swedenborgian reading group in London in 1783, that would grow to produce “Swedenborgianism” in the world, and the New Jerusalem Church in England, and later the United States. At the end of his life he published a comprehensive study of the Lord's Glorification, in an attempt to settle, once for all, the question of the actual nature of the Lord's body with which he arose from the grave. Hindmarsh, Robert, *An Essay on the Resurrection of the Lord; An Humble Attempt to Answer the Question, With What Body Did the Lord Arise From the Dead?*, J. S. Hodson, Printer, London, 1833, p. 195.

It follows, therefore, that the Divine Natural Substance, which had been such from eternity, yet rather *potentially* than *actually*, and came forth from the Father, to be made actual in the Person of the Lord during his pilgrimage on earth, was never contaminated by the evils of the human race.

For the same reason, if new powers, qualities, and properties, are to be insinuated into any subject of intelligence, such an effect can only be produced by the actual introduction of a new substance and a new form, in which they already inhere, and from which they can never be separated, so as to become the properties of any other form, or any other substance.

There is the suggestion here of forms – both spiritual and natural – following the same principles of origin. For the spiritual, the resulting form is the “new man,” of regeneration; for the natural, this might well be the introduction of new organic forms.

What changed? On the spiritual level, a new degree of intellectual influx could now descend fully into the mind, to bring a new level of understanding, both spiritual and natural. The *New Testament* was a new kind of revelation for this new era, accommodated to this new kind of mind. This brought about a new level of freedom – “...if you continue in My Word, then you are My disciples indeed, and you shall know the truth, and the truth shall make you free....”¹⁵ – and the stage was set for a new Christian era to begin. But because of the very nature of freedom itself, what brings the great good of human potential, can also bring great calamity. Swedenborg plainly states that “the origin of evil is in the abuse of the faculties proper to man, called freedom and rationality.”¹⁶ This radical change at the first advent opened the door to the “destruction and annihilation” described in AC 2034 above, necessitating the second advent. Freedom is a volatile element; it makes trouble wherever it goes. As we shall see, it is freedom that becomes the driver

¹⁵ *John* 8:32 (NKJV)

¹⁶ Swedenborg, Emanuel, *Divine Providence*, n. 15

of the Lord's second advent, and the essence of the New Jerusalem itself.

So now there was a fully functional middle place for the human being to stand, with the spiritual mind and natural body fully united in unanimous action. The Lord's Glorification set the stage for a new level of inspiration for the arts and sciences of the New Christian Era to come. Swedenborg was convinced that he was working within this new spiritual context, and his every effort was inspired and colored by it.

The stage is set: with freedom comes a burst of human spiritual development and the rise of Naturalism to counter it. At work here is the perennial tension between good descending into the world and evil rising up to meet it.¹⁷ Swedenborg made dire predictions about Naturalism, the intellectual offspring of the Enlightenment, that promised even then to be the corrosive force it has now become.¹⁸ The great good of the New Jerusalem descends into the midst of an impressive alliance of opposing forces, and the intellectual, political, and religious landscape of our world is transformed by the apocalyptic struggle that has finally come.

After the first advent and a good three-hundred year start came the slow, steady spiritual decline of the Christian Church. In place at its vastation¹⁹ in 1757 was the new era of freedom

¹⁷See Swedenborg's Writings for the New Church on the concept of spiritual equilibrium. The mechanism involves evil at work in the world, but in the Lord's divine providence this evil is put to use as one of two equalizing forces allowing a person complete freedom to move towards good or evil. Central teachings include AC 1857, 3628; HH 292, 293, 541, 593, 594; LJ 33, 34; TCR 475-78.

¹⁸"Naturalism" is a belief about the universe that springs from an axiom that says "all Nature is from Nature." See AC 3024:4, 3108; AE 575; CL 415; TCR 13:4, 75:7, 339, 771, and SBI 2 for core teachings on the threat of Naturalism, and its potential for harm to human culture.

¹⁹Here is another familiar word that becomes a technical term in Swedenborg's system, variously used to denote desolation, despair, or a consummation. A state of vastation is a spiritual nadir, from which an individual, a nation, or the entire human race has the opportunity for

foretold in John's *Revelation*, finally come to pass with the descent of the New Jerusalem. But it was not readily visible to the natural eye. The "kingdom of heaven" had come, but it did not meet the expectations of the Christian world – this "kingdom" was the Lord's new church on earth, and nothing more; and the existing churches had not ostensibly changed at all. Science had made marvelous progress, but was losing its moorings to spirit. In constructing a method for getting at natural truth by combining inductive reasoning with empirical investigation, Francis Bacon's *Novum Organum* (1620) removed Aristotle's *final cause*²⁰ from his new, "scientific" chain of cause and effect alone, and Naturalism was strengthened by this new authority.

Of Aristotle's four causes (material, formal, efficient, and final), it was the final cause that reflected a thing's purpose, or reason for being. As this involved subjective speculation, Bacon abandoned it in favor of only those attributes than could be confirmed by objective observation. This made good sense for his new method at finding truth; but its unintended consequence was the separation of the metaphysical from all scientific considerations. A methodological formality at first, this denial of spiritual cause would become a *shibboleth* for the new scientists of the day, and usher in an era of emboldened Naturalism.

Creatio ex nihilo became the axiom of the day, and all things of Nature were now from nature alone. His own religious beliefs notwithstanding, René Descartes' *radical skepticism* helped fuel this secular departure, and the stage was set for the Enlightenment to finally do away

redemption. Bogg, John Stuart, *A Glossary of Specific Terms and Phrases Used by Swedenborg* (1915), The Swedenborg Association, Bryn Athyn, Pennsylvania, 1994.

²⁰See Aristotle, *Physics* Book II, Ch. 3 and *Metaphysics* Book A, Ch. 3 for his complete treatment of these philosophical concepts. Barnes, Jonathan, *The Complete Works of Aristotle*, Bollingen Series 71:2, Princeton University Press, Princeton New Jersey, 1984, pp. 332-334 (*Physics*), pp. 1555-1557 (*Metaphysics*).

with the need for spiritual connection altogether. It was precisely at this time that Swedenborg saw and reported the dawn of another era, that could finally apply a rational, spiritual/natural model to the sublime natural philosophy of a future day. There was a growing need to restore the separation of science and religion,²¹ and the New Jerusalem he proclaimed was coming down to do that work.

EFFECTS OF THE SECOND ADVENT

So the Last Judgment of 1757 seems to have appeared right on schedule, and just as Swedenborg observed, all those apocalyptic images of John's *Revelation* did come to pass. But how were these events in the spiritual world manifested in the natural world of human experience? Almost not at all. The descent of the New Jerusalem into this world is gradual, cumulative, and spiritual, and not overtly natural at all. But in practical human terms, *spiritual* translates to *mental*, as the highest degree of the human mind is spiritual in structure and in function. This fact will eventually emerge as the solution to the problem. The New Jerusalem steps down from heaven, through the successive degrees of the human mind, to find expression in the natural world of experience.²² Swedenborg explained this "trickle-down" process in terms

²¹At this point the new science of the Enlightenment and the dogmatic religion of that day had grown apart, primarily from science's rejection of final cause, and religion's devotion to biblical literalism. This divide was functional at first, resulting not so much from aggressive rejection, but from misunderstood intentions on both sides. Furthering this division was the secondary competition for influence, on government, on economic life, and on issues of morality. These two camps eventually came into conflict on all cultural fronts, and this would ultimately give way to the open hostility of each to the other in the modern era. As we shall see in this section, a lot of misplaced energy goes into maintaining this hostility in the twenty-first century.

²²The human mind exists as a series of degrees or levels, from celestial to rational to sensual, across which spiritual substance is able to interact in an orderly manner with the natural matter of the brain. The crucial mechanism is the operation, by spiritual/natural correspondence, between these two levels. See AC 1999:3; SBI 8:4; DP 220:3; TCR 8; HH 39; LJ 25; SE 5548; WE 919.

of a gradual emergence of a New Church²³ on earth as a function of the gradual replacement of the Christian church by the descending New Jerusalem.

It is in accordance with Divine order that a new heaven should be formed before a new church is established on earth, for the church is both internal and external, and the internal church makes one with the church in heaven, thus with heaven itself; and what is internal must be formed before its external, what is external being formed afterwards by means of its internal... Just so far as this new heaven, which constitutes the internal of the church with man, increases, does the New Jerusalem, that is, the New Church, descend from it; consequently this cannot take place in a moment, but it takes place to the extent that the falsities of the former church are set aside.²⁴

In terms of everyday experience, the world went right on with its vastated business, while the Last Judgment silently came and went. But just as in the first advent, things changed, and the world would never be the same. What was now descending into the highest degree of every human mind would gradually find expression in a rapid succession of radical ideas that would change the world forever.

What changed? In the “judgment” of the Lord’s first advent it was the nature of matter itself, which effected a change in the substance of the brain as physical platform for the mind.²⁵

The best summary of the multi-level structure and function of the human mind is found in Odhner, Hugo Lj., *The Human Mind*, Swedenborg Scientific Association, Bryn Athyn, Pennsylvania, 1969.

²³The term “church” here assumes a specifically Swedenborgian definition as a historical era of spiritual progress involving the whole human race. For Swedenborg, human spiritual perfection has progressed through a series of developmental stages he called churches, culminating in the Church of the New Jerusalem. See AE 20, HH 328, SS 79.

²⁴Swedenborg, Emanuel, *True Christian Religion* n. 784.

²⁵This is not the first time we have seen a change in the substance of the human brain: *Arcana Coelestia* n. 4326:3 explains that after the fall into evil, the Lord effected a change in the human brain that brought about a reversal of the communicative pathways between cerebellum (the seat of the will) and cerebrum (the seat of the understanding). This represents a major developmental event in both the organic and spiritual evolution of the human being. It is of note that

This judgment of the first advent set the stage for the last. The key to understanding the Last Judgment of 1757 is to see it as a mutation, not of matter (as in the first), but of human consciousness, operating above the level of matter. Human consciousness mutated into a contagious agent of spiritual change. Contagion progresses slowly at first, in a linear way, but will increase geometrically if the environment allows. According to the model for bacterial and viral growth, there is first a long lag phase with a gently upward-sloping curve. But with sufficient nourishment, and if other necessary environmental conditions are met, proliferation enters an exponential phase, with an almost vertical slope of astonishingly rapid reproduction. But despite the impressive outcome, the start is always very slow. And unlike the fate of natural organisms, the exponential phase of this spiritual agent need never end, since its nourishment is spiritual, and therefore infinite in supply.

SIGNS

What concrete historical events can be traced directly from causes put in motion by the Last Judgment two hundred fifty years ago? What has really changed from 1757 to today? It is much easier to see the things that have not.

- Naturalism marches on, and it is developing a disturbingly militant edge. The world religions are no longer just the preoccupation of harmless, soft-headed delusion. Now they stand accused of being hazardous to the health of the human race, and are identified by some as the cause, not the cure, of human suffering. An impressive collection of atheist polemics has entered the marketplace of ideas, and religious writers have been put

paleontologists mark the emergence of modern humans in part by their greatly enlarged cerebral hemispheres, a development that correlates with the increased intelligence of those of the genus *Homo*, compared with their ancestral forms.

on notice that their irrational spiritual rambling will no longer be tolerated by the “brights” among us.²⁶

- The traditional Christian worldview is ostensibly still in place; the church you drive by today will likely not be a Church of the New Jerusalem. Things still look the same. But this worldview has eroded, leaving an ambiguous, uncertain sense of where things are going, and little sense of purpose beyond the emotional, social and political. There is a great divide between the blind certitude of biblical literalism on one side, and the myopic solipsism of religion as consecrated social work on the other. The Christian compass appears broken, and as this becomes increasingly apparent in the Western culture, the brights are increasingly emboldened. In their defense, despite a number of good books by Christian authors,²⁷ they are hearing few credible answers to their reasoned scientific challenges to Christian faith.
- Scientists continue to defend their rejection of Aristotle’s *final cause* for natural

²⁶Following the lead of philosophers J. L. Mackie and Daniel Dennett, mathematician Francis Crick and others, scientist-turned-polemicist Richard Dawkins has recently called for an end to all religions for the good of humanity. He calls himself and like-minded atheists “brights,” (i.e., enlightened ones), and in his *God Delusion* (2006) we find not just hubris, but the rhetoric of an ideologue as well. This is new, and it heralds an unsettling change for future science-religion dialogue.

²⁷There is no shortage of excellent books making the case for spirituality in science. These authors offer valid arguments, from many different perspectives, for the operation of spirit in nature. What is generally missing, however, is attempts to answer specific questions of “how” when these arguments are made. “How are certain subatomic particles denizens of both worlds?” “How does the mind serve as the meeting place of body and soul?” “How did spirit irrupt into nature, causing something like a ‘big bang’ to begin?” “If there is an ‘Intelligent Designer,’ then how might this process actually work?” It is the premise of this dissertation that there is a present need for this kind of conversation to begin. Once these ideas, however tentative, are presented, and reasoned responses have begun to appear, then there can be a true dialogue between scientists and theologians.

things. Despite the significant epistemological challenges of causation being raised by emerging discoveries in quantum physics and biology, the questions of purpose for a natural thing remains a *non-sequitur* for a Dennett or a Dawkins. As anomalies of the New Science continue to accumulate, resistance to them becomes less reasoned and more emotional, less measured and more heated, less polite and more threatening. The temperature is rising in the rhetoric of some scientists, as they consider the increasingly tenuous nature of their old, comfortable, and neatly-limited Newtonian universe. Naturalism has traded detached condescension for a kind of reactive militance – a dangerous development for the new millennium. And yet, despite his distinction as ostensible spokesman for the cause, Dawkins’ arguments against spiritual causes for natural things are surprisingly weak, consisting primarily of condescension, *ad hominem* attacks on his faith-professing peers, and the tired, old infinite regress fallacy²⁸

- The dissolution of traditional institutions – academic, religious, governmental, and cultural – continues apace. Authoritative, hierarchical structures are breaking down.

People who insist that they are “spiritual,” are nonetheless staying away from the

²⁸Richard Dawkins, a brilliant evolutionary zoologist, has in recent years devoted his energies not so much to science as to the defense of it. As popular culture’s ostensible spokesman for the causes of scientific materialism in particular and atheism in general, the arguments set forth in his recent *God Delusion* are surprisingly weak. Several powerful refutations of these arguments have been written. We may suffice it to say that his best argument against an un-moved mover reverts to the simplistic fallacy of infinite regress. In this manner he argues that, given the incomprehensible complexity of the natural universe, God, if God existed, would by necessity be even more complex and improbable. In other words, if God created the universe, then who created God? And on and on.... Respected philosophers were expecting more. (See Ward, Keith, *Doubting Dawkins: Why There Almost Certainly Is a God*, Hahn, Scott and Wiker, Benjamin, *Answering the New Atheism: Dismantling Dawkins’ Case Against God*, and Gerhardt, Rick, *Dawkins’ Ultimate Argument*, at <http://antiochapogetics.blogspot.com/2007/10/dawkins-ultimate-argument.html>.)

churches in droves; many meet in small groups, with no leaders at all. There is a healthy disrespect for government and the people who claim to run it, with a polarization in progress, between statists and those who see no validity to burdensome government. Civil disobedience is in the air. Education is increasingly an individual activity, with virtual classrooms and teachers on a screen. People are networking. And the Internet has brought a sense of horizontality to our culture and its institutions that have been hierarchical in form since the days of the Roman Empire.²⁹

Is this just destructive entropy at work in the world of human experience, or might this chaos represent something providential, and more optimistic, quietly at work? Concerning the descent of the New Jerusalem, the Lord clearly predicted, “Behold I am making all things new.”³⁰ What would things look like if “all things” were being “made new”? Tranquil or chaotic? The Maggid of Mezerich³¹ made this observation about the mystical transformation of becoming new:

Before an egg can grow into a chicken, it must first totally cease to be an egg. Each thing must lose its original identity before it can be something else. Therefore, before a thing is transformed into something else, it must first come to the level of No-thingness...³²

²⁹For a delightful yet discriminating look at this process as it is playing out on the world of business, see Brafman, Ori, and Beckstrom, Rod A., *The Starfish and the Spider: The Unstoppable Power of Leaderless Organizations*, Penguin, New York, 2006. These authors give clear examples from our culture of the demise of traditional, hierarchical forms, and the rise of horizontal, leaderless organizations in their place. To those who have eyes to see, there are spiritual implications to this phenomenon.

³⁰Revelation 21:5 (NKJV)

³¹Dov Baer (1710-1772), the Maggid of Mezerich, was chief disciple and public voice for Baal Shem Tov, the founder of Hassidic Jewish mysticism.

³²Epstein, Perle, *Kabbalah: The Way of the Jewish Mystic*, Shambala Publishing, Inc., Boston, 1978, p. 118.

For one brief moment, the old thing that is to become new is neither; it is lost in time... perhaps not really there at all. And to the casual observer, that no-*thing* state might look more like chaos than something becoming new.

These institutions and attitudes, though perhaps showing signs of stress, have remained in place since the Last Judgment of 1757; they did not abruptly disappear with the coming of the New Jerusalem. And yet, through the lens of Swedenborg's New Revelation, and because they are showing stress, all of these can be held up as evidence for the New Jerusalem, slowly trickling into human consciousness.

Looking back 250 years with the clarity of Swedenborg's paradigm, we can begin to see the New Jerusalem at work in the world. The signs – radical cultural turning points that have coalesced to define our modern world – are there if we only wish to see them as providence at work. There are many, but a short list might include the Romantic Movement in the Arts; the freedom movements – from the American and French Revolutions to those that continue to the present day; the notion of individual freedom as an “inalienable right”; the autonomy of women, who were property only 250 years ago; and the death of slavery as a institution that abruptly went from “peculiar” to untenable; perhaps the most clearly visible manifestation of the New Jerusalem might be the Internet, the astonishingly rapid development of which denotes its relation to something very powerful in the spiritual world – an ethereal and almost spiritual thing, it is the essence of freedom in organic form; even the decline of the main-stream Christian denominations in the world – in numbers, in influence, and in doctrinal integrity – is evidence that the Last Judgment is finally breaking through their obsolescent ecclesiastical forms. These are all presumptive signs of the New Jerusalem, if an observer chooses to see them as such. To

another observer, they might just be random events of history. Scientists may think that seeing is believing, but those with faith in operation understand that believing can allow them to see.

Some scientists, despite the reactive opposition of their orthodoxy, are quietly moving nonetheless towards the “omega point” of a new spiritual-natural axiom, with the final cause of creation restored. This began with particle physicists who could not explain what they were seeing in purely mechanistic terms. Reluctantly at first, they reported the necessity of certain particles – “force carriers” by name – to come and go from and to a different place than three dimensional space. They seem to “appear” and “disappear” as needed. New discoveries such as these require deeper explanations than Naturalism can supply, and the shift to this new axiom may finally be happening, from the logical necessity to explain what is observed. Deep science will finally meet the deep theology of the New Jerusalem, and the true purpose of the Last Judgment of 1757 will be revealed. No longer separated from their spiritual roots and denied a final cause, scientists can now embrace the rationality of a New Philosophy, and build a powerful new paradigm to accommodate both sensory experience and spiritual truth. The restoration of the left and right brain together in human intellectual activity – the *tikkun*³³ of the ages – is the

³³Restoration is a major theme of the Jewish mystics, from Zoharic to Lurianic Kabbalah, and it is an ancient concept common to virtually all religions. From a starting point of unity, there is a separation from the Divine (*Shevirat ha-Kelim*, or the breaking of the vessels, in Kabbalistic lore). The central theme of spiritual transformation then becomes *tikkun*, the restoration of the pathways to the Divine. In Buddhism this is the delay in final liberation until all souls are free. In Christianity it is the coming of the Messiah. For the Gnostics it was the liberation of the Divine Spark, trapped in earthly bodies. In the New Jerusalem, an era of a rational spirituality, it becomes the restoration of the two receptacles of truth and good in balance, in the collective human mind, as science and spirituality are reunited in the New Philosophy. Scholem, Gershom, *Major Trends in Jewish Mysticism*, Schocken Books, New York, 1974; *Tikkun Olam: the Spiritual Purpose of Life*, retrieved January 10, 2013 from <http://www.innerfrontier.com>

coming of the New Jerusalem.

The signs are there to see. The pulse of human culture quickened in 1757, and the notion of human freedom, once radical, is commonplace today, in all its permutations. All things are becoming new – cultural forms and content, immediate communication, access to information, and a personal spiritual inclination of the human mind. But the science demands a deeper look.

Once separated from its spiritual roots and determined to maintain this separation, scientific discoveries themselves are causing scientists to rethink the separation. Causality is no longer a linear proposition, in a quantum universe with uncertain boundaries, and the simple state of being is not so simple any more. Science, calm and confident on its surface, is unsettled at its philosophical core; change (and the anxiety that comes with change) is in the air.

The separation of spirit from nature was the greatest calamity of human intellectual development, a product of the Enlightenment, curiously a period of great intellectual advancement. This has handed down to us a post-modern worldview of a purposeless, mechanistic universe, where humanity has no special status. Observing the fallout from this calamity, Einstein observed that “Science without religion is lame; religion without science is blind,”³⁴ but he offered no solution. Others have sensed the anxiety that this separation brings, but their suggestions tend to be sectarian and dichotomous; winners win and losers lose, and there is no *tikkun*. The key is restoring Aristotle’s final cause with freedom built right in – spiritual truths accommodated to each person’s place and state. This the New Jerusalem can do, when its universalizing principles of spiritual-natural correspondence are fully understood.

³⁴Einstein, Albert, 1941, from *Science, Philosophy, and Religion, A Symposium*, in *The Oxford Dictionary of Quotations*, Oxford University Press, 4th Ed., p. 268.

THE CULTURE WARS: A MESSAGE FROM THE FRONT

For a decade I taught in a typical American university, an institution that strongly favored the ideology of scientific materialism. Today's *scientific materialism* is a modern refinement of the Naturalism that Swedenborg predicted would worsen over time. In many places he warns of atheism coming into to the world as the spiritual is separated from the natural, and people come to regard Nature as the only reality.

The sensual person is in fallacies, because all the ideas of their thought are from the world and enter through the bodily senses; from these, therefore, they think and draw conclusions respecting spiritual things. Moreover, the sensual person does not know what the spiritual is, and believes that there can be nothing above nature, or if there is, that it is natural and material. *The Apocalypse Explained* n. 575:4

The more deeply we proceed into the knowledge of nature, the greater light do we come into, and as it were from the darkness of atheism and of naturalism into a knowledge of the deity, which we can thus in no way deny; thus natural philosophy will lead us truly to a confession of the infinite. All doubts and secrets lead us into devious paths; all opened things lead us into confession of God. That philosopher is unlearned and dull, and does not reach the threshold of true philosophy, who does not acknowledge God. *Mechanism of Soul and Body* n. 23

...to prevent people from plunging yet deeper into erroneous ideas about... the spiritual world, as the result of ignorance, which leads to worshiping nature and this automatically to atheism – something which at the present time has begun to take root in the inner rational minds of the learned – to prevent then atheism from spreading more widely..., I have been commanded by the Lord to make known various things which I have seen and heard. These include heaven and hell, the Last Judgment, and the explanation of Revelation, which deals with the Lord's coming, the former heaven and the new heaven, and the holy Jerusalem. If my books on these subjects are read and understood, anyone can see what is meant there by the Lord's coming, a new heaven and the New Jerusalem. *True Christian Religion* n. 771:2

By either name, materialism is a way of life in the intellectual circles of academia, and it is gaining momentum, not just as an attitude, but as a movement. Traditional religion is withering before it, and there is a culture war brewing, against religion in general, and theistic science in

particular.

Emanuel Swedenborg was born on January 29, 1688. Despite this considerable historical distance, by looking at Swedenborg the man and his scientific works before his theological writings, we find a powerful antidote to the Naturalism that still drives the learned world today. Naturalism is the belief that Nature is from Nature, and that science is the key to understanding all.³⁵ In my university this philosophy was the order of the day, and in this environment, in self-defense, I developed a method for talking to my fellow professors about how things work and how it is that from a scientist I could become a theologian. The “method” was there all along; it has been there for 250 years. But because of the unassuming appearance of Swedenborg’s quaint Eighteenth Century science, it took me a while to see the forest for its trees.

A Rationale

First some basic New Church theology: We are told in Chapter 21 of John’s *Revelation* that there are twelve gates into the New Jerusalem. The number twelve in the internal, spiritual sense signifies “all things of faith,”³⁶ faith signifies the implantation of truth,³⁷ and this, we are

³⁵Swedenborg used a simple working definition of Naturalism as a belief that all nature was from nature, and warned of the consequential extension of this premise into atheism. Not surprisingly, since the Enlightenment this point of view has matured into a more nuanced suite of beliefs that range from the radical *metaphysical naturalism* of absolute materialism, to a less dogmatic *methodological naturalism* that values the objective scientific method first proposed by Bacon, but avoids its metaphysical implications. The form of naturalism that I refer to here is the attitude of my own experience in the universities. It is not sophisticated or philosophically based. It is simply a negative principle, reflexly applied in all cases of implied spirituality, and as such is more an ideology than a philosophy. Because it is not philosophically based, and is essentially reflexive in nature, it is very powerful, and very difficult to penetrate with reasoned argument.

³⁶Emanuel Swedenborg, *Arcana Coelestia* n. 2089

³⁷Emanuel Swedenborg, *The Apocalypse Explained* n. 813

told, is the beginning of the work of God.³⁸

Swedenborg interprets “the twelve gates” to mean that there is a gate to suit the particular needs of every person who is seeking spiritual truth, each gate serving as some unique manifestation of “all the knowledges of truth and good.”³⁹ Since “twelve” signifies “all things of faith” we can assume that the number of gates equals not a literal twelve, but the number of people needing to enter there. That’s an infinite number; spiritually speaking, and that is no doubt a good thing.

One of these gates – the one we are looking at here – is the natural truths of science. Swedenborg used that gate. From a grounding in natural philosophy, Emanuel Swedenborg was drawn through that gate into the deeper truths of the spiritual causes of natural things. He explained this process to German theosophist Friedrich Oetinger, who was fascinated with Swedenborg’s philosophy of heaven and earth. In the last passage of *Soul- Body Interaction* (1769), Swedenborg explains

This happened in the same way that fishermen were made disciples and apostles by the Lord... I too was a spiritual fisherman from my youth. When my companion heard this, he asked what a spiritual fisherman was. I answered that in the Word, a fisherman in the spiritual meaning indicated a person who hunts out and teaches natural truths.⁴⁰

There is a lesson in this. Science today is confirmed in the limiting worldview of Naturalism, which cannot provide a purpose for existence. This is causing a crisis of identity and

³⁸Ibid., n. 226

³⁹Emanuel Swedenborg, *The Apocalypse Revealed* n. 916

⁴⁰Swedenborg, Emanuel, *Soul-Body Interaction*, n. 20, in *Miscellaneous Theological Works of Emanuel Swedenborg*, Swedenborg Foundation, New York, 1988. (Formerly entitled *Intercourse of the Soul and Body*.)

purpose for many people and even nations of the earth. There is chaos at hand, and I suggest that the rise of scientific materialism is largely to blame.⁴¹ Life without purpose spawns existential nihilism just as Naturalism leads to what Swedenborg calls “the negative principle,” that eventually denies all things, submits to no authority, and ends up as a kind of insanity.⁴² From this come two great challenges: 1) The “traditional” Western religions – Christianity (from fundamentalist to liberal) and Judaism in its various expressions – do not possess the theology sufficient to answer and support the recent surge of interest in spirituality by scientists who are asking penetrating questions that the “religious establishment” cannot answer. 2) Scientists think and ask questions in the language of science, and even sublime New Church theology cannot answer them in kind. This is something that theologians fail to understand. The specialized language of religion is not the language of science.

⁴¹This claim is based on a simple rationale. Swedenborg believed that naturalism resulted from the dissociation of the spiritual-natural contiguum, and the subsequent erroneous assumption that all things of Nature are from Nature. This is not a harmless illusion. Once people are unharnessed from absolute truths originating in God, they are free to substitute relative truths of their own. (This is the archetypal image of the fall into evil found in *Genesis*, Chapter 1, where we find Adam and Eve attempting “to be as gods themselves....”) A spiritual-natural worldview was commonplace from the ancient world through the middle ages. It was the skepticism of the Enlightenment that brought about this dissociation, first in the intellectual tradition of philosophers and scholars, but eventually making its way into to the culture at large. Nature was cut loose from purpose, and God was no longer necessary for happiness. It can be argued that the degree of unrest in the Western world is a consequence of an absence of spiritual authority, and that this absence can be traced back to the removal of final cause from the accepted method of finding truth, that is, science and subsequent scientism, in the modern era. “Forever O Lord, your word is settled in heaven” (*Psalms* 118:89) is no longer the case, and we are left as spiritual orphans, to fend for ourselves.

⁴²Swedenborg, Emanuel, *Apocalypse Explained* n. 575, *True Christian Religion* n. 13:4, *Arcana Coelestia* n. 2588:2

These are problems of our time, but they are not new at all. Swedenborg responded to this same dilemma in his time by presenting a system based on scientific, not theological principles, but principles in which spirit is prime mover, nonetheless, and Nature is not from Nature but from spiritual substance (thus having a purpose and origin beyond itself).⁴³ The objectivity and language of science were inherent in this system. He showed the scientists of his day a rational approach to the question of spiritual causes for natural things. I suggest that this same approach is effective for the scientists and philosophers of this day as well – more effective, perhaps, because the science of the new millennium has finally pushed itself to limits that only purpose can explain.

Naturalism cannot explain the purpose of natural things. Scientific materialists cannot raise the question of final cause, because as we have seen, purpose, by definition, lies outside of what modern science does. Worse still, traditional Judeo-Christian dogma simply does not address this question in a pragmatic way.⁴⁴ And although Swedenborg's theological writings

⁴³Swedenborg's scientific works deal with chemistry, physics, anatomy, physiology and psychology, but from a clearly theistic base. His research proceeds according to a scientific method, but one that includes and in fact requires *final cause* in his explanations of natural order.

⁴⁴One might ask how this might be so, considering the constellation of science-religion books written in the last two decades, by an array of such authorities as Arthur Peacocke, Keith Ward, Francis Collins and others. Although these authors comment on the relationship of science with religion in its various manifestations, it is the "standard model" of Judeo-Christian theology that is in question here. Aside from the literal narrative of *Genesis* 1, this tradition bothers little with questions of causation, cosmogony, biological and human origins, the origin of matter, spiritual-natural interaction or other practical problems of the human intellectual experience. This theology is concerned with generals, and ill-defined salvation is assigned to causation as a common end. Although Swedenborg's theological writings do enter into such questions as these, they are in theological, and not scientific language.

address this question in an intellectually defensible manner,⁴⁵ they explain it in a language apart from the language of science, making it essentially inaccessible to scientists.

Biblical Models of Accommodation

In *Exodus* and *The Acts of the Apostles* we find a spiritual model to help us understand this predicament. It is all about language, perception, and accommodation. In *Exodus* we find Moses doing a very un-Mosaic thing. He is trying to get out of his assignment, from Jehovah Himself, to go back to Egypt and help the children of Israel out of their misery. *Exodus* 4:10-16:

- 10 Moses said to the Lord, “O Lord, I have never been eloquent, neither in the past nor since you have spoken to your servant. I am slow of speech and tongue.”
- 11 The Lord said to him, “Who gave man his mouth? Who makes him deaf or mute? Who gives him sight or makes him blind? Is it not I, the Lord?
- 12 Now go; I will help you speak and will teach you what to say.”
- 13 But Moses said, “O Lord, please send someone else to do it.”
- 14 Then the Lord’s anger burned against Moses and he said, “What about your brother, Aaron the Levite? I know he can speak well. He is already on his way to meet you, and his heart will be glad when he sees you.
- 15 You shall speak to him and put words in his mouth; I will help both of you speak and will teach you what to do.
- 16 He will speak to the people for you, and it will be as if he were your mouth and as if you were God to him.⁴⁶

Next, in the *Acts of the Apostles*, we find the Apostle Paul spreading the Good News in Athens, the intellectual capital of the ancient world – the Harvard, Oxford, or UCLA of the ancient world. Entering the Areopagus, he challenged the smartest Epicurean and Stoic

⁴⁵*Nunc liceat intellectualiter intrare in arcana fidei.* (“Now it is permitted to enter with the understanding into the mysteries of faith.”) *True Christian Religion*, n. 508:3

⁴⁶What we have here is a failure to communicate. Moses, being “slow of speech and tongue,” is afraid that the Hebrews will neither listen to nor comprehend what he will say to them. Noting that Moses’s brother Aaron “speaks well,” the Lord arranges a work-around to solve this dilemma. He will speak to Moses, Moses will speak to Aaron, and Aaron will speak to the Hebrews. God’s will shall be communicated in a language that the people will understand.

philosophers there: “All the Athenians and the foreigners,” it says, “who lived there [and] spent their time doing nothing but talking about and listening to the latest ideas.” Just like a top tier university. How did Paul do in that arena? Acts 17:22-34:

- 22 Paul then stood up in the meeting of the Areopagus and said: “Men of Athens! I see that in every way you are very religious.
- 23 For as I walked around and looked carefully at your objects of worship, I even found an altar with this inscription: TO AN UNKNOWN GOD. Now what you worship as something unknown I am going to proclaim to you.
- 24 The God who made the world and everything in it is the Lord of heaven and earth and does not live in temples built by hands.
- 25 And he is not served by human hands, as if he needed anything, because he himself gives all men life and breath and everything else.
- 26 From one man he made every nation of men, that they should inhabit the whole earth; and he determined the times set for them and the exact places where they should live.
- 27 God did this so that men would seek him and perhaps reach out for him and find him, though he is not far from each one of us.
- 28 For in him we live and move and have our being. As some of your own poets have said, ‘We are his offspring.’
- 29 Therefore since we are God’s offspring, we should not think that the divine being is like gold or silver or stone—an image made by man’s design and skill.
- 30 In the past God overlooked such ignorance, but now he commands all people everywhere to repent.
- 31 For he has set a day when he will judge the world with justice by the man he has appointed. He has given proof of this to all men by raising him from the dead.”
- 32 When they heard about the resurrection of the dead, some of them sneered, but others said, “We want to hear you again on this subject.”
- 33 At that, Paul left the Council.
- 34 A few men became followers of Paul and believed. Among them was Dionysius, a member of the Areopagus, also a woman named Damaris, and a number of others.

Paul didn’t accomplish a mass conversion of the Athenians to Christianity, but neither did he fail. He had the courage to engage his intellectual opponents that day. They were the best; and he held his own against them. How? He got them to listen because he talked to these philosophers in

their own language. And he got a few to see the light. How many? “Dionysius, Damaris, and a number of others.” We will return to these stories.

There Are Two Foundations of Truth. Why Not Use Both?

How can science be a gate into the New Jerusalem? Swedenborg himself had learned the hard way, that one cannot climb up the ladder of Being from the natural world to the world of spiritual causes; one must instead descend, from the top down. But as he told Professor Oetinger, with science and religion, the lower state precedes the higher.⁴⁷ Swedenborg the scientist did not fail in some way, only to be rescued by the Lord for some higher purpose. His call to be a revelator came as he found himself in his prime, but with no place to go from there. It was his science that took him to that jumping-off-place. So jump off he did, leaving his science books behind. I suggest that he didn't do all that work for nothing, and after studying his science books, I am convinced that he left them for us in our time, for tools to end the culture wars. Note well that the word here is *tools*, not weapons. It is time to get to work; we have had enough of war. Why do I believe this to be the case? Swedenborg tells us that there are “two foundations of truth,”

...one from the Word, the other from nature or from the truths of nature. The foundation from the Word is for the universal heaven, thus for those who are in the light of heaven; but the foundation from nature, is for those who are natural and in natural light.... But, still, [these two foundations of truth] agree the one with the other. Since the sciences have shut up the understanding, therefore, the sciences may also open it; and it is opened so far as people are in good. ...all things of heaven constantly have their foundation in the laws

⁴⁷A recurrent theme in Swedenborg's treatment of the Scriptural narrative is what is “first in time” against what is “first in end”; and that the first in end is that to which all things look. A lower spiritual state, as represented by the appearance of truth and good in the church, or faith and charity in life, or even the birth order of Esau and Jacob, serves as the foundation for the higher state. As such, the lower state must by necessity appear first on the scene, or “first in time.” See AC 3325, AR 17, TCR 336, 406 for discussions of this principle.

of the order of nature, in the world and in man, so that the foundation remains permanently fixed.⁴⁸

And he also reminds us, from experience, that

The Tree of Knowledge [leads] to the Tree of Life. Science is the key to natural things whereby things heavenly are opened up.⁴⁹

What at first seems paradoxical, is really just how things work out in practice. SE 5709 states that there are two sources for truth, spiritual and natural. The one is from revelation, intuition, induction, rational process, etc., and the other is from sensory experience. Spiritual truth is superior to natural truth, but because we are natural beings, we begin where we are, with what we have, and work our way to spiritual inspiration. As *The Messiah About to Come*, X tells us, natural truth (science) leads us to spiritual truth.

Swedenborg reminds us of the causal relationship of spirit to nature, and of nature's purpose as anchor, for the spiritual world in ultimates. What better way to bring natural people – scientists included – into the New Jerusalem than by the gate of their own natural philosophy?

Swedenborg's scientific corpus has been largely disregarded by the learned world over the past 250 years. But in providence, it lies ready to use on a new crop of skeptical scientists who might believe in spiritual reality, if they were only shown a reasonable and plausible way to go about it. There are two foundations of truth; but Swedenborg is clear that although the natural precedes the spiritual, it can in fact serve as the only foundation, for those who are not "in good." This does not mean scientists who practice evil, but rather those who deny the possibility of spiritual cause, even if it were to help explain things. Naturalism cannot lead to spiritual

⁴⁸Swedenborg, Emanuel, *Spiritual Experiences* n. 5709.

⁴⁹Swedenborg, Emanuel, *The Messiah About to Come*, X (1745)

principles; the ideal is to welcome both foundations as complementary means to the truths of Nature. Swedenborg's theistic science is a marvelous gate into the New Jerusalem, neglected over time, but ready now to manifest its purpose.

A Very Modern Problem

To define the crisis of modern science and religious faith, we must first understand its origins in Western Medieval scholarship. Then we will lay out a description of science as it exists at this moment in history. For a very long time, the business of knowing was a proposition of facts subservient to faith. Science, even Aristotle's science, was constructive so long as it squared with its interpretation by the church. Without the systematic scholarly methodology that we take for granted today, there was little academic power to challenge the faith system of a thousand years of doctrinal accumulation. So science, or knowledge based on the systematic, objective development of facts based on facts, was delimited by the parameters of faith.

But then, one small contribution at a time, religious authority began to feel the pressure of a new objectivity in scholarship, demonstrated by early Renaissance Humanists. Erasmus, for example, in all seeming innocence, pointed out some painfully obvious errors in his textual analysis of the Holy Scriptures; and with Lorenzo Valla's debunking of the *Donation of Constantine*⁵⁰ as a forgery, people began to look at objective methodology as a powerful scholarly tool, for finding the truth in the things they read. With Francis Bacon's *Novum*

⁵⁰In 1439 Italian humanist Lorenzo Valla published *Discourse on the Forgery of the Alleged Donation of Constantine*, a philological analysis of a purported decree by Constantine I in A.D. 315, giving political authority over the Western Roman Empire to the Holy See. His analysis clearly showed the document to be a papal forgery, and produced a flurry of attention to the power of Humanist scholarship. Harrison, J. L., *On the Discourse on the Forgery of the Alleged Donation of Constantine*, retrieved from www.UMBC.edu on 06/19/14.

Organum, the same thing would now apply to things of the senses as well. As this new scholarship, manifested in both literature and science, came to challenge the authority of tradition, a tension grew up between the two that would last into the present day. But as Enlightenment science has come of age, and slowly expanded to finally supplant religious faith as the new authority, a curious juxtaposition is taking place. Now it is scientists, not churchmen who are beginning to find themselves on the defensive.

When President Bush plunged into the debate over the teaching of evolution this month [August, 2005] , saying, “both sides ought to be properly taught,” he seemed to be reading from the playbook of the Discovery Institute, the conservative think tank that is at the helm of this newly volatile frontier in the nation’s culture wars.

Mainstream scientists reject the notion that any controversy over evolution even exists. But Mr. Bush embraced the institute’s talking points by suggesting that alternative theories and criticism should be included in biology curriculums “so people can understand what the debate is about.” Financed by some of the same Christian conservatives who helped Mr. Bush win the White House, the organization's intellectual core is a scattered group of scholars who for nearly a decade have explored the unorthodox explanation of life’s origins known as Intelligent Design. Together, they have mounted a politically savvy challenge to evolution as the bedrock of modern biology, propelling a fringe academic movement onto the front pages and putting Darwin’s defenders firmly on the defensive.⁵¹

After four centuries of “progress,” scientists are falling victim to their own limitations.

Science as a means to truth, like so many other institutions in these early days of the New Jerusalem, is in a state of radical change, with new findings requiring new ways of knowing. Here is how things stand: Naturalism, described by Swedenborg in the eighteenth century, is still gaining momentum. But because of its built-in denial of purpose for the things of nature – Aristotle’s *final cause* – scientists cannot pursue the epistemological and teleological questions now being raised within certain scientific disciplines themselves. Problems of knowing and

⁵¹Wilgoren, Jodi, “Politicized Scholars Put Evolution on the Defensive,” *New York Times*, August 21, 2005, http://www.nytimes.com/2005/08/21/national/21evolve.html?oref=logi&_r.

being, of complexity and design and diversity, are beginning to plague the disciplines of quantum physics and cosmology, evolution, and molecular biology in the twenty-first century. There are questions emerging that demand attention to the metaphysical considerations of “why” as well as “what” and “how.” The leading edge of science begs for explanations that the traditional rules of science do not allow.

Scientists, who must be objective above all other things, are dealing with some unsettling phenomena. The Heisenberg Uncertainty Principle⁵² and Bell’s Theorem⁵³ of “spooky-action-at-a-distance,” challenge what objectivity really is. Force carriers⁵⁴ come and go, in and out of “reality,” as matter at its lowest (or is it highest?) level redefines objectivity. And Richard Dawkins’ dogmatism notwithstanding, certain levels of complexity in biological forms strain the

⁵²Werner Heisenberg found that the act of observation has an effect on the activity of quantum particles, thereby making objective knowledge of their behavior difficult if not impossible to document with certainty. “One cannot assign exact simultaneous values to the position and momentum of a physical system.” The Uncertainty Principle, *Stanford Encyclopedia of Philosophy*. Retrieved January 10, 2013 from <http://plato.stanford.edu/entries/qt-uncertainty/>

⁵³John Stewart Bell discovered that subatomic particles connected through quantum entanglement appear to communicate information faster than the speed of light. In fact they may do so simultaneously, regardless of distance. The Uncertainty Principle, October 8, 2001, revised July 3, 2006, *Stanford Encyclopedia of Philosophy*. Retrieved January 10, 2013 from <http://plato.stanford.edu/entries/bell-theorem/>

⁵⁴“In quantum field theory, vibrations in the field that correspond to a force give rise to particles called force carriers. Particles that interact via a particular force do so by exchanging these force carrier particles.” These particles are without mass and appear to come in and out of existence with the vibration of energetic fields, to aid in their propagation. Where they come from and where they go is at present unknown. Their behavior has led some quantum physicists to speculate on the existence of another “world” beyond the observable one of our experience. Force Carrier, Annenberg Learner. Retrieved on January 10, 2013, from http://www.learner.org/courses/physics/glossary/definition.html?invariant=force_carrier

limits of the Neo-Darwinian Synthesis to explain.⁵⁵ Worse yet, since the emergence of “Creation Science” as an ideological movement in the mid-twentieth century, the issue of divine agency in Nature has become increasingly polarized and politically charged. The “Culture Wars” are going strong, and scientists who only a few years ago might have been neutral on issues of spirituality are now understandably reactive to anything religious in tone.

And yet, despite the reactive environment that prevails, there is new and genuine interest in the interface of spirituality and science. Inspired in part by the John Templeton Foundation over a period of several years, the inclusion of spiritual possibilities alongside of physical laws is no longer startling development in our culture. “Science and religion” is no longer an oxymoron, and finding the two together in conversation has become an ordinary thing. But the boundaries between this new culture and the sometimes hostile agenda of the religious right are lost on scientists who see only danger when religion enters in. Reactivity becomes backlash, and a new spirit of active atheism is on the rise, energized by anger and indignation. The Culture Wars are heating up. The “dialogue” is in danger of collapse.

⁵⁵There are many natural phenomena that seem to point to the necessity of supernatural agency in their design, and until the modern era, this belief was essentially universal. With the appearance of Enlightenment radical skepticism, however, this belief was challenged, and then refuted altogether, ultimately finding its best expression in the evolutionary doctrine of Darwinism, and later the Neo-Darwinian synthesis. But there has been a recent resurgence of the design concept appearing in the work of various scientists who offer an argument for what they formally call Intelligent Design. Their work is based on two axioms, 1) that certain identifiable natural systems are too complex, and their component parts too interdependent, to have resulted from natural selection (“irreducible complexity”), and 2) that the evolution of these systems exceeds chance in both their combined complexity and specificity (“specified complexity”). Examples given for such systems include the vertebrate eye, the flagellar motor present in organisms and cells across the phyla, and the many interdependent factors present in the blood clotting cascade.

A new intelligentsia is arising, who are no longer just opponents of religion, but are calling for the end of religion altogether, not as a failed intellectual program, but as a menace to the human race, and an impediment to human understanding. Theirs is an impressive voice. A chronological list of major players includes J. L. Mackie (*The Miracle of Theism*, 1981), Francis Crick (*The Astonishing Hypothesis*, 1994), Daniel Dennett (*Breaking the Spell*, 2005), Sam Harris (*The End of Faith*, 2005), Richard Dawkins (*The God Delusion*, 2006) and Christopher Hitchens (*God is Not Great*, 2009). These books grow more acrimonious over time. Reasoned scientific and philosophical arguments are giving way to emotional outbursts by scholars who have been maligned by Christianity's militant wing, and who now are looking for revenge. They are organizing on a university campus near you: There are web sites and foundations springing up to encourage people to throw off the ancient yoke of religion and join the "brights" in the building of a new and harmonious (but pretty one-dimensional) world.⁵⁶

Why this level of anti-religious energy from scientists and philosophers? First, we really do have the fundamentalist influence to thank for some of it; it is hard to see Christian charity at work in some of the tactics they employ. But that is not really it at all. It is the New Jerusalem, coming down out of heaven, from God, one mind at a time, that has the scientific world in such a state. And it is the vastation⁵⁷ of the Christian Church, finally unraveling after 250 years. The old

⁵⁶See the Appendix, pp. 375-379, to Richard Dawkins' *God Delusion* entitled "A partial list of friendly addresses, for individuals needing support in escaping from religion." Dawkins has moved from polemicist to evangelist here, with this impressive listing of anti-religion organizations. There is also a recruitment-oriented brights web site at <http://www.the-brights.net>.

⁵⁷*Vastation* is a Latinate term unique to Swedenborg's writings, generally meaning a final state of collapse. In this case it applies to the end of a church (which itself means a spiritual era and not simply an organization), as described by Swedenborg in this manner: "The condition of a church is in general this, that in process of time it recedes from true faith and finally ends in no

way isn't working any more. Fear of loss is manifested not as fear, but as anger. And anger, a powerful emotion, shuts off the higher levels of the mind.

One thing more. The mainstream religions cannot offer skeptical scientists or philosophers satisfactory answers to questions of ultimate reality in their own terms, were they inclined to seek them out. To them, the religion they see at work in the world is an ideological straw man, easily demolished by their well-framed questions – questions that Judeo-Christian theologians cannot answer, except by articles of faith. Fundamental problems of emergence of matter and form, pantheistic connection, entropy (randomness), even the nature of life, are not addressed by the Abrahamic faiths, except in the most general way. It is not the fault of their theologians; traditional religious doctrine just does not extend into such practical matters as these.

In the last part of Chapter 4, “Why there almost certainly is no God,” in Richard Dawkins’ *God Delusion*,⁵⁸ we find an excellent example of this troubled state of affairs. There is a fundamental problem here, as Dawkins describes his experience at a Templeton Foundation conference at Cambridge on Science and Religion, a gathering at which he says he was the “token atheist amongst the eighteen invited speakers.” There he challenged the participants to respond to his point that “a God capable of designing a universe, or anything else, would have to be complex and statistically improbable.”⁵⁹ Describing the response, he says,

faith. When there is no faith it is said to be vastated.” (*Arcana Coelestia*, n. 407) He observed the vastation of the Christian Church as the causative event for the Last Judgment in 1757.

⁵⁸Dawkins, Richard, *The God Delusion*, Houghton Mifflin Company, Boston, 2006, p. 151.

⁵⁹This argument against the existence of God, showcased in *The God Delusion*, is Dawkins’ best effort, which turns out to be a restatement of the canonical “infinite regress” argument in

The theologians were *defining* themselves into an epistemological Safe Zone where rational argument could not reach them because they had *declared by fiat* that it could not... There are other ways of knowing besides the scientific, and one of these must be deployed to know God. The most important of these turned out to be the personal, subjective experience of God. (p. 154)

It is easy to feel his annoyance at the exclusivity of these ground rules. And it is easy to identify with his frustration at this apparent manipulation of the process.

Dawkins says that he was eventually attacked by name-calling (“nineteenth century”), which he assumed was in retaliation for his asking, “Do you believe in miracles,” “Do you believe Jesus was born of a virgin?,” and “Do you believe in the resurrection?” But these questions were perfectly appropriate. He broke through the customary barrier of politeness and asked Christian theologians if they believed the core doctrines of their own religion. According to Dawkins, “it embarrassed them because their rational minds knew it was absurd, so they would rather not be asked.”

Dawkins says he left the conference “stimulated and invigorated,” but from a close reading of this narrative, I believe that he left with his feelings hurt. And his animosity towards religion was not likely diminished by the experience.

Despite his editorializing, Dawkins is right on all counts. Traditional theology (which is all that these traditional theologians had at their disposal) could not respond in kind to his perfectly appropriate challenge (the infinite regress argument), and these traditional theologians could not answer his direct challenges to the tenets of their faith. They stone-walled him; they retreated into the ‘safe-zone’ of ‘subjective experience.’ In doing so, they made him the winner of the encounter. And they lost his respect.

different terminology.

So what is the answer to this predicament, with the theologians circling the wagons, and the advantage to Dawkins and company, with confidence in their own human ingenuity growing by the day? The obvious answer might be deep, wide, New Church theology to provide people with a rational basis for spiritual belief. But as counter-intuitive as it may seem, that might be wrong. Scientists do not normally engage in theology, so they do it rather poorly when they try. Dawkins's efforts are evidence enough of this. They are scientists, not theologians; they lack the vocabulary, the training, the experience, and the specialized vocabulary for doing deep theology. Scientists are no more conversant with these specialized things than theologians with the language of genetics, or molecular biology. So why expect it of them?

The misunderstanding comes at the level of expectations... ours and theirs. They ask scientific questions. They expect scientific answers. This is to say they are looking for answers in their own language, because that is what they expect and understand. And what is wrong with that? Dawkins likes to taunt his religious enemies by saying (incorrectly for that matter) that the existence of God is a scientific question. If someone – anyone! – were to answer him in his own terms, I believe that he would at least stop and listen.

An Enlightenment Solution for a Very Modern Problem

Swedenborg confronted this same challenge from the beginning of his career, so he set out to give scientists and philosophers scientific and philosophical answers to their objective challenges to faith. He did this very well in the scientific works that he wrote before his call to become a theologian. These works are rich with meticulous description and reasoned speculation. They are rigorous in method and the terminology is precise. They are everything that scientific works should be. Here we find good science applied from the axiom that the human body is a

dynamic spiritual-natural unit, animated by a soul, and created for a purpose. But there is no magic in these works, only rational arguments from experience, that models an effective method that we can learn to use: a two-step process of taking experimental or descriptive data and subjecting them to his *induction*, or moving them collectively from unconnected specifics to general systems, and then subjecting this new generalization to further analytic scrutiny. By this method he accomplished his major goal, which was to construct an intellectually defensible model for spiritual-natural interaction in creation and in the human body, in the language of science, to leave behind for generations to come. And then the Lord moved him to a different place, where he could continue to work out the same great problems, but from the top down, and this time in the language of spirit.

*When Israel was a child, I loved him, and out of Egypt I called my son.*⁶⁰

In the Scriptures, Egypt signifies natural truths. At some point a person is able to move up from their foundation of natural truths into the universalizing knowledge of spiritual reality. But we must start out in Egypt. Isn't Egypt the right place for natural people to begin?

Scientists and philosophers want science and philosophy that makes sense, and Swedenborg's scientific and philosophical works offer concepts they will understand. There in those "scientific works" lie the core theological doctrines of the New Jerusalem: Spiritual Influx, Degrees and Series, Forms, and Correspondence. Here is *formative substance*, flowing in from the spiritual world bringing human form to matter; and here is the soul's descent into the body, bringing life to even its smallest parts. Here is a spiritual-natural paradigm – not in the language of theology, but in the language that scientists would recognize and understand, and possibly

⁶⁰*Hosea 11:1 (NKJV)*

engage. It's all there, in familiar terms, to fit their states, and to meet their expectations. It is a wide and visible gate into the New Jerusalem.

Not everyone will want to jump through that door. But some will, and many will see how it is at least possible to enter with the understanding into the mysteries of faith. And that is worth a lot. Is this work easy? No. Sometimes a theistic scientist will be apprehensive that they won't know the right things to say, or that people will reject their ideas. But then we recall those powerful stories about Moses and the Apostle Paul.

Tikkun

The Lord told Moses not to worry about what to tell the people of Egypt. He said, "I will help you speak and will teach you what to say." But for whatever reason in the literal sense, the Lord saw that His truth would require a "stepping down," through Moses, to Aaron, who could accommodate it to the perceptive requirements of those people at that time – the same message, but on a different level, and in the language of its receivers.

This is a powerful spiritual model for bringing peace to the culture wars of our day. Scientists speak their own language and see things according to their own cognitive structures. The language of theology is foreign to them, and kindles resentment in some; many scientists have experienced irrational religious systems, and are not receptive to ideas couched in religious terms at all. But if divine truth were to come to them in the language of science and philosophy, and if it were able to bring rational answers to their penetrating questions, then Aaron will have spoken, from the inspiration of Moses, whose wisdom was from the Lord Himself.

But won't people reject religion out of hand? Some surely will; that is what freedom is all about. But look at what happened to Paul in Athens. "A few men became followers of Paul and

believed,” it says, “among them Dionysius, a member of the Areopagus, also a woman named Damaris, and a number of others.” That is a start, and it will win more “converts” than continuation of the negative principle by both sides. It is communication instead of disputation, in the affirmative spirit of humility. If nothing else, it could bring a new level of civility to the conflict.

Look at what happened to Swedenborg himself, who never set out to be a revelator or a theologian, but who chose to devote his time and energy to natural philosophy. Natural truths eventually became his doorway – his personal gate – into the next level: from philosopher to theologian, from scientist to spiritual fisherman. In the section that follows, we will see Swedenborg at the work of uncovering these natural truths, and observe how from each new discovery emerged the necessity to master yet another great principle to make his system work. Doctrine⁶¹ followed doctrine in a great succession of necessity. His goal of finding and explaining spirit’s interaction with nature was achieved by ascending a series of doctrinal steps, each of which seemed at first a stumbling block, but which would later serve to bring him closer to his destination.

We have seen how young Swedenborg the scientist was driven to explain the operation of spirit in Nature. We have had a look at the historical context which produced such ambition. Working in the early decades of the Enlightenment, his optimism was unbounded. Bacon’s new

⁶¹In the terminology of Swedenborg’s day a “doctrine” represented what would today be called a “hypothesis,” or working model. For a greater system comprised of a related grouping of such doctrines, the term “theory” would apply. No such terminology existed in the scientific culture of the eighteenth century.

scientific method must have seemed a highway to his success, for the power of this method must have seemed unlimited. This is what we sense as we read his early works.

But we find frustration there as well. The scientific paradigm that he brings to bear against this problem of problems – *by what comprehensive and comprehensible mechanism do spirit and nature interact* – did not mature as easily as hindsight makes it seem. Through a series of conceptual advances he was able to find his way; but each was drawn into being from the necessity of previous discoveries. Each new doctrine was a solution to the problems posed by the one before. It is enlightening to trace this development, because each of Swedenborg's powerful doctrines is a hybrid of natural and spiritual principles, but explained in the precise, objective language of science. And we can use these same doctrines to address problems central to twenty-first century science as well. They are universal principles, that inform the science of any era. The more we know about these doctrines the better we will put them to use.

Swedenborg's science – his natural philosophy – has been neglected long enough. It is a method that will prove to be effective in addressing the questions that scientists ask, and in answering their reasonable demands that claims to spiritual causes for natural things be made in the language of logic and experience. It has only to be picked up and put to use, for the thoroughly modern scientific tools it offers.