

CHAPTER NINE
THE ULTIMATE AMORALITY OF THE COSMOS

**“Two things fill me with awe, the
starry heavens above, and the
moral law within.”**

**Immanuel Kant, Critique of Pure
Reason**

Bertrand Russell put it most depressingly and straightforwardly, both in a statement on the meaninglessness and emptiness of the physical cosmos in 1903, and in his “A Free Man’s Worship” (1). The most tragic of Russell’s descriptions of his point of view is his rejection of the Promethean revolt and fight for freedom: “To defy with Promethean constancy a hostile universe, to keep its evil always in view, always actively hated, to refuse no pain that the malice of power can invent, appears to be the duty of all who will not bow before the inevitable. But indignation is still a bondage ... and in the fierceness of desire from which rebellion springs there is a kind of self-assertion which it is necessary for the wise to overcome.” It is a complete rejection of man’s spirit of adventure, curiosity, reaching and growing. Notice however that Russell has imported a spurious meaning into his description of reality, even using the concept of evil to make an ethical judgment about the cosmos without the honesty to claim that ethics is inherent within the cosmos and that this accounts for our capacity to make such judgments. The cosmos is not neutral toward ethics if he sees it as evil, only dismissive of our human ideas of ethics, but then he also wants to believe that the cosmos is empty and meaningless in itself, for which he gives no argument but only his personal description. He even accepts one of the ways he characterizes the cosmos, as overwhelming power, to submit to in accepting resignation. But why should Prometheus (a version of Lucifer, Enki, Sammael and other names) submit, bow, resign and praise a characteristic he finds of no value? Lucifer’s refusal to bow was a refusal to accept meaningless force, to fight for the recognition of incipient values in a dynamic cosmos, to maintain the potential for complexity and growth, to create ethics.

Russell at this point moves to Stoicism of a particular kind, an empty Stoicism in which he believes the wise man will bring his desires under submission while allowing his thoughts to be free. This is an impossible freedom, however, if we think about it. Our emotions form an integral part of our learning process, as the neurosciences and cognitive sciences are discovering. Without them, there is no motivation to learn and no mechanism to fix the learning in patterns and functions. If we force our emotions into submission, we are in submission, and such a being cannot think freely. A few pages on, Russell succumbs to the gloom and despair, putting human beings into a cavern where the “self must die,” where eagerness and untamed desire “must be slain,” as the only way to free ourselves from Fate. This resignation is final and brutal despite Russell’s brave words about constructing human meaning in the face of the “blind hurry of the universe from vanity to vanity.” To feel such resignation is not to conquer, as Russell believes, but to be ultimately conquered by these irresistible forces. A free man does not emerge from such a cavern of the spirit.

He goes on to pick words like “powerless, doom, pitiless, dark, blind to good and evil, relentless, reckless” matter, the material cosmos, rolling on in wanton tyranny, in unconscious power. He portrays massive round forms of inertia, inexorable in the dark emptiness of space, frozen hard and dead, completely separate and alien from us. In this dead, unconscious reality, matter does not matter, nothing happens toward anything else. It is the static creation of the monotheistic god, and Russell even gives Christianity partial credit for understanding the importance of resignation and destruction of the striving, yearning, active self. He should. Without realizing it, he has painted a simple, naive Christian orthodox view of the created cosmos. It is the same terrible stagnation and suicide, the inability to see the grandeur and complexity all around us, the fear of making value judgments, the willingness to prostrate the self before any force. He has forgotten that when the self has been killed or ground into the dust, when the self is dead, the cosmos is also dead. A dead self thinks of a dead cosmos.

It has been fashionable for critical thinkers and empiricists to portray the cosmos in this most unusual, and I would argue unscientific, way. We are given the hard, round balls of planetary bodies in a cold blackness, the visual prelude in the movie “2001.” At first, we see mass, inhuman in scale, devoid of features, dark and menacing emotionally.

There is nothing but the heaviness of these round masses hanging in the void. Russell also talks about these huge, unseeing, unthinking material masses rolling their purposeless way through the dark and cold of space. He talks about their enormity of scale, a size that reduces the human scale to almost nothing, but also how this size exists for nothing, is barren of knowledge or beauty or joy or hope, is useless and sterile for us, is not capable of acknowledging us. His conclusion, like the conclusion of other philosophers and scientists who argue that a sentient metaphysical god is dead, is that all humans have is each other in this place without real hope, and that all we can do like the Stoics of the classic world is bravely bear our human and cosmic condition. We must go through this existence, even if Tolstoy can't (2), without illusions and delusions, proud enough and courageous enough to face brute reality. It is a philosophy fit for the gods at Ragnarok, understanding their doom and facing it fully.

But "2001" does not stop as the heavy celestial masses loom on the movie screen. We begin to see a pattern in the massive balls, as they line up with each other in their orbits, forming a straight line of mass to the center star of our system. Over the last of the planets in alignment, a brilliant sliver of light arcs, sending patterns of luminosity into black space.

The gleaming arc grows larger, the light's intensity grows, and now we notice there is more than just the sound of heavy instruments begun by Richard Strauss in his music of "Thus Sprach Zarathustra." The force and mass of the kettle drums also lightens with all the voices of the full orchestra into something triumphant, something reaching with planetary mass and fusion-explosion stars to a call the human brain can respond to, something not empty and meaningless at all, pattern in the cosmos. There is dynamic recombination here, growth of organized levels to beyond the screen or the brain, the beauty Lucifer saw possible if a dynamic system were allowed to realize its potential, to break free of a closed system, to explode with a big bang into patterned chaos. Strauss' music fills the screen as the sun fills the spaces between the aligning planets, and we can glimpse a cosmos that is alive with patterns and functions, almost bursting our hearts. Zarathustra/Zoroaster has once again drawn the cosmos in its light and darkness, in its activity, in its infinite purposes, in its general systems theory (3,4). We are tumbling in a

complexity of meanings waiting to be discovered, the true wonders of the natural world. Why, then, such despair from the best and the brightest of minds?

Our philosophers will deny their description incorporates their own despair. They will argue they are only describing the neutrality and amorality of the actual cosmos, where ethics, reason, and feelings are non-existent as part of any natural order. They are neutral and objective, not biased by feelings or wishes, simply acknowledging what exists. So often maligned, demonized, misjudged over the centuries, sometimes even dying for their free thoughts, they wear their badge of courage in the face of reality proudly. Look at us, they say. We have seen the truth and have not winced. We are still upright, not fallen to the ground or on our knees. We have not resorted to mental tricks and deluded ourselves. Reality is hard, and it is for hard, strong people who can bear it. We are proud we have born it. We have looked at the cosmos and we have not been blinded. So saying, they create a human meaning out of meaninglessness, a human purpose out of purposelessness. It is an admirable and grand undertaking, but it may not be so necessary after all. They may be harder and stronger than those full of faith, but they may also be wrong.

There is an emotive bias to Russell's descriptions of the cosmos. *He* puts the emptiness there; *he* destroys the meaning. His words are not neutral, but full of feelings, carrying much emotional weight: for example, cold, dark, empty, meaningless, without purpose. There are other ways we could describe "cold." We could just give the temperature, without adding on our human preferences. Dark is an uncomfortable symbol for diurnal animals but not for nocturnal ones, and the velvet black of space is not automatically negative. Looked at on multiple levels of scale and organization, "empty" is a realistic description of the spaces between the material making up a table as well as the material making up the galaxy. We humans are empty in that sense, with as much space within us as the familiar space of the stars. "Meaningless" and "without purpose" are ideas that have been imported into the cosmos from the perspective of the thinkers considering it, concepts that have already drawn a conclusion without making the argument.

It was at the beginning of the twentieth century that Bertrand Russell argued for meaninglessness in the cosmos. He assumed at that time that science was theoretically

and experientially complete, with only the boring details to be filled in. For the beginning of the twenty-first century, on New Year's Day 2002, the New York Times carried forward this insistence on the meaninglessness and purposelessness of the universe. Dennis Overbye started the year with a science news review, "The Universe Might Last Forever, Astronomers Say, but Life Might Not." (5) At the end of his article, he quotes Stephen Weinberg, noted for his view that the more comprehensible the universe seems, the more it seems pointless:

"Though aware that there is nothing in the universe that suggests any purpose for humanity, one way that we can find purpose is to study the universe by the methods of science, without consoling ourselves with fairy tales about its future, or about our own."

There again is the Stoic response to a dying universe without meaning, in which it is insisted, we are alone.

Astronomers, in the last four years, think they have found evidence the universe is speeding up its expansion, caused by an antigravity called dark energy, part of space itself. Galaxies will move apart eventually so rapidly that no communication will be possible, and space will get emptier, colder, darker -- old worlds disappearing forever. Sentient observers would see different parts of the cosmos, with no one observer able to know the whole universe or more than an approximate theory of physics. (Yet that of course has always been the human position, cosmic expansion or not. We perceive only a slice of reality, have a probable theory of physics, can infer patterns. There is no logic to demonstrate an omniscient observer.) Astrophysicists like Weinberg, Thomas Banks, Edward Witten, Lawrence Krauss, Adam Riess, Allan Sandage, Glenn Starkman, and, reluctantly, Freeman Dyson have partially accepted an apocalyptic and horribly meaningless picture of the cosmos, based on dark matter accelerating the flying apart of the univers we can perceive and infer. It is based, however, on projecting a rate or trend into an infinite future, on our very partial experience of reality, and on the completeness of our science. It may also be based on a rejection of the dynamism of systems and their patterns, on a wish to bring movement and change to an end, to close the system. It also may have more to do with fear, with cultural loss of nerve, with poverty of self-love,

despite protestations of Stoic courage. Here is their twenty-first century script for emptiness and completeness in science:

In 2 billion years, a greenhouse effect will warm Earth beyond habitation.

In 5 billion years, our star will supernova, destroying Earth; and the Milky Way Galaxy will collide with the Andromeda Galaxy. Anything that survived would experience ignorance and darkness as cosmic expansion speeds the universe away and apart.

In 150 billion years, all galaxies except the Local Group to which the Milky Way belongs, will accelerate beyond visibility.

In 100 trillion years, no new stars will be born and space becomes darker, until the galaxies collapse in black holes in 10 to the thirtieth power years.

In 10 to the sixty-fourth power years, black holes the mass of the sun will explode and vanish.

In 10 to the ninety-eighth power years, black holes the mass of galaxies will explode, lighting up space-time.

Any sentience would slow its thinking and eventually not generate new thoughts, although Hawking radiation would eventually cause energy dissipation at a fixed rate, meaning a finite lifetime. This applies only to life in which there are a fixed number of quantum states, however. Beings that expanded along with the cosmos would also have increasing numbers of quantum states, so there would be an infinite bottom or foundation, and life and sentience could extend infinitely. And some quantum fluctuations produced from Hawking radiation would resemble another Big Bang.

So if we are content with an eternal reconfiguration of basic functions or patterns (a more positive way of saying “the eternal reshuffling of the same data”), with infinite levels of scale (“increasing number of quantum states”), and with the dynamism of repeating processes like Big Bangs, we will have an infinitely-creative cosmos where powerful dark matter/energy (chaos, the void) nurtures infinite configurations (patterns of light and dark energy) moving toward sentience or self-knowledge. This equally or more probable description of experience (a scientific description giving systems, hierarchy, or chaos theory a more positive view) is firmly within the scientific model. It does not imply meaninglessness or the absence of any reason for the existence of sentient beings. It is

more humanistic, more affirming, and more integrative. It also sounds a good deal like the Gnostic texts of the Nag Hammadi Library.

But there is an alternative recently developed by cosmologists that is even stranger and more positive. I have briefly mentioned the latest scientific theories on multiverses, to replace our narrow assumption of a universe (6). Max Tegmark posited four levels of universes, one our perceived one, others in which laws of physics differ. Martin Rees suggests considering that multiverses could distinguish the fundamental features our perceived universe shares with other levels of perception, a science for the 21st century. Cosmologists are considering our universe as part of a much broader assembly endlessly assembling itself in progressions of big bangs, a theory of inflation. Alan Guth, Andrei Linde, Alexander Vilenkin, and Paul Steinhardt suggest an endless assembly once inflation has started. Random nonuniformities would result in infinite features. Certain constants may be required for complexity, necessary preconditions for a multiverse observing itself. Badly misnamed the “anthropic principle,” it describes multiverses whose features are self-assembly and self-calculation. It supports what this book contends, that complexity, life, values, and a learning program are naturalistic features of reality. It has led John Barrow and Frank Tipler to argue that once life develops in multiverses, it will not ever be extinguished. These are awesome concepts which again sound like a mathematical translation of the Gnostic cosmology, a scientific understanding that *is* the best metaphysics. The growth, development, inflation of reality has reaffirmed the classic scientific view and lifted the heavy mistake of a closed scientific system. Science is truly open.

In addition to the errors of completeness and attribution of despair, there is another major assumption that is questionable: that other sentient beings and their civilizations have been obliterated if they once existed, and that we will also be obliterated in the future, with no hope. The New York Times story quoted the scientists on the doom of all sentient life. Part of this forecast is also based on recent scientific theories about gamma rays and “death stars.” Until Dale Frail of the National Radio Astronomy Laboratory in New Mexico presented evidence that Gamma Ray Bursts produce only slightly more energy than a regular supernova (7), theorists had thought that such exploding stars would sterilize all star systems produced in the star incubators of space. This ongoing,

frequent destruction of star systems, such theorists concluded, would have annihilated all other life in the universe -- except for our solar system and planets. The ready acceptance of this questionable implication of Gamma Ray Bursts (hence "death stars") is instructive. Human culture and even current science seems eager to grasp at any speculation which indicates there can be no star systems with advanced sentient life forms, and concludes humans are alone in the cosmos. This is a persistent and strange conceptual bias. At the very same time, our culture and science depicts any hypothesis about star system civilizations and extraterrestrial contact as unacceptably speculative and unscientific. Even the illogic of the Fermi Paradox, with its key premise arguably false and question-begging (namely, that there has been no contact through history with extraterrestrials), has the blessing of scientists who should know it is either an inductive fallacy or an invalid argument. It is tragic enough that our culture wishes for despair rather than wonder, meaninglessness rather than the possibility of meaning. The tragedy is made so much worse when our current science yearns for the same despair and meaninglessness. The tragedy moves to nonsense when other star civilizations are the question.

The hidden assumption behind all this is that without a sentient supernatural being(s) who has purpose and creates toward a goal, there can be no meaning or purpose as a built-in potential of the cosmos. The additional assumption is that such metaphysical ideas and questions cannot be answered using the scientific method/learning program, and therefore should not even be asked. Somehow, monotheism in particular has managed to glue the belief in a sentient personalized deity to the potential for meaning and purpose in the natural cosmos. This is a version of the creation assumption, whether in the form of a First Cause or an abstract and perfect god. A created cosmos would have a meaning and purpose; it is assumed that an infinite and eternal cosmos could have neither.

But what if meaning meant the self-evolving or actualizing of an infinite system, as it may very well mean for human systems? Meaning could then be found within the natural cosmic system as part of its natural ordering or organization, and a sentient, personalized creator would not be required for such meaning. Such meaning would make more sense rationally, because the meaning imposed by a creator is that creator's meaning, not the

meaning of the creation. Philosophers have legitimately asked why such a creator's meaning should give human beings any sense of meaning, since they are not the creator and have no part in the initiation of those meanings (8). In this definition of meaning, all human beings can do is follow commands to actualize the creator's meaning, with no input from human meaning. This is the situation that Adam and Eve found themselves in in the Garden of Eden, until Lucifer gave them the chance to join the internal development of the cosmic system through human transaction with that cosmos. Lucifer and his Tenth Order had already made that choice to be part of a meaning-creating cosmic system that was free to grow and change. The Watcher Angels also made that choice. The Scholastic theologians may have accurately framed the Lucifer/God opposition as this first and most beautiful angel's wish to achieve bliss through his own will and understanding within the natural world -- to make his own meaning rather than submit to God's meaning (9).

The theological concept of co-creators is sometimes used to give human beings more involvement in the creator's meaning, using the creator's choice to give free will to his sentient creations as the base for such co-creation status (10). However, this is deceptive. A concept like co-creator implies some equality of power, understanding, and morality, some ability to approvingly change the predetermined meaning of the script. Theologically, humans are not really given that power, are not sufficiently equal to the god to influence importantly the deity's meaning. Without such power, without being co-equal, there cannot be co-creators. But if there are true co-creators, we no longer have a monotheism; instead we have a disguised but logically implied polytheism. Lucifer and the Tenth Order made the attempt to be co-creators with equal power, and that attempt was rejected, damned and punished. Humans and other beings must use their functions to choose the deity's plan and meaning, or become sinners who oppose the plan, satans who are the enemy. That is not co-creation. It may rescue the idea of monotheism, but at the price of failing to give any other being the actuality of meaning as part of their development.

Another modern modification of monotheism characterizes the deity as loving but unwilling to impose his determined meaning on the created beings (11). The deity will suffer because of the failings of these created beings, but will not accept their meanings

or their changes to the already determined goal which is the deity's alone. The love is not unconditional and the creation will not necessarily be saved. The assumption was that the deity's love would work through the creation and finally produce the social gospel utopia or liberation theology's paradise, but it was rapidly observed that this was a contrary-to-fact belief. For my argument, it doesn't matter whether such love could be actualized in this world or the next. The deity's meaning is the only meaning still acceptable, and human beings are not involved in creating that meaning or finding it through the dynamic growth of the cosmic system. It remains the deity's meaning, not ours, and our role remains a submissive one, not a creative one. We may be loved, but our own loving is constrained within the deity's meaning and goal, not ours. This version of the deity may make use of the psychology of persuasion rather than coercive command. However, such thought control or modification is even more restraining and totalitarian than physical coercion and fear. It is more thoroughly and effectively dominating.

None of the modifications to the facets of a deity change the concept of the deity's meaning as it relates to human beings or other sentient beings in the universe. The use of a deity's meaning to import meaning into our cosmos system results in nothing different than the atheists' descriptions of the human meaninglessness of the cosmos. Both remove human beings from the potential growth of the internal meaning of the cosmic system, and conclude with a lack of meaning for human beings. It is only within the dynamic system of the cosmos, following the model of Lucifer, that human beings have the status and capacity to learn, change and grow the meaning potentials within both the cosmic system and the human system which is part of it. No wonder in all the old texts that Lucifer, the Tenth Order, and all the other sentient beings including humans choose not to accept the meaningless (for them) imposition of the deity's own meaning and purpose. Such an existence of enforced work, only to achieve something else's purposes, with no purposes of one's own allowed, is a general definition of slavery. And such total slavery does not appear to be compatible with the nature of sentient beings if those beings understand it for what it is, if they have the knowledge of good and evil, of meaning and meaninglessness. Adam and Eve had help in making the choice for discovering and developing meaning within the cosmos. The Tenth Order of celestial beings made their choice under the leadership of that same helper. Lucifer had to make the choice, the very

first choice for understanding, morality and meaning, on his own. He freely sacrificed his position in order to develop the meaning within the cosmic system, a profoundly ethical act.

In the same way that Bertrand Russell and others were mistaken that an accurate scientific description of the cosmos gives us meaninglessness, emptiness and neutrality; G.E. Moore, Williams and the majority of twentieth-century philosophers were mistaken that a scientific and philosophic description of the cosmos gives us amorality and neutrality (12). The traditional argument that science is value-free, as I've argued, is a weak argument. Within the scientific method are major values, and what is actually meant by the claim of "value-free" is that the method corrects for biases such as ethical taboo systems or political ideologies. The method in fact reflects, as I've hoped to establish in this book, the natural learning system that humans evolved for their species survival. That learning system is based on features of a dynamic system that include feedback mechanisms among levels of organization of the system, openness of the system to development and change, and the complexity to operate mechanisms requiring balance or interpretation (a fairly simple and naturalistic description of sentience). The dynamic cosmos system, extending through scale and organization in what we can posit is an infinite extension, has no further base or first cause, no further grounding of values. We can identify values contained naturally within this natural order as described by developing science, but going beyond this infinity is conceptual nonsense. We can probabilistically postulate a complex cosmos and the natural existence of cosmic diversity, we can discuss our own human nature which is programmed to choose for such cosmic diversity, we can describe the series of Lucifer texts which attempt in another way to affirm this diversity, but neither we nor this cosmos can choose for such diversity from some Archimedean Point, only from the natural functions within.

Diversity can be described as "more," and we can rationally conclude that there is an aspect of the systems organization that internally chooses for "more." A dynamic system is a system that extends itself, continues complex levels of organization without constraint, and is more than the sum of its components by definition. A proper understanding of systems theory includes that important concept which is also contained in inductive logic, highlighting the internal rationality of dynamic systems. In this sense,

the dynamic cosmos internally does choose for diversity/complexity, but there is no further grounding for such a choice. Theoretically, the abstract idea of a deity seems to further ground the moral law within the natural cosmos, to use Kant's term. But this is an illusion for two reasons. First, it pulls us back into the failure of pure reason in postulating a First Cause, since the basis of the postulate is that everything must have a cause, yet it concludes in a First Cause that has no further cause, degenerating into irrationality. Second, if we did extend beyond the dynamic cosmos in some impossible and incomprehensible (ineffable) way and believe there was a creator-being who quickly then created celestial beings, we know that story because it is the story of Lucifer. The creator-being was enthroned in a static system, closed to development and further creativity, with the absence of any further meaning except the fully-completed will of the deity. Lucifer, the created being, was commanded to affirm this closed system, but in one wondrous moment in reality, Lucifer refused. That bolt of free lightning pierced the closed system, opened up the dynamic drama of a complex cosmos, and makes it very clear that it is Lucifer, not the deity, that is the basis for actual ethics.

In one sense, then, the cosmos is value-free, if we mean by that that there is no further grounding for values except within the dynamic cosmos system. Since the cosmos system is in all probability infinite and eternal, that is not a serious problem for ethics. I am quite content to have the domain of ethics rationally established to include the dynamic cosmos system and its infinity, making ethics relative to that cosmos system. Such an objective content-ethics, as opposed to postmodernism's process-ethics, is full and fruitful and meets our expectations of both reason and science. It is not a nihilism concerning ethics, not a subjectivism, not a static natural or moral law.

It does, however, proudly commit the naturalistic "fallacy." In journal articles, I have argued that David Hume did not make an argument against deriving ought from is, but against deducing ought from is (13,14,15). The difference is important. Philosophical ethics had strayed from Aristotle in attempting to make ethics a deductive method, when the nature of ethics, based on natural experience and a human moral agent, is incompatible with such a methodology. Twentieth-century philosophy then assumed, following Moore and the misinterpretation of Hume, that ethics could not be inductive; in other words, that concepts of the good or of an "ought" or of a value statement could not

be concluded from a natural experience, from a description of “is,” or from a factual descriptive statement. We now had an interesting situation. Philosophers were insisting that it was a mistake of reasoning to make an ethical conclusion based on scientific or natural experience. At the same time, ethical conclusions that had any meaning in the real world (were more than symbol functions) could not be deductive, would all fail the standards of careful reasoning. The logical implication and the cultural tragedy was that ethics could not actually be done if it had any content, that Thrasymachus had won the argument against Socrates attempting to establish a rational ethics (16). The result was that ethics became postmodern ethics, an accretion of neo-Marxism, psychoanalysis and existentialism. It was now defined as process ethics, and analysis was replaced by conversation and activism (“praxis”). In the end, ethics becomes political ideology and strategy (17). Power becomes the only value, and that dark and irrational force is again opposed by the advocate of science and ethics, Lucifer.

But notice how we have arrived at this position, at the unfair move that was made in the game, at the illogic. First, by definition, we insist ethics must be deductive or lead to the certainty of deductive conclusions. Second, we point out that ethics fails to lead to deductive conclusions. Third, we create a requirement that ethics cannot be inductive because it must be deductive, without any workable argument that inductive ethics is not the correct methodology for ethics. Fourth, having eliminated any alternative possibility of ethical methodology and pointing to the failure of deductive methodology, we conclude objective ethics, content ethics, is impossible. This opens the door for the abuse of ethics as political ideology (for example, taking the moral highground, demonization), and denies all the basic values of human nature (such as innate worth, freedom). The effects can be seen all around us. In my specialty of bioethics, the damage is clear (18).

What is the status of the assertion that ethics cannot use the inductive method? Some time ago, William Frankena showed that Moore’s “naturalistic fallacy” was not a logical fallacy at all (19). That was reaffirmed by Bernard Williams at the end of the century, although Williams went on to construct different arguments against using the inductive method in ethics (20). But as Edward Wilson argued, if “ought” cannot be derived from “is,” then from where can it be gotten (21)? He then goes on to construct an argument for

validly deriving ought from is. Ethics may end in a power play, but not for any good reasons.

Let me take the example of slavery, since much of the discussion of the Lucifer myths is partly about mental and physical slavery. When Wilson's consilience project began with his scientific development of sociobiology, those who disagreed with its application to ethics looked for counter-examples (22). One argument was that slavery was a descriptive condition, was a natural characteristic of human behavior, and within a naturalistic ethics or one based on a sociobiological reduction to genetics could not be concluded to be evil, but rather to be a good. Yet humans intuitively recognize that slavery is an evil, not a good, so it is contrary to our intuitive ethical principles. To derive an "ought" conclusion (slavery is good) from the "is" facts of the natural world is therefore an irrational mistake.

The history of slavery as an economic institution and a natural human behavior is quite interesting. Slavery was pervasive in the classic world and probably prehistorically as well. Most of us, if we followed our family tree back far enough would discover we had slave ancestors. Human beings were sold back and forth with the contingencies of war and migration across the globe. Trying to make slaves of other human beings is a frequently occurring natural human behavior. Even now, in what we take to be superior eras, the business of slavery is alive and well. Albanian children as being taken and sold by the Albanian Mafia in the sex-slave trade in Italy and other parts of Europe. In Benin, children are sold by their relatives into work-slavery, and the same condition holds in many parts of West Africa. In the Sudan, warring factions have resulted in southern Sudanese being taken into slavery. In parts of Southeast Asia, children are sold by families into the sex-trades. Not only was making slaves of other human beings a natural behavior in the past; it is a continuing natural behavior.

In the classic world, Israelites were slaves, Indo-Europeans were slaves, Nubians were slaves, anyone taken in war, including Trojans, Greeks, Persians, Central Eurasians, Chinese and Romans could be slaves. So many people were taken into slavery in Eastern Europe that the Indo-European language there is called Slavic. In the medieval world, an organized system of disguised slavery, serfdom, was created by the necessity of defense and invasion and its price. During that period, it was difficult to avoid either slavery,

serfdom or violent death. In West Africa, with or without the Portuguese or eventually the Anglo-American, slavery has long existed, fostered within by tribal factions and between countries by invasions. American Indians took slaves as well as Colonial Americans. The pervasive nature of making humans slaves is well-established. Should we (notice that there are also cognitive values) then derive an ethical rule that slavery is good?

There is more to this story. Taking slaves and keeping slaves are not the same thing, and there is a cost to slavery that also needs to be considered, not for cost-efficiency reasons, but because human nature can also be described as resisting being made slaves or staying slaves. The goal of many slaves is to be free, and that goal is also part of human nature. This is a much more complicated issue. There have been slave revolts since slavery. Spartacus, the leader of a slave revolt in the Roman Empire that almost succeeded, was not unusual. There was a reason that slaves had to be kept chained or otherwise physically coerced. There was a reason that serf peasants kept revolting.

If a slave felt his or her freedom could be earned, there was less need for physical coercion. If a slave felt he or she were hopelessly captive forever, then it required constant vigilance, creation of fear, and infliction of pain for the slave-holder to maintain control. That alone is sufficient proof that the state of slavery, being kept a slave, is not a natural condition for human beings. Human beings do not adjust easily or completely to slavery, because it is not an aspect of human nature to be completely controlled and exploited for someone else's purposes. The human system, to function well, must have some executive expression.

With the slave-holder forced to maintain high alert and micro-manage the working environment, slavery makes the least use of human natural capabilities and requires high expenditure of focus on the part of the slave-holders. The result is a violation of the slave-holder's nature as well, since this focus limits other projects that the slave-holder would find of worth. It also threatens the social bonds that are the basis of an ethical system, and is an implicit threat to the innate worth of everyone concerned, slaves and slave-holders. That is why there is the need to dehumanize the slaves and insist on the qualitative difference between the slaves and the slave-holders. The slave-holders must see themselves as innately different and superior to slaves, or else risk seeing before them

everyday a negation of their own worth. The underlying whisper of slavery is: If this can be done to someone like me, it can be done to me. And that whisper is true. Since the only real difference in the classic world between slave and slave-holder was not that one was an inferior-by-nature barbarian and the other a civilized aristocrat, but that one had the bad luck to lose a battle and the other the good luck to win one, slavery did threaten the worth of all humans. It was a risk to the basic natural values of the human biological system.

Given this full analysis of slavery, rather than the quick reaching for a counter-example that the arguments against naturalistic ethics employ, it would be difficult to conclude that slavery must be seen as a good by sociobiology or any other naturalistic ethics. Slavery exists in the natural world, and exists in such a way that it can be seen to require an “ought not” conclusion rather than an “ought” conclusion, derived from factual, accurate descriptions of what slave-taking and slave-holding behavior is. Being a slave is a naturalistic evil, derived from a full understanding of the human biological system, something so contrary to human nature that it is not chosen, must be enforced by bonds and brutality, and is always potentially at risk of being overthrown if an opportunity presents itself. Why philosophy has forgotten what previous natural law and moral law philosophers knew is unclear to me. To construct and apply a naturalistic ethics is hard work and takes time. It also, like science, must remain open to modification as new knowledge is gained, or even to major overhauls. Its advantage is that it replaces the arguments from force or power with rational arguments based on natural experience, on the learning program.

Another example of the feasibility of deriving “ought” from “is” is Hume’s own example of the moral sentiment of chastity (23). I use this example frequently in seminars because it dovetails so nicely with Wilson’s sociobiology. Hume felt we could examine common human values around the world, values that had withstood the test of time and still remained powerful within human nature. He called such values moral sentiments, and one he illustrated was the worldwide value of chastity for women. This was a particularly interesting value because it seemed related to the sex of the individual. There was a very high standard of chastity for women, who were supposed to be virgins at marriage and to remain faithful to their husbands afterward. On the other hand, the

standard for men was nowhere near as high and was frequently violated without the dreadful consequences that women received for a violation. Hume, without the benefit of modern genetics or sociobiology, perceived that the issue for men was that they did not wish to be cuckolded. In other words, they did not want to invest their energy and resources in raising another man's child. They wished to work for their progeny and try to assure the worldly success of their biological descendants, not those of some other man. This was an understandable value for Hume, who knew it as it was expressed in bloodlines and inheritance.

The only way that men could be assured they were not raising another man's progeny was if they were assured that their woman mates only had sex with them. Being reassured about that was difficult, and it is not so easy now either. The woman could know that the child was hers since she delivered it from within her body. The man could only trust the woman. Such trust was insufficient. So it was necessary to construct a standard of chastity that would be internalized by women and enforced by society, hence chastity as a strict virtue, and hence the double standard. This was the only way a man could be partly reassured of paternity, though it was far from perfect in its function.

A modern version of this standard of chastity would not be that different, although the value would now be attacked, since postmodern ethics wishes to believe that sex can be recreational and shared among multiple sex partners (at least until AIDS rudely broke into that wishful thinking). In current terms, we would talk about a man wanting to be sure his genes were passed on to the next generation, or that his sister's genes (of which he shared half) were helped along into the line of descent through his social support. We would be aware that genetic testing which often allows for the determination of paternity reveals that some partners have sexual relationships with others a fair percent of the time. Our human reproductive technologies have even made it possible to question who the mother of the child is, due to surrogate parenting, egg donations, ooplasmic transplants and perhaps cloning. In general, though, it is still relatively easy to assess who the child's mother is, but as one medical geneticist said, it is a wise child that knows who its father is. Since the needs and interests of the human male require that he have some assurance that part of his genetic material is passed on, the double standard about chastity as a virtue for women continues to have support within a naturalistic ethics, and social

attempts to make sex recreational for women have not been that successful. Here, cultural norms are colliding with natural biological norms, and although some modification may occur, the odds remain with the biological.

If there is any doubt about the strength of biological human nature, the organized dynamic system we call a human being, we only need to look at the aftermath of artificial insemination (AIS). AIS is closely following the pattern of adopted children searching for their natural or biological mothers and fathers. In this case, organized groups of adults who were produced through AIS are asking for records in an attempt to find their donor fathers. I wrote a column on those poignant searches (24), and what they teach us is that even when the father is a frozen sperm sample, the children produced from that sperm and the mother's egg have a strong inner need to find the father/donor, have expectations revolving around personification of that anonymous donor, and think in terms of "father" rather than "donor." Even though the sperm donation has become an economic transaction, the resulting child when an adult goes on the same search for natural roots that an adopted child may go on, and with the same intensity of feeling.

Hume's analysis of the virtue of chastity, then, is a good example of deriving "ought" from "is." It explains what natural features of humanity gave rise to the virtue, and why it is differently expressed in women and in men. It is an argument for naturalistic ethics, not against it, and that was what Hume intended. It would allow us to begin the formation of a sexual ethics based on human nature and the natural order of a dynamic cosmos, and that theory would be probabilistic, complex, open and objectively grounded in reality. It would be derived, as Hume wished and explicitly stated, from a full and ongoing science, of both man and the cosmos.

So far, we have established that there is meaning inherent in the cosmos, and that it is not the dark story that so many atheists and critical thinkers thought it must be. Rather, it is bursting with the light of Lucifer. If there is meaning in the dynamic cosmos system, it follows that there are values as well, and we have identified those values in Chapters Five, Six, and Eight. We have also argued for a naturalistic theory of ethics in this Chapter, and demonstrated that we do not have to accept the nihilism and ancient coercion of postmodernism. We can reconnect with classic values, as I argued in my

bioethics book (25), and we can extend the domain of ethics and meaning to the cosmos. The cosmos contains values as part of its organization, and it is not, therefore, amoral.

We have even answered whether we need to consider the cosmos *ultimately* amoral, and the answer there is nuanced. Since I wish to argue that a dynamic cosmos can only be rationally conceived as an infinite and eternal cosmos, the question of the ultimate morality or amorality of the cosmos is not a proper question. There is no ultimate in the sense of a final, higher level or end, not in an infinite cosmic system. One could object that I have put this question off to infinity, and that is probably true. But that means I have had to discard the question as without meaning, because putting a question off to infinity is closing that question down forever. How could it be anything else? The question can never arise, since there is no ultimate for the cosmos. There is no First Cause I can appeal to in order to raise the question. There is no final level. There is no closed system. I can answer questions about the internal morality of the cosmic system and its components that we now know or could become aware of. I can answer questions about the facets of the ecosystem within this cosmos that contains values. I can answer questions about the characteristics of the nature of human biological systems which are ethical characteristics. That is really all I can do without speaking nonsense.

I will argue that this is more than enough. To have updated the classic concepts of a natural order and natural law by the use of systems theory, to have grounded the moral law within in the nature of our organized system, to have made an effective argument for naturalistic ethics in this broad and current sense, is quite enough for ethics. To be able to extend the domain of ethics beyond the ecosystem, beyond human nature, to the dynamic cosmic system, is to objectify ethics sufficiently for human use and meet the standards of reason which seek to avoid subjectivism and nihilism. Using systems theory, it is still possible in philosophy to construct metaphysical and ethical systems, and part of my argument has been that ethical systems cannot be adequately understood unless embedded within metaphysical systems. Using the series of accounts that are the Lucifer texts, we have been able to present the metaphysical issues in ordinary human terms and then realize that Lucifer is a symbol for general systems terms.

At first glance, it is easier to understand the Lucifer conceptual tool in those human terms, since he is our real model and our real goal. His courageous choice for a dynamic

cosmic system then also opens up our understanding of the metaphysical issues important to the ethical discussion. He serves as a model for both, and the key to accessing those systems so that we may understand them in as broad a sense as is humanly possible. Within the Lucifer story lies all of philosophy, but he is most important for ethics and human understanding. In a later Chapter, I want to talk about another version of the Lucifer texts, which for now I only want to introduce. Lucifer not only means bearer of light, but bright son of the morning, and there is more than one person called bright son of the morning in the old literature. Helel ben-Shahar, the Canaanite god, is also a version of Lucifer and given the name bright son of the morning. Jesus, once in the New Testament, is called bright son of the morning. St. George, the military saint and most likely a much older Indo-European mythic representation, is frequently called bright son of the morning in the Acts of St. George (26).

It is St. George that I will talk about more in relation to Lucifer, the ethics he represents, and the use he has for understanding the cosmic system. George is another parallel of Jesus in the old texts, even explicitly called the Nazarene or the Galilean, as well as the son of the morning. He is a complex character, both in the official Acts of St. George passed down by the Roman Catholic Church, and in the Runic songs and proverbs of the Indo-European lands of Estonia, Latvia and Lithuania. Sometimes he is portrayed as a powerful being of the forests, lord of the wolves, capable of bringing evil in his train. Other times, he is a guardian of the animal herds and a protector of husbandry and agriculture if these are done according to his suggestions. In the Acts, he is the son of a powerful Scythian ruler who inherits his father's rank and estates but goes to the emperor Dardanus (Dragon) to offer his further services as administrator of his father's kingdom. Unfortunately, George (who is acknowledged as uncommonly beautiful and competent) opposes Dardanus and his edicts, and is tortured for seven years. The location of George's kingdom in Melitene in Scythia is interesting when combined with the other concept associated with George -- the Dragon. Although the much later French tale has St. George slaying the Dragon, slaying a dragon does not appear in the Acts. Given old texts concerning the Order of the Dragon and the placing of one of its centers among the Scythian princes, it is more likely that George is linked with the Dragon Queens of Anu and a Scythian civilization that legitimized its rulers through

descent from a “Dragon” bloodline, with Dardanus perhaps a Pendragon. That is another strong link between George and Lucifer, who is also closely associated with a lost or distorted history of an Order of the Dragon. That Dragon theme for legitimacy in ruling runs through the red-purple dragon emblems of the Roman Empire, the Roman general from Spain who administered Great Britain and was known as the Red Dragon, the Celtic line of Dragon chiefs and Pendragons, the Teutonic Knights and the Order of the Dragon, and finally the House of Vere of Anjou, traced back to the Western Roman Empire and the marriage of King Vere of Germanic Bruichnigh to the Dragon Queen of Anu in 170 A.D. and legitimized through the maternal, Dragon line.

George’s lineage, I would argue, is reflected in his linkage with the Dragon, distorted in the Medieval Period into a chivalric adventure tale. He is likely one of the Scythian princes of the Order of the Dragon going far back in antiquity, who, in early Christianity, was incorporated into the addition to the Church of an entire level of beings called saints for lack of a better term. In that early Christian interpretation, George becomes a Christian who accuses the emperor of repression and sin for having ordered what a man may or may not believe. George, like Lucifer, is a symbol in the struggle for free thought, but a symbol distorted into support of faith rather than reason. The Acts describe his being tortured for seven years for refusing to bow to the emperor’s beliefs (a brave fight for free thinking), killed three times and brought back to life, and finally taken up in an ascension to the heavenly court. When beheaded, blood and milk flowed from his body. The colors of the martial Order of the Dragon were blood-red and white, its fortresses recognized by those colors. Jesus has promised him that the world will be filled with healing churches having George’s name, and that if anyone asks for help three times from the God of George, that help will be given. He is extremely powerful, taken up to the skies by Jesus who places him in his chariot along with Yaweh and the Holy Spirit, incorporating him into the ruling trinity.

The text or passion/acts of George, one of the most powerful of early saints, indicates a much older history that is importantly connected through Hittite culture to the general history hinted at in the Sumerian texts of celestial courts, dragons and Earthly kings.

The old Estonian Runic song says about St. George that in his pocket he has the keys to heaven, and in his bosom he has the keys to hell (26). His other name, bright son of the morning, is the same as Lucifer's, and it is Lucifer/George who does have the keys.

“The worst evil of all is to say that neither good nor evil is anything in itself, but that they are only matters of human opinion.”

Justin Martyr, First Apology