CHAPTER FIVE
THE BIRTH OF ETHICS: KNOWLEDGE AND FREEDOM

"Honor is a sacrifice no man ought to make,
as I received [it] so I wish to transmit [it]
inviolate to posterity."
Benedict Arnold, to John Hancock,
President, Congress

Honor, dignity, freedom. They are now almost archaic sounding values, and that makes sense because ethics has entered a culture of nihilism and unreality as a result of postmodernism and the abandonment of reason and empiricism (1). The attempt to live in a world without ethics, with only power or force determining decisions, is awful in its evil consequences and demeaning to the nature of man. For a social species, it is so unnatural that it is likely to be futile. Imagine a world in which all humans are sociopaths, and it will not be a future anyone would want to live in. Historians can talk about the Dark Ages as brutal, identify the fourteenth century as the terrible Age of Iron, decry the anarchic destruction of Balkh, build museums to various holocausts, but there would be nothing that could compare in magnitude to the routine and general ethical nihilism of a bureaucratic, technological and total society.

I have argued that ethics begins with Lucifer and humanity, not with the forces of the celestial court, and that moral choice, freedom within a causal explanation of the cosmos, and self-love are prerequisites for ethics. Lucifer was the first being who chose for freedom and became what philosophers have liked to call a "moral agent," and he made that choice against overwhelming force. This may seem too harsh an ethical judgment, but the Apocrypha and Pseudepigrapha confirm it, if one listens to what one is reading. These old texts are not to be taken lightly or dismissed easily. Some have better provenance than many texts included in the official bibles. For example, fragments of the Ethiopian Enoch, a very old text, are found in Aramaic at Qumran, which places them far before the New Testament or the organized Old Testament (2). Fragments of Enoch are found in the official biblical text and referred to in the Qur'an. For purposes of my ethical

analysis, I want to look at the Hebrew Apocalypse of Enoch, one of the three versions of Enoch still existing, and the strange story of Metatron, Prince of the Divine Presence.

We know from the other Enoch texts that Enoch was selected from among all men as the favorite of the supreme ruler, the Holy One, and as the one good example of human beings which justified the ruler's creation of the human species. Enoch is the single human being plucked from the planet, introduced to the levels of heaven, and accepted into the celestial court organization. In order to exist in the heavenly court, the ruler changes Enoch into a heavenly being (an angel), completely altering his form and nature. Enoch is given no choice about the transformation, although he is taught about the heavenly court and its beings.

The alteration is extensive. Enoch is given 72 wings, 36 on each side. This also entails giving him multiple eyes all over his body, and turning him into a being of fire rather than flesh. His head flames and sparks, his hair is the white of white wool or swept up in flames. Enoch's eyes shine with this extreme light. The ruler also changes Enoch's name, now calling him Metatron (along with 70 other mysterious names he is granted), the "glory of highest heaven" and Prince of the Divine Presence. Metatron is assigned official court duties in the seventh level of heaven, sitting on a great throne at the door of the seventh palace, surrounded with other heavenly princes and assistants. He is to judge all celestial beings on the authority of the Holy One, and hears cases continuously. This is similar to the rescue of the repentant Archon, Sabaoth, in the Gnostic texts (3). Not satisfied with this elevation of his favorite, the ruler also crowns him and shows him before all the court to be bowed to and adored. All the powerful princes of the highest levels fall to the ground and tremble before Metatron's beauty and power, and "even Samma'el, the Prince of the Accusers, who is greater than all the princes of kingdoms that are in the height, was afraid and shuddered at me." (Samma'el is another name for Lucifer in the old texts, and is similar to the Gnostic name for the chief Archon, Samael, god of the blind.)

As all the powers of the heavens are bowing to Metatron as the ruler wishes, an apostate rabbi named 'Aher rides his chariot into the heavens. 'Aher has come to behold this new creation and prince. He is afraid when he sees Metatron sitting on the throne surrounded with princes and ministering beings, falls from his chariot, and grovels before

this imposing new prince who once was the human Enoch. It is important to understand at this point that Enoch had never aspired to such status, was not asked for his agreement to the transformation, had not risen through political maneuvers or force into this high office, in other words, was the unwitting recipient of this gift and not power-hungry or game-playing. That, however, will do Enoch no good. When ‘Aher sees Metatron, he says: “There are indeed two powers in heaven!” Immediately there is a divine voice, immediately, who calls out: “Come back to me, apostate sons -- apart from ‘Aher!” Metatron does and says nothing, as ‘Aher’s apostasy is responded to quickly. The ruler or Holy One selects a YHWH prince (one who is so powerful that he can act with the name of the Holy One, since YHWH is a class name in this context), ‘Anapi’el the dreadful prince, and commands him to go to Metatron. Metatron relates that this YHWH came at the command of the Holy One, “blessed be he, and struck me with sixty lashes of fire and made me stand to my feet.”

Precisely what has Metatron done to deserve such punishment? He has become a threat, through the Holy One’s own doing and not through Enoch’s wishes, to the ruler’s absolute power. Metatron has been altered by the ruler to be so impressive that he now threatens to be equal with the ruler, a threat that an absolute ruler will not tolerate. It doesn’t matter that Metatron has not intended this, that it is the result of the ruler’s own actions, that Metatron is innocent of wishes to be equal. Like Lucifer, Metatron is taught the lesson that even the appearance of wishing to be equal to the ruler will be severely punished. The threat does not have to be of one’s own making. And the punishment is particularly cruel and sadistic. Metatron is made to get to his feet and submit to sixty painful lashes without complaint or attempt to avoid the punishment. His body language and his own words, “blessed be he,” must indicate his acceptance of this unjust punishment. Honor cannot exist in such a court. Integrity cannot exist in such a court. Most important, self-respect and internal freedom of thought cannot exist in such a court. Outwardly, Metatron may be beautiful and imposing to look at, but inwardly, he is a gob of ash and/or mud. No bowing or high thrones or titles like Prince of the Divine Presence can fill that emptiness inside, that destroyed nature. Metatron is abused as if he had been sexually abused, and his mind and mouth must form the words that praise the abuser. He

is ground to the lowest of beings, which is exactly what the ruler wishes to accomplish. There will be no two powers in heaven, absolutely not!

All the granted power, all the pomp and status, are fake. There is no reality in this heavenly court except the absolute power of the ruler, and what he wills must be blessed and said to be right, no matter what that will may be. This is an awful existence for any being who has self-love and the wish for freedom, and despite the massive changes that gave him immortality, Enoch might have been better off to live and die as a human being with integrity and freedom. His development has stopped, and his future is in the hands of an arbitrary, all-powerful ruler who has no ethics, only force. To appreciate the depths of Enoch's degradation, compare him to Lucifer. Lucifer was given the same command, to defile himself internally and degrade himself externally by bowing to an inferior being or by having to agree to be a "yes-man" concerning the evaluation of the cosmos. Unlike Enoch, Lucifer exhibited self-love (good pride or honor) and integrity, as well as incredible courage in wanting to be free thinking, to be a free and growing being out from under the suppression of the ruler of the heavenly court. Milton was right to admire his courage, because it was amazing and admirable courage in light of the risks and likely consequences of opposing the static nature of the ruler (4). Carus is wrong in making light of Lucifer's struggle for his freedom and his capacity to live with himself and his choices (5). Carus feels the need to imply the struggle was selfish, subjective, and negative. Carus assumes, without documentation or evidence, that Lucifer/Satan is a rebel only seeking liberty for himself and the oppression of others (forgetting he led one-third of the heavenly beings in this rebellion for freedom), and that only God's kingdom establishes right, a right which insures the liberty of all. He declares that Lucifer promises, but God delivers, liberty; that Lucifer is a tyrant proclaiming independence but giving oppression and slavery. He agrees with the representation of Lucifer in chains, since sin/license enslaves the mind.

This is an appalling description turned upside-down from the ancient texts, reflecting Carus' refusal to grant ethical status to Lucifer and to question the ethical status of the ruler of the heavenly court. Yet the texts are full of comparisons between Lucifer and the Holy One that indicate the opposite. Metatron is only one example, and in Chapter Ten I will list a number of the unethical cruelties and capricious sadism that characterize the

heavenly court (and that Job had the courage to question). There is no good reason to convert Lucifer's rebellion for freedom into license or sin, except Carus' wish to do so. Thinking freely without fear, suppression, brain-washing or extremely painful punishment is not license in any way, and represents what any parent or teacher would want for young minds in his or her charge. Lucifer wished equality among the heavenly beings, as the texts also clearly state, and equality to reason, to be respected, to have moral agency is not a definition of license either. The chains on Lucifer are imposed by the absolute ruler, who will respect no one as near-equal to him or deserving of freedom to question him or having fundamental worth outside the will of the ruler. That is made quite clear (and its implications for ethics are enormous) in Ethiopian Enoch: "For our Lord is faithful in all his works, his judgments, and his righteousness; and his judgments have no respect for persons." The ruler is consistent, static, operating on will or command and not values, and refusing to respect not only the status of some persons but the very personhood of all beings. The Ethiopian Enoch may not have intended to, but it got it right. Respect for personhood, a prerequisite for ethics and, if seen as respect for functions, an internal characteristic of dynamic systems, does not exist in the heavenly court. Not only was Metatron flogged with sixty lashes of fire. Somehow, the high-ranking Gabriel also managed to run afoul of the ruler, and was punished with forty lashes of fire. Lashing subordinates into submission was not a single instance or apparently an unusual event in the court. I can only conclude that Carus was biased when he constructed an argument easily seen to fail against Lucifer representing freedom. Lucifer is perhaps the first free being, though the price he paid for his freedom was very high. We should at least honor his attempt.

Russell did not even consider that right and ethics might be on the side of Lucifer rather than the celestial court (6). He is so appalled at the evil possible in the world, both human and natural, that he wishes still to personify that evil and make it other than God's responsibility. He is, however, aware of all the attendant problems that brings for a monotheism, since it will not make sense conceptually. His only solution is to try and include both the argument from complexity and somehow a recognition of the terrible nature of evil and the personification of its cause. I think the complexity argument will work, but only if the catalyst for complexity in the cosmos, Lucifer, is given the high

moral standing he would then deserve and is not personified as the Prince of Darkness, archfiend, and cause of evil. Russell is not willing to do that, not willing to grant that Lucifer is the beginning of ethics and complex systems in the cosmos. He remains trapped within a conceptual frame that wishes to see Lucifer as the cause and personification of evil, as eternally damned for the value system he created for the universe by his actions, and as the opposer and enemy of all that is good. The complexity argument will only work if Lucifer is granted his ethical due and his salvation, a move more in line with other Indo-European mythological explanations which honor the daemons and their role in the cosmos. Lucifer must be accepted.

Freedom to think and express one's self did not end with the fall of Lucifer. When the ruler was considering making human beings, for example, he took the project to the primordial first class of angels, again according to the texts of Enoch. He had set up the class to give him advice, at least that was the official description. But that should have been modified to read he had set up the class to give him advice he wanted to hear or act on. The first class of heavenly beings were not yes-men, and their advice was not to create human beings. The ruler, intent on his idea and project, did not like that advice, so he destroyed the first class of angels. He then set up a second class, and put the same question to them. They unfortunately had not considered sufficiently the consequences to the first class, or were also exceptionally brave beings. They advised against the project, and were summarily destroyed. The ruler then set up a third class, who were better at politics than freedom or integrity, or who learned hard lessons quickly. The third class gave the advice the ruler wanted to hear, approving his project, and survived. Still, they retained some courage and free thought, some self-respect, for when the project proved somewhat disastrous and the ruler wished to totally destroy the human beings he had created, the third class of heavenly beings pointed out that the first class, destroyed for their astute advice, had been correct after all. That took courage. The static will of the ruler had again collided with the dynamism of the cosmos system. The fact that the third class of beings was capable of defending freedom and reason, even if in a weak way, demonstrates the irrepressible vitality and freedom built into the dynamic cosmos system, its combination of chaos and ordered chaos, of oscillations and controlled states that are basic and natural to it. Freedom/self-worth and the knowledge that comes from free

thinking processes cannot be eradicated from open systems without destroying those systems. Lucifer's refusal to submit expresses the natural values of an open system and the complexities produced by those systems.

There is another example from the old texts of Ethiopian Enoch, also found in the fragments called Slavonic Enoch, involving Enoch's meeting of the Grigori on the fifth level of the heavens (7). The fifth level of the levels of heaven is a gray and silent place, dismal and sad. On it are large beings who look as gray as the environment. Their faces are worn with care, lined and depressed. Their mouths are down-turned and no sounds come from them. The silence is a silence of psychological death. Enoch asks what manner of place and beings this is. He is told that these are called the Grigori, who rebelled with Lucifer and lost. They are now confined on this fifth level with their Lord Lucifer, although Enoch does not see him. In addition, some of the rebels broke their vow and went down to Earth, perhaps the 200 beings who agreed to an oath with Semyaz their leader that they would go to Earth and interbreed with the women there. These brothers are now hanging in the dark prison of the second level, tortured, and pleading with Enoch to intercede with them to the ruler. The Grigori know what is happening to their comrades and weep for them, emotionally very distressed at their fate.

Enoch asks why they are silent and not singing the praises of the ruler, why they are waiting until the fate of their comrades is decided. He urges them to begin the trumpets and music, open their mouths in praise of the ruler, and send up their "service" to him. The Grigori take his advice and begin to sing praises, though this self-abasement is no guarantee that their condemnation will be lifted. Later, in fact, the ruler refuses Enoch's intercession for those on the second level, who will be damned forever. This is an interesting comparison of Enoch's empathy, which he shows for both those on the second and fifth levels, and his basic decency, of the Grigori's loving bond with their comrades on the second level and their huge distress at their fate, and of the responses of the ruler. Both Enoch and the Grigori have genuine feelings of love, of concern for suffering, of altruism and hopes to alleviate pain and damnation. The ruler shows none of this. His will is that these beings be punished forever for daring to oppose him, which in his eyes is their real sin. There is some question whether Enoch's urging to the Grigori was the ethical thing to do. He wished to help them, and his perception was that their only hope

lay in praising the ruler and totally submitting, accepting, and approving his will. In the face of their desperate situation and overwhelming force, his advice is the most prudent, but it comes at a high price. The Grigori's spirit/self, already beaten and collapsing into grief, must be fully beaten and destroyed. They must sing praises to the tyrant they had struggled against for their freedom. Physically his slaves, they must become psychologically his slaves, a much greater destruction.

There is a poem by Rudyard Kipling that tells the same old tale of autocrats, "The Ballad of the King's Mercy" (8). It is set in Kabul, Afghanistan, and told about Abdhur Rahman, the Durani Chief whose mercy fills the Khyber hills. A low-class man from Hindustan had struck a superior, was spat on in the face, and led out to the streets to have his throat cut. The king went by, and the man begged for mercy. The king called his captain of the guard, Yar Khan, to give the man a noble death. Yar Khan was a bastard son, honored by the king, but to tame Khan's pride, the king made him butcher the pleading cur, and said loudly for the crowd to hear, "Fear not -- his arms are tied!" Such an insult required that Yar Khan attempt to kill the king and regain his honor, but the king was waiting for him. He was taken prisoner, and the king told him that three days from then, if his strength remained, Khan could ask a favor of the king and bless him in his pain, for the king was merciful. Khan was stoned and buried under the pile, but was not killed, per order of the king. A guard was assigned to watch. On the second night, a mangled Yar Khan, dying slowly, asked the guard to deliver him from the agony of death.

The guards, risking their own lives, disturbed the king in his harem and asked: "Protector of the Pitiful, give orders that he die!" The king took some time, then told them Yar Khan could endure till day, since the night was short and he needed to pray and learn to bless the king's name. During the night and just before dawn, Khan begged four times to be delivered and blessed the king. The guards shot him at morning prayer, and hearing the matchlocks clink, Khan again blessed the king, the merciful king of songs and tales. To label this cruelty and sadism as mercy is a travesty. It is instead the final destruction of a human being through slow, agonizing pain, the final grinding into the dust of human spirit. And it is not that different from what the ruler of the heavenly court required of his beings, nor from his punishments.

The Grigori singing praises and blessing the ruler are in the same horrible condition as Yar Khan of the poem, and once those praises are sung, a being's integrity, freedom, self-respect and worth have been obliterated by pain and suffering. Acting in this way toward another being is so unethical as to be beyond description. This is what an autocratic society can achieve and what a total society can go beyond in horror. Ethics can exist in neither without opposing the foundation of such societies, since ethics requires the capacity to freely think about situations without preset conclusions, and make responses to situations without closing off options from the start. In beings whose monitoring or executive function has been destroyed by force and pain, or has never been allowed to develop to begin with, ethical or value functions are beyond the beings' capacities.

Compare how the chief ruler of these texts treated his other celestial beings with how the Sumerian god Enki related to the other Anunna. He is a competitor with Ninhursag, and she once cursed him to death. Yet she returned to save his life and he did not attempt to destroy or punish her. Instead, his contests with her were teaching opportunities. He also taught true lessons to the prideful Inanna, at one point even allowing her to deceitfully take the precious *me* away from him, rather than harm her. It was not that he was weak. He opposed his warrior brother, Enlil, conquered the forces of the Kur, trapped Ninurta who planned to kill him (but then spared Ninurta's life), and ruled the Abzu. But he was not power-hungry, cruel, vindictive, or a tyrant. He was the wise and creative one, the just decision maker for the gods, who advances free thinking rather than destroying it (9). He would not have accepted the Gnostic prohibition against trying to grasp with empirical reason "the incomprehensibility."

Ethical functions or choices would have remained beyond the capacities of Adam and Eve without the intervention of Lucifer. Their self-monitoring function was inoperative. No freedom was given to develop it, and threats and fear were used to discourage its natural development. For Metatron, pain and public degradation were used to suppress such a function. For the Watchers and the Grigori, despair, torture and fear of eternal condemnation over time broke their spirit. Their nature, and the nature of the cosmos system, were suppressed and trampled upon until, if they could still think, they would understand their self-shame and self-destruction. Although it is possible to arise from such depths, with an adequate understanding of the limits of body and spirit and the

unjust coercion of pain and despair, very few are compassionate enough toward themselves to achieve that rise.

Freedom, as an integral component of ethics, is also an integral component of the knowledge of good and evil required for ethics. Knowledge, the product of the learning program, cannot be acquired without a free functioning of that learning program, allowing it to do what it was biologically constructed to do. Premature conclusions and closure of investigation, or coercive punishment if some experiences are investigated are not exclusive flaws of religious belief systems, but can be found in any human endeavor, even including science. I know from working with our AIDS Training Program that premature closure is a dangerous constraint on the human learning program, and leads to great human suffering. There were so many examples in the early days of HIV Disease that exhibited this tendency to close off learning, sometimes under the pressure of political ideology, sometimes under the pressure of "conventional wisdom" (10,11,12). In the very beginning, when clinicians were beginning to see a disease syndrome among young male homosexuals, this disease was erroneously called Gay-Related Immunodeficiency Disease or GRID. That focused investigation and some discrimination on the gay community. It caused medical researchers to look without seeing when the disease, at the same time, was appearing in intravenous drug users in New Jersey, newborn infants in big city obstetrics wards, and a small number of heterosexual cases that have survived in the medical literature as deaths from unknown diagnoses since the fifties, occurring in Haiti and Africa. If we had freely used our learning program as exemplified in the scientific undertaking, we could have seen the danger to heterosexuals, to children and to drug users far sooner than we did. There was great resistance to seeing what was spread before our eyes.

There was also considerable resistance to understanding that this disease could be spread by sex, blood products, and maternal-fetal transmission. Again very early, the Centers for Disease Control was sure with sufficient probability that AIDS could be transmitted through blood, but this probable conclusion met with extreme resistance. Many hemophiliacs were infected with HIV before public health policy and battered scientific learning finally attained the accurate picture. In fact, if private blood banks had not begun to insist on screening donors and urging the development of a test, introducing

an economic incentive, even more individuals would have been exposed to HIV. It was not that the evidence for blood transmission was ambiguous. It was that resisters were insisting on absolute proof, on laboratory/legal chain of causation, before they would bend on their assumptions. When Luc Montagnier and the Pasteur Institute did first identify the lentivirus, a retrovirus they had never seen before, which caused AIDS, the American researcher who insisted it was one of his discovered family of HTLVs wanted to hold to his preferred conviction. Robert Gallo did finally help do the work that scientifically verified beyond any reasonable doubt that HIV, the lentivirus, was the cause of AIDS. Even when a test was developed, however, there was ideological resistance to offering it. We are extremely lucky that HIV was not as effective a pathogen in the U.S. as it appears to be in Africa, or our population would have suffered greatly from these premature conclusions and consensus.

Good science, science that holds to the standards of the inductive scientific method, is opposed to such misuse or abuse of the learning program. Its method attempts to be self-corrective and sufficiently tentative that even cherished scientific theories or laws could be replaced with sufficient experiential data. It maintains the standard that any hypothesis should be entertained, though not necessarily concluded, and no hypothesis should be thrown in the dustbin of history forever. We live in a dynamic cosmos that we perceive very incompletely (extremely incompletely, in fact), and either changing experience (dynamic flow or chaos periods) or new experience (extending perception and posits) may resurrect a discarded hypothesis. Science, mirroring experience, needs to be as open and dynamic as we posit that experience to be with good reason. Yet frequently science also deals with the tension between conservative or static order and ordered dynamic chaos. The values of science sometime fail under this tension. This book has argued that our conventional-wisdom interpretation of ancient texts is one example of this failure of science to hold its line and standard. Another example presented has been the uneven response to the hypothesis that star system explorers or organizers may have interacted with human beings. A hypothesis is not a verified conclusion, and some scientists may be unduly frightened that taking such hypotheses seriously will give them automatic (but false) validation in the public mind. The fear is legitimate, because most human beings do not really understand their own learning program, nor do they wish to. Scientific

investigation has been abused before for such results. However, fear cannot determine the learning program, or it too defeats the program. Risk is an essential component of learning, and learning does involve dirtying the hands, to speak metaphorically and sometimes realistically. The white coat of science needs to be a stained coat, or it is a symbol that it has failed to uphold its own standards. Anything is open to learning, and the scientific method advances when anything is open; it deteriorates when some things are closed. Lucifer again is a good symbol for that, and Lucifer does not wear a white coat.

I have attended many meetings of skeptical humanist groups, had dinners with personal conversation, was once married to a skeptic. I consider myself a skeptic who struggles to maintain the standards of inductive reasoning, not an easy task. What saddens me is the premature closure and personal or social uncorrected biases that can be found in skeptic groups as easily as in fundamentalist prayer sessions. Skeptics investigate reports of unidentified objects in the sky for one purpose, a purpose already concluded and a philosophy already closed (13). They wish to show that such phenomena are irrational, fraudulent, or psychotic, and they leave open no other possibilities, except the conservatively-approved program of listening for messages from space. I suppose this listening, an unlikely way to make discoveries of other star civilizations, fulfills their definition of being open to all hypotheses. They assume the traditional dogma/premature conclusion about space civilizations. Along with astronomers like Carl Sagan and astrobiologists, they would be willing to entertain the hypothesis that intelligent life exists in the cosmos and might even have developed space travel. However, they also assume such life-forms have never travelled to our planet and made contact with us. The burden of proof is on those making such a negative claim in the same way that the burden of proof is on anyone making a positive claim that contacts have occurred. The appropriate stance in inductive logic is that there is insufficient evidence to make either claim verified public knowledge, and those making either claim must better convince us. The appropriate stand of the scientific method is to entertain all hypotheses and wait for sufficient verifiable knowledge before assuming either claim.

Skeptics also assume a completeness to science that does not describe the actual scientific enterprise or the values of its methods. They are very conservative in terms of

scientific theory and laws, and see their conservatism as defending the scientific method in its battle with the actual evils of irrationality, fraud or psychosis. They see the closed systems of religion and correctly identify such closed systems as a danger to the welfare of human beings, but they distort how closed these systems really may be, and they fail to see other closed systems, often embracing those mistakenly.

The Skeptics, for example, are as confined by political secular ideology as the Baptists may be by religious creationism. They usually embody the neoleft and its doctrines, and hold those doctrines as close-mindedly as some Baptists fight evolution. At one meeting, a skeptic group was decrying the infiltration of the secular public square by religious institutions, symbolized for them by the conservative Republicanism of George W. Bush. They saw the secular public square in great danger because of the political/religious irrationality of the neoright, and were in full battle cry, doing what intellectuals usually do, sending letters to the newspaper and rallying the faithful. When I suggested during discussion time that it was important to address the failure of the secular public square, rather than labeling those who were coming in to redress the failure, I stood alone. There was complete refusal to even consider that the secular public square was failing, yet the evidence was piling up from all institutions and all sources. One leader gave me a response that consisted of a vicious attack on religious schools based on incidents of a few teachers engaged in pedophilia. There was no recognition that pedophilia occurs at public and private schools as a rare but unfortunate event, and was not confined to religious schools. This same individual would have been horrified if anyone had concluded, based on some reports, that homosexuals might engage in pedophilia and were therefore to be segregated as a group. He would have staunchly pointed out that heterosexuals also engage in pedophilia on rare occasions. But because I was criticizing secular public schools as failures, and suggesting we look at religious schools that were not failing, he was not capable of correcting for his bias and became inductively irrational. Another responder denied there was anything wrong with public schools, a denial that flew in the face of comparisons and evaluations. World culture (not multiculturalism, which is something far different) is not being imparted in public schools. Children taken from public schools and placed in private schools do better. Political and social indoctrination is common in public schools. Textbooks are inferior in

public schools. Very bright children are destroyed in public schools, which have a Rawlsian discrimination against them. All of those issues could have been discussed, but that was not allowed. Rational analysis of the secular public square and its problems would not be tolerated.

The remainder of the group reaffirmed the neoleft ideology and its anger with religious institutions. They did so without self-awareness that the flaws they attributed to religious institutions could also be attributed to them that evening. They reacted no differently than the psychics at Lily Dale (a spiritualist community in Western New York's summer retreat area) react to skeptics who come to their public readings to debunk them. They were, in terms of the human learning program, no different.

The most serious danger, however, is in a presentation of science that fails to grasp the incompleteness of science and the openness of the learning program. We should find it wonderful that science/validated experience is incomplete because of the nature of the dynamic cosmos system. We have a changing, growing garden before us, stretching out to infinity and awesome in its combinations and patterns, a glowing oscillation of future experiences. We ourselves are a never-finishing project, with curiosity never ending, with a program that can accept new experiences and be nourished on them. We are a dynamic part of a dynamic system, an awesome, ordered chaos to be embraced and loved. We are a speck of dust to be reckoned with (14). Because that speck of dust, at any level of organization, contains the patterns of the cosmos within it, as E.O. Wilson described genes as enfolding the storms within them (15).

Historically, science reflected that oscillating dynamism, and the Enlightenment was a science shining in its incompleteness and openness. It has been misrepresented in our culture and that misrepresentation has left it open to irrational attacks from postmodern ideology, the politicizing of science. Intellectuals reflect that misrepresentation. One year, I had a forensic psychiatry fellow in my ethics meetings who was emotionally committed to psychic phenomena, fantasies of quantum mechanics, and alternative science. He had never had a psychic or mysterious experience, but he was entranced with the idea of it, and convinced that mechanistic, materialistic, close-minded science was preventing important discoveries about the universe. He was half-right, I think, in his criticism, because our culture, our intellectuals, our skeptics have not fully grasped the

nature of science as part of the cosmos system. Of course, he also wished for the leaps of fancy, the beautiful speculations that avoided the grubby work of validation, the hope of immortality, the idealist wish that the mind could create and move matter. On the other hand, I actually had had strange experiences that he found fascinating, and I was telling him they were not public knowledge, not validated conclusions, only hypotheses. Interesting projects for further thought and experience, but nothing one could hang a theory or conclusion on. He was terribly frustrated by that, and I doubt I convinced him of the importance of careful use of the learning program. All hypotheses should be entertained probably forever; all conclusions should not.

As I began to think about it, I realized that we are not at all clear about what "Enlightenment Science" really is, and may often have mischaracterized it. Enlightenment Science was close to that standard of entertaining any hypothesis and not coming to absolute closure, an idea the Logical Positivists would have advanced (16). An actual description of Enlightenment Science was a combination of science and sorcery trying to thrash out the seed on the winnowing floor. In that respect, it was little different from the inductive learning that had gone before, working its way back up to the Greek and Egyptian standards of science. The learning program had been freed of some religious repression and was struggling for political freedom as well. Premature consensus and conclusion were identified as the threats to the standard of science that they were.

The history that culminated in this Enlightenment reflected the openness that became the fulfillment of the scientific method. That openness allowed a range of hypotheses and a decent respect for the mental capacity of ancestors. It most decidedly did not cordon off vast areas of human experience as prima facie false, or abuse psychiatry to carry out an effective but highly unethical attack on all who pressed for such experiences as being mentally ill. The currents of human experience and conceptual organization that the Enlightenment rode were deep, and while old knowledge was modified, it was not prematurely rejected. If we look at some of the science stars in history, we will find that they were just as likely to be considering astrology as astronomy, and busily taking the tools of alchemy to advance to chemistry.

In the thirteenth century, Roger Bacon, who was said to be a Rosacrucian, was an alchemist seeking to prolong human life. In the fourteenth century, Michel Nostradamus was a competent physician who had been on the teaching faculty of the University of Montpellier medical school. He left his position because he scientifically disagreed with the common treatments of purging and bloodletting, and travelled to areas of Western Europe hard hit by the Plague, where he was generally successful in saving lives. He was trained to be an astrologer/astronomer and was quite good at both. He was also an alchemist/chemist, making up his own medications for his patients and, given the technology and knowledge of his time, a good medical researcher. He had been taught cabalistic, gnostic and hermetic concepts as well by his Jewish grandfather whose library contained many ancient texts (17). In the sixteenth century, Dr. John Dee, a physician and scientist, had the goal of total knowledge. He was a mathematician, knew the optical science of his time, and was a cartographer, in addition to being the court astrologer and very involved in questions that are now banned from serious scientific research. But he considered himself a scientist of his time, and with good reason (18).

In the seventeenth century, Rudolph II, ruler of Prague, turned his court into an alchemistic laboratory, inviting John Dee and also Jan Comenius to be part of the intellectual ferment of the time. A great deal of emphasis was placed on developing astronomical clocks. Prague already had a fine example, made in 1410 by the clockmaker Mikulas of Kadan in collaboration with Jan Ondrejuv (called Sindel), a professor of mathematics and astronomy at Charles University. This clock continued to be modified, and its sculpture, mask and figures were done by members of a Masonic lodge. By the seventeenth century, new statues were added and a new calendar disc installed. Heavily damaged in World War II, it was restored and still provides a full range of astronomical data: the mean revolutions of the Sun, the mean revolutions of the Moon and the apparent (ecliptic) revolutions of the stars. Its curator between 1551-1572, Jan Tabosky, stressed it was “the pure art of astronomy” (19). The history of physics in Prague is enlightening. One of its clockmakers, Sindel, did observations that were so precise that they were praised by Tycho Brahe two hundred years later. The astronomer Tadeas Hajek, personal physician to Rudolph II, studied supernovae in Cassiopeia in 1572, and worked with Tycho Brahe. In 1600, Brahe invited Johannes Kepler to Prague and the knowledge of

the two produced the laws of planetary motion, the first two published by Kepler in 1609 in Prague. Twenty years before Newton, Marcus Marci described rainbow hues, spectral dispersion of light through a prism, the diffraction of light on a wire, and colors of thin bubbles, as well as experiments in pendulum mechanics. A Jesuit, Joseph Stepling, in the eighteenth century, founded the Clementium Observatory which has the longest series of systematic meteorological and geophysical observations in the world. In the nineteenth century, Christian Doppler formulated the Doppler Principle in Prague, and Ernst Mach spent 28 years at Prague. Albert Einstein also came to Prague to work in physics, publishing papers on gravitation, thermodynamics, radiation theory and quantum physics. Rudolph II's court had really started something (20). But it is crucial to remember that all this development of current physics, often seen as the epitome of science, was awash in the no longer acceptable ideas of the "invisible world and visible world" connections, the levels of organization, invisible societies, secrets and sorcery. As Umberto Eco describes those fermenting days of science when his protagonist looks at Lavoisier's scientific equipment and the level of his technology, Lavoisier studied the kinetic theory of gases and constructed the eolopile (19). The eolopile was a spouted sphere that when heated spun, spewing steam. First built by Heron in the days of the Gnostics to assist speaking statues and other mysteries of Egyptian priests, it continued to resemble Lavoisier's equipment in the eighteenth century, making the parallel between the inductive experiments of the alchemists and the inductive experiments of the chemists.

Again, in the seventeenth century, Robert Boyle, another physicist, was a member of the Invisible College, along with the intellectual, John Webster. Unless one knows the real history of this period, that small fact might go unnoticed, but it would not have at the time. Nor was the fact that Isaac Newton, one of the most famous of physicists, was not only an alchemist but a Free Mason. Again one would have to know that Free Masonry was not a social club, but a group dedicated to finding the ancient texts and knowledge and applying them to their modern world. The British Royal Society had strong ties to Free Masonry, and developed from the Invisible College of which Boyle and Webster were members. That Invisible College was a product of the Rosacrucian movement. Even Francis Bacon got slightly caught up in Rosacrucianism, since his The New Atlantis had a description of "the Riches of Solomon's House" and that connected it to Free Masonry

and Rosacrucianism. Rene Descartes searched for Rosacrucians and was himself suspected of being one.

In the eighteenth century, Montesquieu was initiated into the English lodge of Masonry. The London Grand Lodge combined Free Masonry with Enlightenment rationalism without identifying any contradiction, and perhaps there wasn't. The French Masonic lodge, the Lodge of the Neuf Soeurs, could count as members Dr. Guillotin, Voltaire, and America's Ben Franklin. At the same time as these sons of the Enlightenment were struggling for compassion, freedom of thought, and political freedom within their Lodge, the Lodge's Grand Master, Comte de Milly was searching for an elixir of longevity, still trying to combine the old and new in science. That he managed to poison himself and died is what must sometimes happen from research and growth, and Lucifer would have understood.

None of this may seem to speak directly to the mischaracterization of Enlightenment Science or the important standard of science to entertain any hypothesis, unless we understand what Free Masonry and all the intellectual societies of these periods really represent. John Brooke does an excellent job in reinstituting the open ideas and unlimited hypotheses of the Enlightenment in his book, *The Refiner's Fire* (22). Brooke is looking for the real roots of American intellectual development in his historical investigation of Mormon cosmology and beginnings in the Radical Reformation. He traces the Masonic movement and its search for freedom and scientific knowledge that encompassed all of the old hermetic tradition and gnosticism, the old goal of John Dee -- total knowledge. Total knowledge is likely to be an infinite project, but in its process, it makes us accept the standing of all hypotheses, all experiences, all searches. It combined in an organization of intellectuals and researchers the openness of the scientific method with the rigorous validation requirements of the scientific method. It provided the mystery, wonder and learning that Edward O. Wilson feels is genetically-programmed into the human species (23), and is a requirement for us to function well. It also showed that there need not be any dualism or polar opposition between reductive science and synthetic/holistic science, between physical mechanism and human experience. It describes a systems science that is ambiguous because of the limits of our perceptual levels, probabilistic because of the systems structure of the cosmos, and uncertain

because it seems likely that the cosmos is infinitely-leveled and eternal. Those features give rise to values and reflect the chaos theory implicit in the Lucifer myth. Jasper Ridley, in his history of Freemasonry, documents the commitment to freedom that was a prime value of this movement. (24) Its members involvement in the struggle in the struggle for human freedom, across centuries, is clear and moving. Prime values were at stake and individual heroism was common -- although secretive.

The second serious mischaracterization of Enlightenment Science or current science is that it is value-free. As I have argued in academic journals, science is not value free (25). On the contrary, it is value-laden. The scientific method is a self-correcting method that attempts to remove all forms of false bias from an investigation and conclusion, and that is what is actually to be meant when we talk about science being value-free. It should be free of our baseless value assumptions, not censored by taboo systems, not subject to cultural political manipulation, in other words -- free thinking and experiencing. That is the only sense in which it is value-free. In other ways, it contains primary human values, values established by our human nature and, if my argument works, by the nature of the cosmos that we can perceive and the patterns that we can infer or posit. The scientific method is the free learning program and is constructed to uphold the value of such free experiencing and thinking Without the freedom to think or experience, there can be no real science, since such a corrupt method will not ultimately yield satisfaction in the transaction between human beings and the cosmos. We can commonly call it the removal of bias from the investigation through various research designs or statistical safeguards. But what we are really talking about is freedom, the value of freedom based on the understanding of human nature, its learning program, and knowledge of the cosmos. Ethics begins from this freedom to learn -- or to use the older metaphor, to taste of the fruit of the tree of the knowledge of good and evil.

The scientific method also embodies joy in expressing the learning program, in allowing our natural human curiosity to continue through all our life experiences, and in honoring/respecting/valuing the embodiment of that learning program in our species. Our scientific learning transaction with the cosmos gives us, as a species, worth, and introduces valuable emergent properties from our level of organization. One of the greatest tragedies of modern time is the loss of that sense of personal worth, but it is not

science that has taken that away from us. The religious conception of Metatron may have taken that away, or the self-abnegation of St. Augustine on his death-bed (26). I think present postmodernism and its political neoleft ideology has taken that away from us (27). I think bioethics, with its embracing of cost-efficiency and its arguments to dispose of human beings who are no longer cost-effective has taken that away (28). I think a media that encourages fear of taking risks and fear of technology contributed to the loss. But it was not science or the Enlightenment that took away the worth of human beings. Science opened up a continuing cosmos, as some classic civilizations already inferred, one that spiraled level after level, waiting for our discoveries and thoughts, guaranteeing we would never be bored. Science took us from a static planetary garden into magnitudes we have difficulty comprehending, into the fluorescent system of an electron microscope or the nuclear fusion system of a galaxy. In setting us on that journey, it magnified our worth and made each person a potential explorer of worlds. Like Lucifer, who taught us the knowledge of good and evil, it has taught us the same: complexity, diversity and growth against the dysvalue of uniformity, sameness and stagnation. That is a value statement that corresponds to our nature and the cosmos.

In doing that, science, like Lucifer again, showed us the danger of totalitarian control and organization, now in its most insidious form, the Total Society. Can scientific technology and information be abused by those who wish to create the Total Society? Yes, it can, as all human activity can be twisted and abused. The scientific method, however, cannot be used in this way, because that method correctly links accurate knowledge with the freedom to know. Lucifer was correct. The tree in the garden was the "Mother of Science." Science is part of the value system that resulted from developing the capacity to know good and evil, the prerequisite step for a learning program that assumes there are natural human goals and purposes in its transaction with the cosmos.

"For a scientist, this is a good way to live
and die, maybe the ideal way for any of us --
excitedly finding we were wrong and
excitedly waiting for tomorrow to come so
we can start over, get our new dope
together, and find a Hypotheses Number

One all over again. And being basically
on the right track when we were wrong."

Norman Maclean, Young Men and Fire