

THE GRAND INQUISITOR: SEEKING THE SUBLIME IN

ALASTAIR REYNOLDS' *REVELATION SPACE*

by

KAREN ELIZABETH PLACE

(Under the Direction of Dr. Fredric Dolezal)

ABSTRACT

I advocate the genre of SF as the new path upon which literary endeavor moves towards the sublime, or the realization of an ultimate truth in the universe. I aver that SF is a rational, even expected, descendent of an extant literary history, and manifests humankind's inherent desire for transcendence in a culture dependent upon technoscience. I establish a framework for defining the SF genre, for the purposes of clarity, followed by a suggestion for critical analysis. My primary source is the work of Alastair Reynolds, who situates his *Revelation Space* trilogy in the far-distant reaches of the galaxy and several centuries in the future of humankind's space-faring civilization, and thereby demonstrates the paradigm of humanity's search for something greater than itself. I will cite examples of this yearning from traditional literature to support the concept of an historical arc of thought that ultimately manifests in the literature of SF.

INDEX WORDS: Alastair Reynolds, canon, *Childe Harold's Pilgrimage*, *Don Juan*, Fyodor Dostoyevsky, hard science fiction, John Milton, John Wilkins, latitudinarian, literature, Lord Byron, *Paradise Lost*, *Revelation Space*, science fiction, sublime, technoscience, technology, The Grand Inquisitor, transcendence, William Blake.

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DEDICATION

To my own little family.
You were there, and thus I am here. . . and on my way.

*Do not trouble your hearts overmuch with thought of the road tonight.
Maybe the paths that you each shall tread are already laid
before your feet, though you do not see them.*
- Galadriel

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CHAPTER 1

ARGUMENT

*This, then is what the arts are concerned with, this is what they intend,
namely, to restore within us the divine likeness.*

-Hugh of St. Victor

now and then narrating,

Now pondering . . .

-Lord Byron, *Don Juan*, 9.52

INTRODUCTION

Science fiction pursues the possible answers or consequences of a question: either a question that everyone is asking or one that everyone is trying to ignore. “How do we get *there* from *here*?” (Gunn 9, emphasis added). Since science fiction questions present reality even as it proposes a potential future on an alternate, yet quite possible, path, “Sci-Fi” is unnerving to average readers in the same way that the Spanish Inquisitors inspired dread in the scientific minds of the day. Humanistic readers’ lack of understanding, both of scientific concepts and of socio-historical constructs in science fiction narrative, and their trepidation concerning individual and societal self-examination on a grand universe- and time-scale relegate literary works of possibly great merit to a back row in libraries and bookshops, and only a handful of journals dedicated to its study. I argue, perhaps provocatively, that the Inquisitors were actually the ones suffering from the greater horror; they sensed that science, especially astrology/astronomy, might reveal the “face of God,” bereft of the comforting power and religious taboo of the mighty church. The Inquisitors perceived science as destructive because they held it as a movement too close to God, questioning faith, questioning God’s existence; or, in some ways, erecting humans

as God(s).¹ The formerly overwhelming rejection of science-fiction as mainstream or academic reading² arises from a cultural suspicion and fear of otherworldliness; e.g., for the religious, the alteration of the body and the empiricism of scientific exploration are “blasphemy,” and for the secular, theoretical science and the philosophy of a technologized culture are dangerously nigh to religious zeal.

The “sublime moment,” often referred in William Blake’s writings as “wonder” or “astonishment” (De Luca 18), is the transition between absolute reality and fantastic transcendence of either the corporeal form or the psyche. Vincent De Luca, in “Blake’s Concept of the Sublime,” writes that Burke defines achievement of sublime as when, “nature suddenly manifests itself in so overwhelming a fashion that normal relations of subject and object are abolished; at the same time, the mind loses its consistency of operation and becomes a thing of paradox, of self-contradictory awareness” (19). Essentially, then, the sublime is the reconstitution of the mind and body through total immersion in and absolution of the strictures of earthly awareness. The search for the path to the sublime, that is, the ultimate realization of a transcendent truth or reality, has been an established quality of humankind’s forays into literate self-examination, beginning, as they say, at the beginning, with the “Book of Genesis” in the Hebrew Scriptures and traversing through literary history, from the metaphysicists to the

¹ Charlotte Methuen, in her essay “Science and Medicine” disagrees, arguing that the concept of negative dynamic between the “modern thinking” of science and the “fundamentally conservative” church of the Italian Inquisition is “at best simplistic and at worst a profound misunderstanding of the complexity of the relationship between science, medicine and theology” (Methuen 521). Her point coincides with that of David Noble, (see also my fn 12) and is evidence of a growing trend amongst Inquisition historians to mark the complex interrelationship of popular culture and religion.

² The canon of English Literature, indefinable but unmistakable, does not often allow for the teaching of SF in higher education, except as a distinctly marginal topic reserved for students interested in “pop culture” or, worse, an “easy A.” Most of the critical arguments leveled at the traditional standards for literature courses are polemics for the inclusion of authors or genres heretofore underrepresented because of their class, ethnicity, or gender. Few, if any, call for the introduction of SF as worthy of literary study at university level; most SF material is reserved for middle and secondary level courses, such as Bradbury’s *Fahrenheit 451*, Orwell’s *1984*, Golding’s *Lord of the Flies*, and Huxley’s *Brave New World*. (see also my fn 5)

naturalists, from the Enlightenment philosophers to the Romantics, and on into the current millennium. The quest for this, in literary endeavor, now wends its way largely along paths mapped by science fiction, since wonder at the former mysteries of this world – the old superstitions, the inexplicable ontology of human life, the nature of nature – seem to have faded. The nearest that the modern imagination, especially secular thought, makes towards the old mysteries are the ponderings of the cosmologists. Colin Milburn points out that “In Baudrillard’s age of simulation, science and science fiction have become “coterminous”:

It is no longer possible to fabricate the unreal from the real, the imaginary from the givens of the real. The process will, rather, be the opposite: it will be to put decentered situations, models of simulation in place and to contrive to give them the feeling of the real, of the banal, of lived experience, to reinvent the real as fiction, precisely because it has disappeared from our life.³ (268)

On the other hand, those intrigued by the interaction of the humanities and the sciences believe that mystery is extant in the world around them. Proponents of “existential scientism,” a school of thought that argues that “science alone can explain and replace religion” (Stenmark 14), believe that “mystery” will turn to wonder once the theories are proven, and the explorations accomplished. As a result, SF must further push the limits of the knowable into the realm of the unknown or unknowable: the possibilities of technology and science, the qualities of the universe, and the existence of an “other” or “others,” which are three common nuclei of the SF story. We must then ask just how we can adequately define the broad genre of SF, even though “[d]efining science fiction is like measuring the properties of an electron: you may think you’re measuring a solid object, but it’s really a wispy cloud” (Gunn “Introduction” ix). Gunn’s initial definition of the genre of SF resonates more strongly with me than any other:

³ Milburn is quoting Baudrillard’s essay “Simulacra and Science Fiction.” (see Bibliography), to reinforce his own argument about on the shifting perception of science in general culture.

Traditional fiction . . . is the literature of continuity. Whatever the situation, it is continuous with everyday experience, and the decisions that must be made by the character are decisions based upon prior experience, upon tradition. The moment characters in any kind of fiction encounter new situations or attempt new solutions to traditional situations, the story begins to feel like science fiction . . . because science fiction is the literature of discontinuity.
("Toward a Definition of Science Fiction" 8)

Thus, he says, science fiction is "the literature of change. Change is its subject matter and method" (9). Gunn founds his definition on a kind of reader-response theory, in that, a critical reader's first action must be to read and react, then question our response (Gunn 10). As a reader of myriad literary texts, my instinct is always to become immersed in the world of the story as the first step in the reading and critical process, regardless of my ultimate purpose in reading. "Losing oneself" in a good book is absolutely the aim of reading any work, and more so with SF, for the concepts are more universal, more challenging (and, some might say, more daunting) than many other types of writing, in that the questions SF authors pose with their tales are those of the immediate present, even if the plot is set in the future. The best SF authors purposefully invoke the fantastic within the context of the real, thereby engendering disequilibrium on the part of the reader that leads to examination of the self and of the world. These sensations of discomfort, query, and fascination are the intended effect and the SF reader's attraction. The Isaac Asimov provides a similar, though more open-ended definition, stating that SF is "that branch of literature with deals with the reaction of human beings to changes in science and technology" (Asimov 82).⁴ For David N. Samuelson, an editor for the literary journal *Science Fiction Studies*, good SF must exert continuous effort to stay ahead of itself, predicting, asking, and unveiling, for "[t]he cutting edge is always somewhere between the known and the unknown, the

⁴ Ray Bradbury, to include another SF author of more general acclaim, ascribes to the notion of "the future" as the primary basis for a definition: "Science fiction is really sociological studies of the future, things that the writer believes are going to happen by putting two and two together" (qtd. in Kreuziger 85).

proven and the unproven . . . always threatening to resolve into the mundane or the marvelous” (Samuelson 149). I will use a combination of these classifications, though I will maintain a similar kind of guarded ambiguity, as defining any genre is a work unto itself.

TRANSCENDENTAL SIGNIFIER OR THE MEANING BEHIND IT ALL

The marvelous: being the subject of marvel, of awe, of wonderment. In advocating the genre of SF as the new path towards the sublime, I must initially aver that SF is a rational, even expected, descendent of an extant literary history. Northrop Frye argues for an approach to general literary criticism by proposing an extreme structuralism, stressing “autonomous verbal structure,” such that life and reality are linked through language. Literature is, then, the utopian dreaming of humankind, upon which humanity builds civilizations. In other words, the dreams of which life should be made. The fundamental desires that artists develop are not the individual expressions of the authors, but the universal truth of the heart of humankind, irrespective of, and rejecting any influences beyond, itself, “a sealed and inward-looking realm which ‘contain[s] life and reality in a system of verbal relationships’” (Eagleton 92-3). Humankind strives for the realization of these fantasies, and thereby conceives archetypes of character and conflict, interconnected throughout literature, and separate from the eternal flow of civilized history outside of the literary. Claude Lévi-Strauss offers an earlier model, delineating and making scientific the argument that all myth, and, indeed, all “story,” are products of the human mind, embedded in the structures of the human brain itself, and are therefore universal (Eagleton 109). Frye and Lévi-Strauss present intuitive, if startlingly restrictive, explanations for the apparent ubiquity of certain mythos in literature. Terry Eagleton, nevertheless, disparages Frye’s conceptualization of an internal coherence of literary history as the result of humankind’s unified utopian wishing, asserting that Frye’s argument arises from Frye’s Christianity, rather than pure

intellectual discourse, and is therefore an argument for the intrinsic quality of religious belief. Eagleton implies that literary criticism must be entirely divorced from the influences of personal response, which is really related to a wider social response, since this variety of reader response is related to so-called historical social structures. To Eagleton, Frye justifies the study of literature through the lens of Christianity, and offers literature as “an essential palliative for the failure of religious ideology” (93).

Eagleton generally advocates a Marxist criticism for all literature, and tends to disagree with critiques that turn on less socio-economic concerns (*Literary Theory*). His mindset is not uncommon in academia and the literary critical world, and is, actually, more the norm than otherwise, since his book, *Literary Theory*, is a standard text for introductory theory courses. The stigma attached to SF, a holdover from the early pulp magazines of the 1950s, extends to not only the texts themselves, but also to the critics in the field of SF, “What is needed is a criticism serious in its standards and its concern for literary value *but* willing to take seriously a literature based on ideas, types, and events beyond ordinary experience” (Robert Scholes, qtd. in Gunn *Towards* 12, emphasis added)⁵ To study SF despite such antipathy from literary critics, as those now-flourishing critics on the “fringe,” such as Donna Haraway, Kathryn Hayles, James Gunn, and others, do, the forced linguistic constructs and socio-political frames must stand a bit to the side, at least at the outset. James Gunn’s words resonate herein, i.e., all criticism should begin with the experience of reading the text; not in an anti-intellectual way, but certainly more intuitively than choosing a theoretical system and applying it in process. “First we read

⁵ Scholes prefaces this comment with a stinging remark about the quality of SF, stating that: “as long as the dominant criteria are believed to hold for all fiction, science fiction will be found inferior: deficient in psychological depth, in verbal nuance, and in plausibility of event” (*ibid*). Is it possible to qualify an entire genre in this fashion? Scholes’s comment here, although haughty and patently untrue (not to mention unverifiable), is common among readers; average, academic, and otherwise.

something and respond to it, and then we ask ourselves why we responded in that way. . . . [W]e ask the text different kinds of questions” (Gunn 9). Lose yourself in a good story, and you will discover that the questions you need to ask are right before your eyes.

Eagleton’s critique, then, helps expose one of the impediments facing intense, academic study of SF. We must develop wholly another critical recourse in order to analyze a work of SF both diachronically and synchronically, as SF is inextricably linked with all phases of (space)time: the history of humankind for the characterization of individuals and state, the present for our politics and scientific endeavors, and the future, for the questions that it poses. That is to say, SF is as much connected to the immediate context of the time in which it was written and published and to the author’s intent as it is to the context of reader’s milieu and personal experience, who will necessarily be reading it as a work of the past, since the present is constantly disappearing. What are the relationships between the overlapping contexts of the past and present? Including, but absolutely not limited to, the social structures of religion, science, politics, class, and the individual, which are influences and strictures upon the *reader*, as well as the *author*.⁶ If science fiction is the *avant-garde* of a Frye-type structuralist vision of the sublime, or even a replacement for an absent “mystery,”⁷ then one must scrutinize it for evidence of such, not only within the internal structures of a specific work or within the SF genre, but also in the wider contexts of literary and civilized history. As Derrida points out, even if the “transcendental signified,” or, THE MEANING BEHIND IT ALL, does not exist, human history

⁶ Clearly, the role of *reader* in this dynamic is the prevailing one, for the typical hard SF reader actually *reads* differently than the average reader of so-called “traditional fiction” (Gunn 8). Authors, and, subsequently, publishers, have a demographic expectation of the SF reader: usually intelligent, comfortable with the SF form, and/or curious about the content in terms of scientific applicability or feasibility.

⁷ A notably common idea in literary criticism is that the various systems for the analysis, and certainly the writing, of literature are despairing efforts to find a surrogate for religious belief systems in an increasingly secularized academic and social realms (Baudrillard, Eagleton, Frye, Samuelson, and others).

proves, repeatedly, that a predominant quality of humankind's endeavors is that tenacious seeking for a fundamental "truth." Or, to use the term we have established here, "the face of God." In this regard, my own investigation for an essential truth within a particular SF text rather leans towards a fusion of semiotics and subjectivity, despite a Derridean nod to the possible fallacy of the pursuit. Nonetheless, I will consider a recent SF trilogy in the so-called tradition of "hard science fiction," as an exemplar of the combination of current scientific interest and the technological influences of modern civilization with more (supposedly) humanist considerations of archetype, characterization, signification, and story.

TECHNOLOGICALLY SPEAKING: HARD SCIENCE FICTION

Typifying this sub-genre of SF, "hard science fiction," proves a difficult, if not impossible, task, as the disparity between opinions usually balances on the point between the actual literary value of scientific rhetoric in fiction and the verity of the theoretical or technological information. Generally, the language of science informs the genre of SF, and in hard SF the rhetorical features of scientific theory and findings come to the fore as integral elements of the story and of reality; sometimes as the genesis of the plot, sometimes as evidence of a futuristic setting, but more often as both. From here, the disagreement turns to whether hard SF is a valid sub-genre of an already indeterminate literary type, and if so, whether or not critics and academics approach it as literature. Then one must ask, "What is literature?" and thus begin an inevitable trip down that slippery slope of contentious discursive analysis, so I will constrain my argument to a narrower avenue of inquiry. For the purposes of this discussion, "literature" is fictive writing that investigates, either explicitly or implicitly, the effect upon the individual and society, of the following: historical contexts and constructs; interpersonal relationships and personal awareness or lack thereof, with an eye to transhistorical considerations; and a thematic

resonance that both includes and transcends synchronic analysis. James Gunn offers this definition for “hard SF”:

By hard science fiction, we mean that science fiction in which the story turns around a change in the environment that can be understood only scientifically and generally through what are known as the hard sciences, usually the laboratory sciences such as chemistry, physics, and biology, and the observational sciences such as astronomy, geology, and geography. Mathematics and computers are two of the tools used by all the hard sciences. (“Readers of Hard Science Fiction” 85)

I also agree with Samuelson that, “[w]riting and reading hard SF require a mindset that thrives on ‘hypotheticals,’ fantastic assumptions with theoretical justification in science,” to which I add that SF uses the technoscientific innovation extant in the modern world, along with imaginings of the future which arises from an analysis of history, humankind, and oneself. He calls it, “a seemingly paradoxical yoking of fantasies to the oxen of science and technology” (145). Let imagination take flight, as long as you follow the commonly accepted laws of physics; or, at least, the abstruse and imaginative ones.

Alastair Reynolds writes hard SF, situating his *Revelation Space* trilogy in the far-distant reaches of the galaxy and several centuries in the future of humankind’s space-faring civilization. His PhD in astronomy lends credibility to the technoscientific⁸ language of the narrative, and renders it less empty rhetoric and more provocative hypotheses. Much of the terminology should be familiar to an educated reader, though the actual science may be overly challenging to a non-scientist, and even if the manifestations of technology are only imagined descendents of current theories, they are certainly not impossible. *Revelation Space*, his first novel, and the other books

⁸ Elaine Graham, citing Andrew Ross and Donna Haraway, avers that “technoscience” uses “The interpenetration of ‘science’ and ‘technology’” to “illustrate the contention that no knowledge of the world is independent of its social context. . . . [as] the social context of science – as cultural practice – is asserted, so the boundary between pure and applied, theory and practice, dissolves. Technoscience *is* culture because it performs the task of reflecting a world back to us and of articulating its own (increasingly definitive) version of reality” (30). Thus, I will continue to use the term “technoscience,” for it applies implicitly to my argument for an overarching connection between the traditional origins of literary social discourse, e.g., humanist or character-driven writings, and the literature that embraces science and technology.

of the trilogy, *Redemption Ark* and *Absolution Gap*, contemplate the nature of humanity's search for the path to the sublime, whether in the re-creation of the human identity, or the discovery of truth elsewhere in the galaxy, believing, that we can, "with silent lifting mind," tread "the high, untrodden sanctity of space," and thus reach out and touch "the face of God" (qtd. in Rees).⁹ In articulating his own theoretical literary investigations into the quantum nature of life and all existence, reaching through the "brane" to communicate with the potentially sublime, Reynolds has his characters, like Byron's Childe Harold, attempt to "speak lightning" (*Childe Harold's Pilgrimage*, 3.42). Is the language of the outer galaxy, or of quantum science, the reconstituted language of the sublime that was lost in the destruction of Babel? Will humankind find, somewhere amongst the stars, the speech with which Adam talked with God while they walked together in the Garden? Or does the achievement of the sublime require humankind to become more godlike, first?

⁹ Canadian RAF pilot Gillespie Magee wrote the short poem "High Flier," often referred to as the "Pilot's Creed": about his time wheeling in the blue during the second World War. Note that as he "soared and swung / High in the sunlit silence," his plane's engine, hardly clean and quiet, powered his flight through the "sanctity of space" (li 12). Magee is lifted up to heaven with the human-made technology of an internal combustion engine, and therein discovers a pathway to the sublime.

CHAPTER 2

THE GRAND INQUISITOR: TECHNOSCIENCE AND FAITH

The Universe begins to look more like a great thought than like a great machine.
-Sir James Jeans

VII. The desire of Man being Infinite, the possession is Infinite & himself Infinite
-William Blake "There Is No Natural Religion"

MIRACLE, MYSTERY, AUTHORITY

Reynolds' characters are in it for themselves. That is to say, the social paradigms of conventional religious societies, such as reverence for the Papacy or other religious ruling orders, the criticism against non-religious groups, and the worship of specific deities or philosophies, have diminished in this future universe to almost complete obscurity in the vast annals of a human history.¹⁰ These humans, the product of a world transformed by technology and scientific investigation, have rocketed, blasted, and fabricated their way into the darkness of the vacuum, and yet have not found God in the freezing nothingness between the stars. They are completely secularized, as travel to and colonization of formerly unvisited planets demand both vast political readjustment and a swift progression of science, so that a cosmological argument for faith in a supreme being or an organizational power in the universe grows increasingly distant and unrecognizable. Even that, however, is not entirely precise, for, though the elements of a traditional religion are lacking, humankind has moved instead to veneration of technology and/or knowledge itself as the apex of humankind's potentiality, even if that knowledge belongs to an

¹⁰ I will only examine these issues in the literature and religions in the Western tradition, in consideration of length constraints, though a discussion of the relationship between science and religion on a broader scale would surely prove intriguing, especially of the cultures of Asia.

alien culture.¹¹ Religion, as one of the primary agencies through which humanity sought spiritual transcendence, has been subsumed into an unremitting pursuit of the path to the ultimate enlightenment: the truth of being or the realization of the sublime, via the accumulation of knowledge and the subsequent discovery of the tangible evidence for this sublime, somewhere in the universe. The sublime is either, and both, the transcendence of humankind into an entirely new understanding of ontological truth in the universe or the locus of that transcendence. Not necessarily restricted to spiritual transcendence, although that is certainly a form of sublimity, the fulfillment of the sublime is the discovery of the answers the questions humanity asks of the great unknown; or, the answers to queries that we do not yet know how to pose. I assert that humankind has ever been in search of the sublime, though the path has diverged and reconverged throughout the era of humanity: in religious practices, which are a search for God in the human soul or in the works of the earth; through rational thought and didactic philosophy; on the “wings of poesy” and thus of human creativity; and, now, in scientific endeavor and human innovation, though these are not entirely disparate from either of the former.

Religious systems are the way that humankind so often moves in an earnest attempt to achieve the sublime, claiming that in the worship of a higher power one comes closer to communication with and personal realization of ontological truth.¹² In literature, the principles

¹¹ Interestingly, this “human/alien knowledge” could be the “secularist” primal offense against an insentient “universe.” Of course, the pursuit of such knowledge, or more precisely, the knowledge of good and evil, especially after the warning of the Garden of Eden, is an offense against God, the originator of all knowledge in that tradition.

¹² David Noble argues that religion and technology are not necessarily mutually exclusive; in fact, he believes that throughout the past millennia, the two have been inextricably linked for the survival of both. “What we experience today is . . . a continuation of a thousand-year-old Western tradition in which the advance of the useful arts was inspired by and grounded upon religious expectation” (4). I disagree with Noble’s ultimate conclusion, however; whereas he believes that religion and technology have simply “evolved together” and that “technological enterprise has been and remains suffused with religious belief” (5), I argue that technoscientific enterprise is the search for a broader and more primal sense of an ontological “something,” and is, consequently, the evidence for such an

of religious conviction provide the most readily apparent of themes to articulate or analyze, even in those writings that seem primarily concerned with the material world. Religion, however, is only a specific example of a more general trend towards the sublime, or the transcendental signified, and is also a significant locus for the discomfort western readers experience regarding scientific innovation, and by association, SF literature. Jay Newman further illuminates this issue in the (post)modern age in *Religion and Technology: A Study in the Philosophy of Culture*, demarcating the discrete factions of the religious community regarding the importance and, of note for this discussion, the morality of technological advancement and scientific enthusiasm. The “religious antitechnologists” are concerned, he says, that:

[T]he religionist might now have reason to worry about the practical cultural observer’s concluding that technology may be an adequate substitute for religion. Technology’s very success in contributing to the realization of ideas such as freedom, knowledge, happiness, and peace – ideals that most defenders of religion see as historically associated with the traditional ethicosocial program of religion – may lead the practical observer to believe that technology is a proper successor to religion. She [*sic*] may believe that religion is no longer as necessary as it once was, if indeed it has ever been as necessary as its defenders have assumed it to be. (Newman 110-1)

Of course, this anxiety is historically familiar, and one need only review the reaction of the church to the study of science, and, fascinatingly, even the philosophical writings on the subject. The Spanish Inquisition and its treatment of Galileo and others, both the intellectually curious and scientifically rebellious, are the ready-to-hand examples of the discordant relationship between religion and science. As a literary example satirizing this antipathy, Dostoyevsky’s Grand Inquisitor from the parable within *The Brothers Karamazov* embodies Dostoyevsky’s philosophical wonderings about the workings of the Roman Catholic Church in his own time and in the time of the Spanish Inquisition. His severe, formidable cardinal speaks to one who

inherent truth; a parallel formulation, rather than a necessarily integrated or consequent dynamic. This idea is nearer that of scientism: the replacement of deist religion with that of technology and science.

purports to be the returned messiah, reproaching Christ's teachings on man's "free will" and encouragement to find God in themselves, rather than in the workings of "miracle, mystery, and authority," that he asserts are three central tenets of Church doctrine. The Grand Inquisitor rejects any questioning of the Church's teachings or of the natural world, for though he recognizes that the inherent nature of humankind is to ever seek sublime truth, he asserts that the Catholic religion has superseded the need for any search outside itself as it provides "miracle, mystery, and authority" enough to encourage worship and loyalty:

Freedom, free thought and science, will lead them into such straits and will bring them face to face with such marvels and insoluble mysteries that some of them, the fierce and rebellious, will destroy themselves, others, rebellious but weak, will destroy one another, while the rest, weak and unhappy, will crawl fawningly to our feet and whine to us: "Yes, you were right, you alone possess His mystery, and we come back to you, save us from ourselves!" (Dostoyevsky 268)

The Church is not, to the Grand Inquisitor, merely the instrument of the sublime; it is unquestioning faith in its works that is the fulfillment of sublime promise.

Dostoyevsky's "wicked" depiction of a tyrannical Roman Catholic Church that oppresses both self-actualization of the sublime and the inquiring of non-laity into the truth behind the "mystery," evokes John Milton's satire of the Church in the "Paradise of Fools" section of *Paradise Lost*. The Angel Raphael, as envoy of God, instructs Adam that while humanity shall be allowed to question truth, "To ask or search I blame thee not, for Heav'n / Is as the Book of God before thee set," (*Paradise Lost* 8.66-67) Raphael then contradicts himself, admonishing Adam not to question the mighty works of God; or specifically the "Universe" (7.226). "Sollicit not thy thoughts with matters hid, / Leave them to God above, him serve and feare; . . . Heav'n is for thee too high / To know what passes there; be lowly wise: / Think onely what concernes thee and thy being;" (8.167-8, 172-4). While Milton's satire of the Roman Catholic Church permeates the text of *Paradise Lost*, a primary component of this section is Milton's critique of

contemporary scientific endeavor, especially in astronomy. Milton argues that humanity should only obtain "knowledge within bounds" (7.120), and that the surge of astrological hypotheses and theories in his time were a human vanity, rather than a glorification of God. His reasoning differs from that of the Church, in that Milton does not argue that the inherent nature of the inquiry is sinful,¹³ rather he disapproves of the methods and aims. In a way, Milton seems to protest the building of a new Tower of Babel, as humanity attempts to reach that sublime through scientific edification and investigation. He directly implicates John Wilkins (1614-1672), co-founder of the Royal Society, and promoter of Natural Religion and the Copernican System, for his work *Mathematicall Magick*, mocking Wilkins' his research on the Chinese "land-ships." According to Sidney Gottlieb:

Though Wilkins can hardly disguise his excitement about what he takes to be the many accomplishments of man's reason and practical skills, the "mathematical magic" portrayed in this section of *Paradise Lost* is no cause for celebration: it signals not human dignity and achievement but rather the almost inescapable vanity that fills "the works of men." (Gottlieb 3.447)

Though not necessarily in response to Milton's scorn, but certainly in response to others of like stance, in his 1640 edition of his work *Discovery of a World in the Moon*, Wilkins contends that scientific inquiry is not against the teachings of the Bible, and is, instead, a charge laid upon later generations by the ancients. He pleads for his "Readers" to be unprejudiced, that an increase in the learning of men is his primary design:

It is my desire that by the occasion of this discourse, I may raise up some more active spirit to search after other hidden and unknowne truths. Since it must needes be a great impediment unto the growth of sciences, for men still so to plod on upon beaten principles, as to be afraid of entertaining any thing that may seeme to contradict them. (Wilkins, 1640, "The Epistle" *Discovery*)

¹³ "Led on, yet sinless, with desire to know" (*Paradise Lost* 7.60). Flannagan points out that "Milton is at pains to stress that neither Adam's scientific inquiry nor Eve's debate with the Serpent is sinful" (Milton, fn, 539). Adam's questions are not sinful, but as Milton has Raphael explain later, using human pride and skill to learn the answers that God has not offered is the sin; thus, the eating of the Tree of the Knowledge of Good and Evil.

Wilkins makes this argument in his only mildly diffident introduction, meaning that he wants the Reader to continue to search for the sublime in creation, and that one must search beyond the confines of the prevailing anti-science rhetoric of “the Church Men,” or, for us, Roman Catholic theologians and certain sects of “dissenters.” Wilkins chooses the insights of philosophy and science, to make his case, citing the rational dialectics of the respected philosophers, scientists, and mathematicians from past as well as his present, from Plutarch and Plato to Pythagoras and Campanella, and from Aristotle and Lucian to Kepler and Galileo. Along with the Platonic formulation of his argument, Wilkins’ latitudinarian ideal relies upon an iteration of authority that is the combination of reason, tradition, and scripture.¹⁴

Sir Matthew Hale, a common lawyer and a contemporary of Wilkins, shares many of his latitudinarian ideas of the reasonableness of Christianity and science. He goes a step further in his scientific and religious writings than Wilkins, however, asserting that science is one of the methods humanity must use to “carry up” the mind to God. In his *Primitive origination*, Hale writes that humanity “was made to be the Spectator of the great work[s] of God, to consider and observe them, to glorify and serve the God that made them; and he is accordingly furnished with an intellective faculty answerable to his condition” (qtd. in Cromartie 195). Hale does not defend his interest in science as an inherent intellectual demand, as Wilkins does; rather, Hale believes that God gave humankind the tools to pursue the sublime for the purpose of God’s glory. To attain the sublime is to achieve a kind of transcendent righteousness.

¹⁴ As one of the latitudinarians, Wilkins, also bishop of Chester, subscribes to an “advocacy of ‘reason’ in religion” (Freedman vii), the aforesaid scripture, tradition, and reason. Righteousness is all of these, and since scientific inquiry is founded upon the reason given unto humankind by God, it follows that if one maintains reason above all else in science, asking questions is not blasphemous. In his *Principles and Practices of Natural Religion*, Wilkins clarifies the John Locke’s affirmation of the “reasonableness of Christianity,” explicating the difference, and coherence, of simple and complex evidence for it. First, the evidence of the inward and outward senses, and second, evidence of experience, or, experimentation (Griffin 61-2). Milton would probably protest, however, that reason is only the fruit of the Tree, and a false diversion: “he his Fabric of the Heav’ns / Hath left to thir disputes, perhaps to move / His laughter at thir quaint Opinions wide” (*Paradise Lost* 8.76-8).

Wilkins's epistle to his readers is further evidence that writers and thinkers, from the origins of the Scientific Movement to the present, ever seem to either justify their interests in the sciences, or explain their hesitation about the pursuit thereof. In contrast, Science fiction, and particularly hard SF, neither offers explanation nor pays heed to detractors; at times, in fact, it seems as if some SF writers deliberately move towards the more fantastic in order to accommodate their base of loyal readers and, cunningly, to thumb their noses at the contemptuous. Reynolds securely founds his narrative in the hypothetical potentiality of humankind's future, and thereby limits the overly "fantastic" in the movement of the plot, although the language may seem a bit overly-technical at times for those not fluent in some of the more recent developments in the fields of quantum physics and astronomy.¹⁵ Particularly since the arrival of Stephen Hawking on the cultural scene as a popularly recognizable astrophysicist, most references should be familiar and, generally, a rudimentary understanding of basic physics will suffice. Reynolds, like many other writers of "popular" hard SF, communicates the logical progression from the simple law to the theoretical or hypothetical stage.¹⁶ He does not address, however, the lack of a strong theological basis for any of his characters' motivations or the overall progression of the novel. The reason is, of course, human

¹⁵ I enjoy reading, and learning, about the advancements of this type of technology, so I do not find his technical style intrusive or disconcerting. I will admit, however, that readers not accustomed to the "science-y" diction and explanations may feel disoriented in these sections. That discomfort is reasonable, though I believe that, with technological developments as they are currently, readers will ultimately feel less discomfited reading SF than they anticipate. For instance, beta-level simulations of humans, manufactured from the computer input of an individual's personality and neuroanatomy, are a conceivable – albeit far-distant – descendent of EEGs and AI programming modules. As an example of his language, "Small entoptics surrounded his seated figure, symbols of Boolean and three-valued logics and long cascades of binary" (*Revelation Space* 10), and he uses specialized terms throughout, such as "Schwarzschild radius," and "causality," which are abstruse ideas, but relatively understandable on a superficial level within context.

¹⁶ Hawking's *A Brief History of Time*, is one of the first books on the hard sciences to achieve not only scientific notice, but worldwide public appeal. The book remained on bestseller lists for 237 weeks, has been translated into more than 40 languages, and 9 million copies, or about one for every 750 people, are extant. (Radford).

civilization's movement away from the center, from Earth, thereby removing the focal point for "old world" beliefs – consider the power of Rome for the Catholic Church, and Jerusalem for Judaism and Islam. Human civilization, and thus human ethos overall, has moved, literally and figuratively, into another region of intellectual and social development, and has initiated a shift from the celebration of traditional piety into the religious adoration of new technology and science. Machines help maintain life and health, are weapons of warfare, are essential for travel and communication, and provide an extensive network of information and social infrastructure, like Dostoyevsky's vision:

And then we shall finish building their tower, for he finishes the building that feeds them. And we alone shall feed them in Thy name, declaring falsely that is in Thy name. Oh, never, never can they feed themselves without us! No science will give them bread so long as they remain free. In the end they will lay their freedom at our feet, and say to us, 'Make us your slaves, but feed us!' (Dostoyevsky 262)

The Grand Inquisitor puts the Church in the role of provider, protector, and ruler, using the promise of the sublime as a method of suppressing any would-be usurpers such as scientific knowledge. His fears, however, have been utterly realized, for humankind in Reynolds' novel, and in much of SF, now practices idolatry of science: it is the machine technology that gives "bread," or, the necessities of life and civilization, not the men of a fragmented religion based on ephemeral mysteries. The cardinal would concur that those who control the tangible evidence of a potential sublime and the means to achieve it, control the hearts and minds of humankind. In the future, that evidence is the attainment of near-light speeds, machine intelligence, and the mystery of the vanished alien civilizations.¹⁷

¹⁷ I would argue that it is at this point that the boundaries between SF and postmodern writing is the fuzziest; herein lie the makings of capitalist/materialistic critique/veneration of modern civilization. In this future, who has access to the technoscientific advances? What roles do materialism and consumerism play in the wider culture, because of

SEEKING THOSE WHO CAME BEFORE

Thomas Medwin relates a comment that Lord Byron supposedly makes upon receiving a letter from a friend who is attempting to make a case for hot-air balloon flight. The quotation is intriguing, albeit unverifiable as Byron's own words, inasmuch that Byron, ever the man of wild imaginings, exhibits a near-prophetic sense of the future of technology:

We are at present in the infancy of science. Do you imagine that, in former stages of this planet, wiser creatures than ourselves did not exist? All our boasted inventions are but the shadows of what has been – the dim images of the past – the dream of other states of existence. Might not the fable of Prometheus, and his stealing the fire, and of Briareus and his earth-born brothers, be but traditions of steam and its machinery? (qtd. in Page 125)

This impression of the current limitations of humankind's inventions and inventiveness, that all that it has accomplished is but a mimicry of previous inhabitants, is a theme that resonates within the context of SF writing, and in all writing as it outlines the search for a sublime truth. We, as humans, are not as smart, creative, or worthy as those who have come before, and we therefore must search beyond the boundaries of our known existence for the answer to the question of transcendence.

The search within dead alien cultures for evidence of further technological innovation, and, perhaps, evidence of humankind's future with, or of, the sublime, is a center point to the plot of the trilogy, which actually spiderwebs out in an array of distinct, yet entwined, storylines. In the first novel of the trilogy, *Revelation Space*, the heterodiegetic narrator drops us in the midst of a razorstorm on the planet Resurgam, in the Mantell Sector, North Nekhebet, many hours away from the colonial capital city of Yellowstone. The sulphurous planet is an unlikely site for human colonization, but the archeological discoveries of an alien civilization, buried

technological progress? Alan France addresses this issue briefly in his article, "Historicizing the Posthuman." *JAC: A Journal of Composition Theory*. 21 (2001): 173-183.

deep beneath the yellowish crust, excited the academic community in the wider galaxy, and so an academically-supported community was founded. The Resurgam residents' social and individual behaviors are markedly similar to humans on Earth, as Reynolds preserves the relationship between established human behavior and its reasonably expected behavioral constants, thereby alleviating the potential for authorial distancing that often accompanies SF of the far-distant future. A predictable social order has arisen in Yellowstone and established a hierarchy of citizens dominates the structure of community, both in psychological sense and the physical. The wealthiest, or the highest caste, live in sky-scraping, or, considering the method of atmosphere-creation, "dome-scraping" condominiums, hundreds of feet above the surface. The criminals, the diseased, and the poor populate the lower and ground regions of the city, while most of the commerce takes place in the central areas.

High above the unclean masses, the intellectuals and the politicians seek the answer to the riddle that the planet poses: Who are the Amarantin? An apparently space-faring race that was devastated by a singularly apocalyptic and indecipherable "Event," their skeletons are four-limbed and bipedal and roughly humanoid, except for an avian-type skull. The evidence uncovered in the archaeological dig incontrovertibly demonstrates to Dan Sylveste,¹⁸ the pre-eminent Amarantin scholar and the head of the team on the dig, that the Amarantin's civilization was remarkably technologically advanced, though alien in behavior and culture. Sylveste believes, almost fanatically, that unearthing the Amarantin ruins will initiate a new technological age for humankind, which, in turn, is closer to an understanding of the universe and all that it

¹⁸ Interestingly, "Dan" is an archaic word for a title of honor, equivalent to "Sir," typically used in the past before personal names of respected men such as clerics and poets. Thus, a man investigating a culture that disappeared over 900,000 standard years ago, and who exhibits a blind faith in its technological advances and space-travels, bears as his forename the signifier for a holy man, or one who preaches the supposed truth of a religious sublime.

contains.¹⁹ Suffice to say, the “Stoners” of Yellowstone not only rely on technology for biological survival, they rely on it as the underpinning of their social structure and intellectual pursuits. It is their religion. For the colonists on the planet Resurgam, humanity’s irresistible compulsion to innovate, to create, to move forward, and to seize upon knowledge and truth emerges as the desperate attempt to reach a sublime truth. A sublime that has become increasingly distant as humankind advances away through time, even as it scrambles to return to the supposed enlightenment of the deep past.²⁰ Reynolds purports that human technological works either are the leftovers of greater civilizations,²¹ or are the infantile constructions that resemble, on the vast scale of future-time, the stone tools of early man.

NEURAL (IM)PIETY

In the third installment of Reynolds’ trilogy, *Absolution Gap*, the implications of technology as the path to, or manifestation of, the sublime, are sharply outlined against a critique of religious fanaticism. Here, Reynolds introduces an entirely new storyline and fits it neatly into the mythos of the previous two novels, even as its characters and plot retain autonomy until almost the conclusion of the work. Reynolds uses his skills as an adroit narrative craftsman to great advantage here, following the various plotlines at not only different spatial locations, but also different chronological times, so that he executes the climax with a powerful degree of

¹⁹ Sylveste is rather histrionic on this point, and purposefully so, for reasons that Reynolds makes clear in a later section of the trilogy with regards to Sylveste’s genetic background and his other astral experiences.

²⁰ An interesting psychological concern is the underlying basis for such a negative perception of humankind’s abilities. Many researchers (or, better, conspiracy theorists) argue that the Great Pyramids of Egypt must be attributed to the workings of otherworldly beings, as humans could not possibly have achieved the feats of engineering and strength obviously required. The other suggestion, that humans constructed them, but we have subsequently “forgotten” how, is even more unnerving, in that it demonstrates a sort of latent regression of civilization.

²¹ Or, similar to Carl Sagan’s *Contact*, the possible remains of an unknown omnipotent force, and thereby proof of the existence of a Supreme Being, or Beings.

believability, despite the immense reaches of space between the points of action. Accordingly, we see the long-term development of at least one of the major plotlines as it progresses closer in time to the others. The story of import here is that of Horris Quaiche, a baseline, or non-augmented, human mercenary aboard an enormous ship, a “lighthugger,” run by a sub-group of humans called the “Ultranauts.” He serves under a cruel and maladjusted captain-Queen, Jasmina, on a perpetual scavenging mission, seeking the remains of devastated alien cultures and human colonies throughout the galaxy. Quaiche is the victim of an indoctrinal virus, that is essentially a man- or machine-made virus that exhibits neurological symptoms in response to Quaiche’s thoughts, speech, or behaviors that have anti-religious or “blasphemous” allusions, or in moments of keen expectancy or marveling. For instance, on a trip to the surface of the previously unexplored planet Hela, Quaiche’s anticipation of the wonders below triggers the virus:

He shivered in awe, and fear, and reckless expectation. He felt the indoctrinal virus awaken in his blood . . . when it engorged him . . . he would see and hear things. He would glimpse stained glass windows in the sky; he would hear organ music beneath the subsonic growl of correctional thrust. (96)

Reynolds never explains the origins of Quaiche’s infection, though another element of the trilogy narrative is the effect of advanced technology and machine-enhancements on health and longevity. The “melding plague,” which attacks and violently distorts the more intricate forms of nanotechnology, including medichines²² – nanotechnological machines ingested to do the work formerly consigned to chemicals and herbs – and evolutionary devices, has decimated large

²² Many SF authors, including Reynolds, assume that their readers have at least a basic knowledge of their subject matter, hence the slang-ish jargon here. Reynolds asserts, without being explicit, that nanotechnology will be an established part of life in the future. Milburn argues that authorial assumptiveness in SF is an inevitable result of the blurring between science and science fiction and that the present writing on this scientific field is almost more culturally influential – and influenced – than the actual work or possible results: “[T]he writing of nanotechnology, as much as or even more than any of its eagerly anticipated technological inventions, is already forging our conceptions of tomorrow. Unleashing its science fictions as science and thereby redrawing the contours of technoculture, nanotechnology instantiates the science-fictionizing of the world” (269).

sections of the colonized and technologically integrated galaxy. Quaiche's infection, however, may be more connected to the interstellar war between the Conjoiners and the Demarchists, as a system of oppression or doctrinal control; or, even more simply, an obscure type of neuro-biological warfare.

Along the same lines, the paradigmatic nature of Quaiche's illness is especially provocative if one considers it from the perspective of the infector. According to Jasmina, the virus is "A crude mishmash: a half-baked concoction of three thousand years' worth of religious imagery jumbled together without any overarching theistic consistency. It doesn't make him believe anything coherent; it just makes him *feel* religious" (*Absolution Gap* 24). What were the programmers attempting to achieve with the introduction of a designer infection that is patently artificial, even to the sufferer? Quaiche's religious "feeling" is certainly the sense, albeit false, of capturing a glimpse of the sublime, or of feeling the brush of its propinquity. The concept of the virus only works within the context of a society which recognizes the design of those explicit representations, for stained-glass windows in a secular context are merely decorative, while in a religious setting they are finite representations of the infinite sublime. Reynolds participates in the intrinsic human desire to reify the sacred in a kind of universal recognizable form, such as the accouterments of western religion, and so, unfortunately, supports his argument in a somewhat one-dimensional way.²³ Reynolds quite possibly employs these slightly facile literary devices deliberately, to emphasize not only the programmatic natures of archaic organized religions, but also reader response to them. Or, put another way, show the reader that despite

²³ Irrespective of narrative metaphoric shortcomings, however, Reynolds' fundamental point remains: humankind is susceptible, and in fact, is encoded, with the desire to seek something greater than or outside ourselves. Elaine Graham comments that authorial insinuation, whether intentional or subconscious, often becomes a rhetorical discourse between author, reader, and context. Symbolic and linguistic representation, then, "is designed to convince, to engender particular associations and invite active responses. Representational practices serve not only to portray and report, but to legitimate, to reproduce and normalize; or to subvert, to contradict and destabilize" (26).

intellectualization and secularization, humankind still yearns to glimpse the sublime, and will rely on even the superfluous trappings of a mostly-forgotten, earthly religion. So that, even as Quaiche recognizes the falsity of the religious sensations, he yearns to be submerged in a metaphysical transcendence, to be absorbed in an ardor of faith that surpasses his own technoscientific understanding, even as he uses that knowledge to achieve the sublime:

When he most needed their succour [*sic*] he could feel them for the paper-thin façades they were. . . . He truly felt himself to be in the presence of something sacred, but he also knew, with total clarity, that this was due to neuroanatomy. Nothing was really with him: the organ music, the stained-glass windows in the sky, the sense of proximity to something huge and timeless and infinitely compassionate were all explicable in terms of neural wiring, firing potentials, synaptic gaps. (*Absolution Gap* 136)

Quaiche's apparent lack of authentic religious feelings arises from his knowledge of the neural workings of his own body and of the existence of the virus, yet, he still experiences the desire for the sublime, especially in circumstances of extreme misfortune. Since he is already a resident of the "heavens," he seeks transcendence within the constructs of a now-ancient religion, as presented to his neurological system by a man-made virus.

Similarly, the character Ilia Volyova is an intriguing example of that desire for a mystical sublime within the constructs of technoscientific knowledge, and, perhaps, in spite of it. Volyova is a Triumvirate, or one of the leaders of the lighthugger *Nostalgia for Infinity*. Her characterization is interesting, in large part because she is an Ultranaut, Reynolds' paradigm of the transhumanist movement in this novel. "Ultras" are a human faction that inhabits the mighty lighthuggers, and they spend most of their lives in the low-gee atmosphere of the ship. The effects of living in low gravity, along with those of each ship's collective introversion, and of extended bouts of cryogenic sleep as they travel across the light years, render the Ultras socially isolated from other human factions. And not only physically, for the hierarchy and morality of

their space-bound enclaves are totally insular. The important factor here, however, is the technological and physiological modifications of their bodies that Ultras undertake to both withstand the conditions on board and also for aesthetic considerations. They are the realization of Graham's assertion about the ultimate goals of the transhuman philosophies: "[they] exhibit a will for *transcendence* of the flesh as an innate and universal trait, a drive to overcome physical and material reality and strive towards omnipotence, omniscience and immortality"²⁴ (165).

In a revealing scene aboard small ship affixed to the outer hull of the lighthugger, Volyova presents her Gunnery Officer, Ana Khouri, with the sound of phantoms in the darkness:

The sound was . . . moaning and cavernous; long drawn-out howls so low that they were almost felt rather than heard. . . . [T]he sound the wind might make after blowing through a thousand miles of cavern. But this was clearly no natural phenomenon, not the particle wind streaming past the ship, translated into sound; not even the fluctuations in the delicately balanced engines. There were sounds in that ghost-howl; voices calling across the night. (*Revelation Space* 150)

Volyova explains that the voices are the transmissions between the crews of various ships as they traverse the empty light years of space. Khouri grasps the physical explanation almost instantaneously: since the other ships are traveling faster than *Infinity*, closer to the speed of light, the voices sound slower due to the relativistic time-dilation and Doppler effect. The eerie moans are not ghosts, but the unmediated voices of living beings speaking into the void from, one might say, the future. The scientific reasoning is sound and both Khouri and Volyova are familiar with the fundamental principles, although Volyova recognizes her intellectual superiority in this regard. Even so, however, Volyova experiences a moment's wistfulness for old-fashioned superstitious mystery, in contrast to Khouri's obdurate pragmatism, and internally

²⁴ The Ultraneut model of the posthuman is clearly of significance to a discussion on transformational sublimity - achieving transcendence through bodily modification - but the implications are far too vast to sufficiently expound here. Research and writing on the cybernetic body seem to dominate studies on SF and social technology, and for some of the most intriguing ideas, see the cybernetic and posthuman writings of Elaine Graham, Donna Haraway, N. Katherine Hayles, Robert Mitchell, Peter Oppenheimer, David Porush, and Phillip Thurtle.

maintains a sense of pleasure in supernatural possibilities of the unknown night outside the shuttle windows. “For a moment – one that she revelled in, no matter what Khouri made of it – it was possible to believe that the interstellar spaces beyond the glass were really haunted” (*Revelation Space* 151). Volyova chooses to set aside hard logic and listen instead to the mysteries of space as something beyond herself and humanity, something, indeed, she can spend her life seeking.

CHAPTER 3

AMONGST THE STARS: VISIONS OF CELESTIAL APOCALYPSE

*"This narrative is not meant for narration
But a mere airy and fantastic basis,
To build up common things with common places"*
(Lord Byron, *Don Juan* 14.7.6-8)

LURKING FEAR

The disquiet that SF discourse evinces from the general reader, as well as the academic, is underscored by the general feeling that the control of technoscientific discoveries and their uses rests in distant power-centers, such as the government or restricted-access laboratories. And, of course, those educated in the humanities generally have little training or background in the sciences, beyond the basic requisites for secondary or university degrees. The fear of the unknown is not only the fear of the possibility of unrecognizable "others" lurking in the vacuum of space, but is also the fear of the self lurking in the space between known behaviors and the potential devastation of human interference with seemingly incomprehensible technoscience. Splitting atoms to make energy (and to forge weapons), transcribing the human genome to cure disease (and to manufacture clones), searching the cosmos to clarify our existence (and to find the "other"), describing quantum particles to learn the nature of everything (and . . . to learn the nature of everything).²⁵ Who are we to tamper with the workings of the universe? Yet, this trepidation is a powerful undercurrent in literature throughout civilized history, from the Armageddon of the Bible to writings on the Black Plague and the London Fire, and on to the metaphysicists' dread of the demise of the mind through a dearth of learning.

²⁵ The dangerously exciting search for the "Unified Theory." Is this not the Tree of the Knowledge of Good and Evil?

To the fearful, technoscientific progress engenders the proverbial Icharus, climbing to heights heretofore unknown and turning to ash and ice the edifices of civilization. *Hubris*, the excessive, self-conscious pride in accomplishment and might, is humanity's Achilles' heel, and a troubled awareness of our own failing displaces nightmarish imaginings of nuclear holocaust, for it is ever the causal factor in visions of the end-of-the-world, even as it accounts for the original downfall of humankind:

Oftentimes, when Pegasus seems winning
The race, he sprains a wing, and down we tend,
Like Lucifer when hurled from Heaven for sinning;
Our sin the same, and hard as his to mend,
Being Pride, which leads the mind to soar too far,
Till our weakness shows us what we are. (*Don Juan* 4.1)

Even so, for Byron, the Age of Reason and the subsequent Industrial Revolution epitomize the direction that humankind of his era has taken to achieve the sublime, although not, he would protest, in a metaphysical sense. Despite the dire warning of humanity's overweening pride in Canto Four of *Don Juan*, in Canto Ten he evidences once more his uncanny talent for prognostication as he praises the Scientific Revolution and foretells the probable direction of technoscientific advancement:

Man fell with apples, and with apples rose,
If this be true; for we must deem the mode
In which Sir Isaac Newton could disclose
Through the then unpaved stars the turnpike road,
A thing to counterbalance human woes:
For ever since immortal man hath glow'd
With all kinds of mechanics, and full soon
Steam-engines will conduct him to the moon. (10.2)

Instead of offering a cautionary approach to the increase of human dependence upon science, Byron celebrates the emergence of industry and technology as further progress towards the realization of the sublime and, thus, man's redemption from a bleak past of superstitious,

religious oppression and the suppression of innovation. Adam and Eve's fall, instigated by the acquisition of forbidden knowledge and the unanswered questions therein, is redeemed not by the salvation of a religious messiah, but by the resolution that scientific enlightenment provides. Since he is not of a particularly scientific bent, Byron deems his poetic works as his contribution to the furtherance of humankind's movement towards an ultimate truth "And though so much inferior, as I know. / To those who, by the dint of glass and vapour, / Discover stars, and sail in the wind's eye / Is wish to do as much by poesy" (10.3.5-8). Like William Blake's "Poetic Genius,"²⁶ Byron believes that creativity, innovation, and imagination are the cornerstones of human progress in an understanding of the natural, and supernatural, world. This progress, ultimately, leads to a realization of the essential truth of being, individually and as a species.

Sir Isaac Newton observes that humankind's further search for the sublime through the study of science and the exploration of nature is as worthwhile and inexorable as it is naïve and idealistic:

I do not know what I may appear to the world; but to myself I seem to have been only like a boy playing on the seashore and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me. (qtd. in Brewster 407)

Merritt Abrash agrees, remarking that "the vast increase of scientific knowledge about the physical world and its human aspects has led to an even greater expansion in scientists' awareness of how much is still to be learned" (124). On a more ominous note, I also add that every discovery of a dead alien culture will invariably diminish humankind's place in the greater realm of existence, and that SF examines this issue *a priori* the actualization of such a find. The

²⁶ In "All Religions are One," Blake purports that all of humankind strive for truth through the experiential nature of self and of the ubiquitous "Poetic Genius." He states, "As the true method of knowledge is experiment the true faculty of knowing must be the faculty which experiences. . . . As all men are alike (tho' infinitely various) So all Religions & as all similars have one source / The true Man is the source he being Poetic Genius" (li 1, 22-4)

devastating ramifications of such a single-minded pursuit of knowledge are easy literary devices,²⁷ yes, but are also reflections of the historical desire for the answer to the questions of existence, regardless of psychological or social consequences. John Wilson, in a review of Canto III of *Childe Harold's Pilgrimage*, notes that Byron's musings on the shadowy corners of the human spirit and of the natural world elicit an unsettling sense of foreboding, arising in part from painful self-reflection, of the possibilities for the direction of humankind's future. He notes that Byron writes on "subjects of darkness and mystery which afford, at some period or other in his life, so much disquiet . . . so much agony to the mind of every reflecting modern" (qtd in Cooke, 93), and demonstrates the connection between an individual's qualms about the fate of humanity and the intrinsic apprehension of humanity-at-large. The genre of SF addresses both concerns, first, that of the inevitable decline of humankind as a species and as a significant actor on the universal stage, and also that of the physical consequences of human technoscientific development, and, upon occasion, proffers a bit of hope for the technophobic and the generally uniformed.

THE PARANOIAC AND THE IDEALIST

Before elaborating the philosophical consequences of humankind's recognition of its decrease in universal significance, I want to examine the more concrete results, especially in terms of Reynolds' work and the connections between it and SF in general. The usual effects of humankind's race towards the pinnacle of scientific achievement tend towards the apocalyptic, more notably in post-atomic age literature, and becoming more marked in post-1960s SF. Ursula

²⁷ And, one might say, scare tactics, especially in post-nuclear, conspiracy-theory, and politically paranoid SF.

LeGuin and Margaret Atwood²⁸ demonstrate an underlying discomfort with the direction of scientific discovery and innovation in their novels, *The Lathe of Heaven* and *Oryx and Crake*, respectively. LeGuin's novel features a protagonist who alters the external world through dreaming, while Atwood writes a tale of a future in which humans' scientific enhancement of the natural world is the focal point of societal development. In both instances, the protagonist is one who opposes the alteration of civilization, *per se*, though always after the change takes place, whether said change was effected through dreams of or scientific alterations of the essential state of being. The political voice of each of the novels is occasionally distracting, inasmuch that the histrionic, lecturing, tone of the authors certainly arises from fear of the unknown and fear of the future, rather than a rational, historically and currently accurate examination of science and society. The worlds of each novel are altered through the machinations of man and the plots reside in the mind-bending consequences of such manmade distortions, although, in each case, the aims of the antagonists are initially altruistic: they want to save mankind from itself and take control of an unimaginable future, based on past digressions from the path to enlightenment. Of course, it all ends up quite unexpectedly, because of certain intrinsic, and intractable, qualities of humanity that disallow an excision of their particularly human behaviors. The instinct for self-preservation at any cost, for example, or the recognition of physical or mental disparity between individuals in a society, become focal points for the question of man's ideal state of being. Truth, in these novels, is not the sublime; instead, humankind must maintain the *status quo* of scientific progress, so that socio-economic and political structures of modern civilization have the opportunity to progress to a stage more proficient at directing the advancements of

²⁸ With the advent of the feminisms, both first and second-wave, women SF writers demonstrate a tendency to focus on either the human body (usually second-wave, esp. cyberpunk) or the implications of man's dominance in the realm of technology, and thus, warfare, politics, etc.

technology, and only then realize the sublime. Genetic manipulation is dangerous, they seem to say, for we are not prepared to know the truth of the universe, and ourselves, and thus physiological and political consequences shall be dire.

Quite on the other hand, Reynolds' novel describes a future that is more perceptibly the progeny, albeit remote, of modern civilization. The results of scientific progress are as they have ever been: humans journey to uncharted territory, build societies, go to war, suffer the aftermath, and begin to rebuild. Humankind, in Reynolds' vision of the future, has accepted space travel as nearly routine, and he conscientiously observes and articulates the difficulties of the unimaginably vast distances and the probable consequences of war on the established societies of a growing number of colonized planets. The apocalypses in this vision of the future seem smaller, even when an entire planet's colony is decimated, because the scale of space-time has increased exponentially in terms of both the physical and of the psychological and philosophical.

Armageddon, to use religious terminology made secular in the nuclear age, in Reynolds' future, does not reside in the destruction of humankind as a result of its technological weaponry; rather, it is a kind of "other," a mysterious unknown entity from the depths of space – and possibly time – charged with the regulation of space-faring intelligence. Humanity has always battled with itself, Reynolds seems to assert, until outside forces threaten its existence. The "Inhibitor devices" are an artificially intelligent machine hive entity, manufactured a billion years before the inception of organic life on Earth. They have destroyed hundreds of alien civilizations throughout the galaxy as those civilizations gained spaceflight, in order to prevent another "Dawn War," an interstellar conflict that embroiled all of the initial space-faring cultures in the galaxy and lasted thousands of years. The Inhibitors, "a hybrid-machine chimeric species, with some residual vertebrate traits" created the machines to halt the progression of any species

intelligence, thereby eliminating the possibility of spaceflight and the subsequent, inevitable, battle for galaxy supremacy. (*Revelation Space* 252) “They . . . set about disturbing the conditions which could lead to intelligent life ever arising again. . . . They seeded the galaxy with machines, designed to detect the emergence of life, then suppress it” (539). The machines prevent death by effecting it, thereby closing human civilizations natural circle of emergence, progress, disaster, and rebirth. The Dawn War is the calamitous result of species’ yearning for the stars and the secret truths that might wait in the shadows between them, and the Inhibitors are designed to thwart an intelligent species intrinsic desire for answers.

Even here, then, the implications of advanced science and technology in the celestial realm seem unavoidable. Yet, Reynolds’ focus is not merely upon the sinister results of species’ attainment of spaceflight; rather, he emphasizes the idealistic reunification of humanity as one species, one people. The second novel in the trilogy, *Redemption Ark*, explores several more mystical aspects of the machines and machinations of the humans of the future. As one of the main characters, Ilia Volyova, struggles for personal redemption, she simultaneously, almost superfluously, offers salvation to the helpless inhabitants of a doomed planet. She calls upon the aid of a range of human “types,” and together they rescue almost 100,000 humans from the planet below, before she sacrifices her own life for that purpose. The unification of the human factions, when facing inescapable cataclysm, is clearly a more hopeful view than that of either Atwood’s or LeGuin’s novels, and would not have been possible without the aid of both posthuman bioengineering and technological advancement. At one point, Volyova floats unprotected in vacuum, her lungs and blood freezing as she inhales the icy black of space, but medicines and prostheses keep her alive long enough to coordinate the transport of the human colonists to the lighthugger, which, in turn, is massive enough to house a large segment of the

planet's human population. Volyova achieved her "glory and redemption" (*Redemption Ark* 668) as she moves into the future, leaving the now-antique ship and the other technologies, many of which are old beyond reckoning, for a more metaphysical actualization of the sublime in the uncharted regions of death. She first breathes in the universe that she so loves, and then dissipates into it, joining the "ghosts" in the darkness. The redemption of Volyova, and of others later, further demonstrates the correspondence of SF between the literary realms of spiritual mysticism, philosophical humanism, and numinous science.

OUT OF THE PAST AND INTO THE LIGHT

As Trinity tells Neo in the Wachowski brothers' film, *The Matrix* "It's the question that drives us. It's the question that brought you here." Literature and science are both questions posed to the past, and a searches within the present and the future for the answer. H.G. Wells, in his article "The Rediscovery of the Unique," writes of humankind's scientific accomplishments thus far as merely the small flame of a match in the darkness of the unknown:

Science is a match that man has just got alight. He thought he was in a room – moments of devotion, a temple – that his light would be reflected from and display walls inscribed with wonderful secrets and pillars carved with philosophical systems wrought into harmony. It is a curious sensation, now that the preliminary splutter is over and the flame burns up clear, to see his hands lit and just a glimpse of himself and the patch he stands on visible, and around him, in place of all that human comfort and beauty he anticipated – darkness still. (qtd. in Abrash 125)

Reynolds, as a hard SF writer, plunges into the darkness of the unknown, and, indeed, the unknowable, holding onto a faith in technology and science that will carry him, and humanity, into that future. But why is technically accurate, even if only theoretical, technology such an integral part of hard SF? Why the hypothetical inertia-suppression engines, the quantum weaponry, the gravity accelerators, the near-light speed ships, the planets ringed with orbital human habitats, the computers that run and repair themselves? One might make an argument

that if SF is the course of the literary search for the sublime, that search is dependent upon the transition into a post-nuclear world civilization in the mid-twentieth century. I assert, on the other hand, that literature has been moving in this direction from, well, the beginning, and that hard SF is only the most recent, and most overt explicator of that anxiety. SF is the result of a natural progression of a civilization determined to seek a teleological answer to the questions of humanity's relentless mortality, on both the scale of individual humans and of civilization-at-large. Humankind has ever searched the stars for redemption of and escape from our essential "humanness," our failings, our vulnerability. First, the superstitious, ephemeral faith of the ancients, telling stories of a first man and woman created in the image of a omniscient God above, who fell from grace into mortal life, gaining knowledge in exchange for everlasting life. The various "Enlightenments" – of science, poesy, industry – brought humanity forth from the dark ages of "miracle, mystery, and authority" into the worship of the mind and the articulated desire for transcendence through poetry and scientific endeavor.

The future, or, that time beyond the present into which we peer, is in the dark of the unknown, and in the dark of space. We have always asked the shadows between the stars for the truth of existence, and we go in search of it, even though most of us travel in such realms with literature as our transport rather than spaceships. Out there, somewhere, is the sublime:

Like the Chaldean, he could watch the stars,
Till he had peopled them with beings bright
As their own beams; and earth, and earth-born jars,
And human frailties, were forgotten quite:
Could he have kept his spirit to that flight
He had been happy; but this clay will sink
Its spark immortal, envying it the light
To which it mounts, as if to break the link
That keeps us from yon heaven which woos us to its brink.
(*Childe Harold's Pilgrimage* 3.14)

Like the pioneers of the American west, like Marco Polo and Columbus and Erik the Red, like stout Cortés upon a peak of Darien, we seek something larger than ourselves, more important, more real. The literature of SF asks the questions that reveals the door to the future, and technology and scientific enlightenment are the matchlights in the infinite darkness of the unknown.

*No, the journey doesn't end here. . . . the grey rain-curtain of this world rolls back,
and all turns to silver glass, and then you see it. . . . White shores, and beyond,
a far green country under a swift sunrise.*

~from *The Return of the King*,
by JRR Tolkien

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