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UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

THE "SUPRAMUNDANE":
THE KANTIAN SUBLIME IN LOVECRAFT, CLARKE, AND GIBSON

A Dissertation

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

Doctor of Philosophy

By

Bradley Alan Will
Norman, Oklahoma
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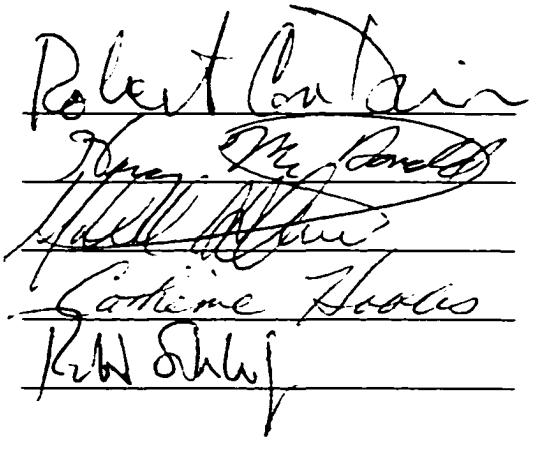
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A Dissertation APPROVED FOR THE
DEPARTMENT OF ENGLISH

BY



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Introduction

I first encountered the term "supramundane" in James Turner's introduction to Lovecraft's At the Mountains of Madness anthology. There Turner uses the term to refer to Lovecraft's "Gothicism [with] . . . an expressly scientific approach" (xv), distinguishing it from the more traditional, ghostly, supernatural Gothic. This aspect of Lovecraft's fiction makes it difficult to classify. It uses elements of science fiction, horror and even fantasy, crossing over the boundaries of genres which are often seen as philosophically opposed to each other.[1] I realized that Lovecraft's work crossed these boundaries because his stories dealt with the fantastic--the unexplainable--in terms of the scientific rather than the supernatural.

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[1]For example, author and critic Gregory Benford writes in "Science Fiction, Rhetoric and Realities":

> Hard SF seeks to convince, to appeal to the intellect. Fantasy and horror speak to the emotions, delving into deep fears and loves. . . . [F]antasy--outright impossibility--appears in ostensibly SF works because much of the audience doesn't understand (or maybe doesn't care about) the distinction. (224-5)

Lovecraft's characters typically confront the unexplainable with empiricism rather than spiritualism. In "The Shunned House" investigators of a haunted house bring with them "some scientific mechanism[s]" (250) which were "procured . . . from the laboratories of Brown University and the Cranston Street Armoury" (251). Significantly, they do not bother with the trappings of the supernatural spiritualist seance--the traditional means by which hauntings are put to rest. The protagonist of "The Shunned House" uncovers part of an enormous "unthinkable abnormality" (261)--a gigantic vampiric monster buried beneath the house. He destroys the monster not with incantations or blessings but, rather, by dumping six carboys of sulfuric acid into the pit in which it lies. In this case, scientific knowledge is used to destroy the monster, but more often, in Lovecraft's work, the resources of science are unable to destroy or even explain the anomalous phenomena encountered. The anomaly remains unexplained in spite of the engagement of science.

The movement from addressing the unexplainable in terms of the supernatural in favor of addressing the

unexplainable in terms of the scientific is culturally significant. The supernatural world view suggests a known natural sphere. Here, anything unexplainable is miraculous and totally disconnected from the natural world. Thus, from within this world view a person could encounter the unexplainable without disrupting his conception of the natural world because the supernatural phenomenon has nothing to do with the natural world. The supernatural world view allows him confidence in his vision of the natural world in spite of his encounter with the unexplainable.

The attempt to address the unexplainable in scientific terms (as in Lovecraft's work) has an entirely different effect on the observer's confidence in his vision of the natural world. For example, in Lovecraft's story "The Colour Out of Space" scientists attempt to determine the composition of a meteorite by subjecting a sample to spectrographic analysis. Their test fails to identify the substance. The composition of the meteorite remains unexplained, and the scientists are forced to acknowledge that their vision of the natural world--their scientific knowledge--has

failed to account for everything. This failure of science to account for or offer protection from the unknown is one of the key components of Lovecraft's horror. The acknowledgment of the failure of science is a moment of sublimity which forces a recognition of humanity's relatively insignificant and helpless position in a dangerous, uncaring cosmos.

This idea of the utterly unexplainable phenomenon, though hardly a common image, can be found in many different subgenera of science fiction. The primary examples cited in this work--Lovecraft, Clarke and Gibson--illustrate how this key concept is shared by authors whose works have little else in common. In this dissertation I demonstrate how these works can be seen as part of a science-fiction subgenera which is committed to the depiction of the unexplainable. This genre of the supramundane invokes the Kantian sublime with its failure of human understanding and subsequent awareness of the infinite vastness of the great unknown which lies outside our sphere of dominion. This vision of the sublime is, in its extreme form, one of

apocalypse. At the very least it is a vision of catastrophic transformation of humanity.

My earliest interest in this area of research was inspired by a few lines from The Haunting, the film version of Shirley Jackson's The Haunting of Hill House. In The Haunting, the trappings so common in the traditional haunted house story--spiritualism and mediumship--are subdued in favor of empirical scientific investigation. The characters, specifically the chief investigator Dr. Markway (Richard Johnson), attempt to understand the haunting in terms of science rather than spiritualism. This is a significant shift in perspective. Markway insists that the mysterious, incomprehensible phenomena which occur in Hill House have explanations which are natural, albeit currently ungraspable. Markway says of a harp that "was playing itself":

> I don't think it is anything supernatural. . . . More likely, it is in the realm of the preternatural. . . . Something we don't have any natural explanation for right now but that we will have some day. The

> preternatural of one generation becomes the natural of the next. You know, not so long ago scientists laughed at the idea of magnetic attraction. They couldn't explain it, so they refused to admit it existed. (1:13:00)

Here the unexplainable phenomena are not seen as transcending natural laws, but rather, they function within natural laws which science does not yet recognize.

Lovecraft's work seemed to me to be a prime example of this "preternatural" rather than supernatural perspective. His characters were, as in "The Shunned House," attempting to understand monstrous anomalies through the application of scientific methods. However, I soon realized that what was particularly interesting about Lovecraft's stories was the repeated failure of these investigations. In The Haunting, Markway is sure that someday science will be able to explain the anomalous phenomena of Hill House, but the anomalies of Lovecraft's work are forever elusive, utterly beyond the grasp of humanity. While

the aliens and monsters in other science fiction stories were yielding their secrets to intrepid scientists, Lovecraft's monsters gave up nothing and forced the hapless human investigators to recognize the limitations of their scientific understanding.

Once I began to look for this pattern of the utterly inexplicable scientific anomaly, I began to see it in other more prominent works of science fiction, like Clarke's monoliths from the 2001 cycle and the Artificial Intelligences from Gibson's matrix trilogy. Interestingly, in any other context these three authors--Lovecraft, Clarke, and Gibson--seem to have nothing in common except for a general interest in science fiction. Nevertheless, each author, in his own way, invokes a vision of the unfathomable anomaly, and thus, these three authors can all be seen as contributing to a specific subgenre. The works of these three authors are certainly not the only examples of the supramundane. Among the more prominent examples are the science-fiction television series The X-Files and Babylon 5.

It became apparent that the unexplainable in these works was intrinsically linked to the sublime--an area of theory about which I knew next to nothing. My early exploration of the sublime was guided by Dr. Robert Con Davis. I turned to the big three of the sublime--Longinus, Burke, and Kant--and almost immediately discarded Longinus and Burke's formulations of the sublime as inappropriate for my project. Kant's Critique of Judgement and "Analytic of the Sublime" remained impenetrable, as mysterious as Clarke's jet-black monoliths, until I read Thomas Weiskel's discussion of Kant in The Romantic Sublime. Weiskel's semiotic rereading of Kant was particularly applicable to Lovecraft's work (see Chapter 2), and it opened the door for my earliest rudimentary understanding of Kant. My further grasp of Kant was possible after many long afternoons of discussion with Dr. Henry McDonald. Only through his encouragement and patient answering and re-answering of a seemingly endless stream of questions was I able to formulate a consistent interpretation of Kant's Critique of Judgement.

The issue of contingency and catastrophic evolution, which now seems so obviously central to any conception of the supramundane, was the last part of the dissertation to be written. Dr. Ronald Schleifer's suggestion that I look at Stephen J. Gould's Wonderful Life to find a theoretical basis for Clarke's use of evolution sparked an entire chapter devoted to catastrophe and evolution and became the theoretical basis for yet another link between Kant, Lovecraft, Clarke and Gibson.

Along the way, I have been helped by the enthusiastic encouragement of Dr. Catherine Hobbs and by Dr. Michael Morrison, who has shown me where to look for the larger context of science fiction and kept me within the bounds of scientific fact. Most importantly, though, I am indebted to my wife, Linda McHenry, for her patience, her encouragement, and her willingness to be a sounding board for virtually every idea that tripped through my head.

Ultimately, in future incarnations of this work, I plan to demonstrate how Lovecraft, Clarke and Gibson each present a revision of the Kantian sublime.

Lovecraft does so through semiotics and the use of the unnamable. Clarke evokes the sublime in terms of catastrophe and evolutionary transformation. And Gibson re-envisions the sublime in terms of information.

Chapter 1

The Supramundane and the Kantian Sublime

Defining the Supramundane

In The Lost Worlds of 2001, Arthur C. Clarke writes that one of the major concerns he and director Stanley Kubrick faced in developing the 2001: A Space Odyssey film was the possibility that their work of speculative science fiction would be passé even before it was released. As Clarke describes, the film's fictitious space exploration was in some danger of being outpaced by NASA's efforts in the real world:

> While the film was in production, the first space rendezvous (Gemini VI and VII) took place. Luna IX landed in the Ocean of Storms and gave us our first close-ups of the lunar surface from a distance of a few inches. . . . Most astonishing and unexpected of all--the discovery of the first artificial radio sources in outer space was announced just a month before the movie was premiered. (April 1968). . . .

> And at the end of that same year, Apollo 8 looped round the Moon, and half the human race heard that unforgettable Christmas message from another world. . . . A cautious, pedestrian approach [to the film] would have resulted in instant obsolescence. (77)

The problem they faced was not, as Clarke modestly claims (18), that reality might show their speculation to be ridiculous. The race with NASA was an attempt to present a depiction of space travel before it became commonplace, ordinary, mundane.

It is sometimes difficult now, as we actually approach the year 2001, to understand the initial impact of the film. People who were only a few months old when 2001 premiered grew up with Star Wars and have come to expect big-screen spaceships to be hyperactive and violent, like swarming TIE Fighters and exploding Death Stars. 2001's space-flight sequences offer the opposite--a slow, rhythmic gracefulness which, despite its elegance, is quite dull by today's standards. Nevertheless, audiences sat in rapt attention,

fascinated by extended, detailed sequences of spinning space stations and complex docking procedures.

Yet for the characters on the screen, space flight is anything but fascinating. Heywood Floyd dozes through a lunar landing. His daughter is utterly unimpressed by a visual telephone call from orbit. The crew of a commercial shuttle craft evidently are bored by their work. For these characters, space flight has become commonplace. It is not exciting, and as Robert Plank argues in "Sons and Fathers in A. D. 2001," this "banality that reigns supreme over earth and space" is a virtue rather than the defect some critics claim it to be (125-6). The characters lack enthusiasm for their ordinary, workaday world.

There is a contrast, though, between the attitude of the characters and that of the 1968 film-going audience. The theater crowds were fascinated and excited by both the technological achievements presented and, to a certain degree, the characters' boredom, for the lesson of the space-flight segments is the unrealized dream of the Space Age. It is the reassuring notion that humanity will someday dominate

space, that we might someday transform it from an awesome, hostile environment into a safe, ordinary place where one might complacently doze. Clarke and Kubrick worked to present 2001 within the opening moments of the Space Age, and they wanted to address an audience for whom space flight is still a new, emergent, awesome technology. And yet, they present that technology as ordinary and mundane.

William Gibson employs a similar technique in his book Neuromancer. He published Neuromancer in 1984, just as personal home computers--particularly Apple's IIc and IIe series--were becoming popular. Also during this period, modems were used only by the computing elite, and a global computer internet seemed a wondrous but attainable possibility. Just as 2001 was released when space exploration had grabbed the popular consciousness and seemed to be the key to knowledge, so, too, Neuromancer came out just when personal computers began to have a similar status.

In other words, just as space travel is ordinary for the characters of 2001, so, too, are computers and the global information matrix of cyberspace commonplace

for the characters of Neuromancer. They are so familiar with the workings of cyberspace that Gibson has to resort to the rather unlikely narrative technique of explaining it to his readers through the voice of a television documentary described as a "Kid's show" (52), implying that children would be the only people in that world who might not already have a grasp of how cyberspace works. This is underscored by Gibson's repetition of the passage in each of the novels of the matrix trilogy.

Both 2001 and Neuromancer firmly establish an ordinary, mundane world, looking slightly into the future, to a time when a technology, which is new and exciting for the audience, has become accepted and commonplace for the works' characters. Bowman is a skilled astronaut and Gibson's protagonist, Case, is among the most adept of the cyberspace "cowboys." Both characters have achieved total mastery of their fields. These are futures in which science and technology have progressed so far that new and cutting-edge fields have been rendered ordinary. These are visions which seem to support the notion that scientific knowledge can

always expand and progress, eventually to achieve dominion over any given field.

But ultimately, these works also undercut this idea. Having initially established humanity's scientific and technological domination, these works insert an intrusive element of chaos into the mix. They do not allow humans to retain their status as masters of the universe but instead, create a situation in which humanity becomes subordinate. As advanced as space travel has become in 2001, the humans are forced to recognize that they are not the supreme navigators of space. Their space exploration leads to encounters with "monoliths"--unexplainable, unfathomable alien artifacts which enable a form of space travel the human characters cannot begin to understand. Humanity's domination of space is an illusion after all.

At the conclusion of Neuromancer and throughout the subsequent books of the matrix trilogy, Count Zero and Mona Lisa Overdrive, humans loose control of the cyberspace matrix. The cyberspace cowboys are still able to navigate and manipulate "data" in the network, but they no longer have the illusion of being the

supreme rulers of their world. Mysterious Artificial Intelligences roam cyberspace at will, disrupting its structure and altering the rules by which it is constructed.

These intrusive elements are not part of the mundane sphere. That is, they are not part of the world which is graspable by human consciousness, the world which is delineated by the scientific laws whereby we give order to the universe. The monoliths and the artificial intelligences violate the basic scientific principles of the human characters who encounter them. They behave unexpectedly. They defy scientific analysis. They fail to fit any order of taxonomy or classification. They bring about a failure of the human faculty of understanding.

This characterization of the monoliths and the artificial intelligences as things which exceed human understanding--as things which go beyond our conception of the mundane sphere--implies an incompleteness of our understanding. If the intruders exist in a zone beyond our understanding, then our understanding of the universe is only partial. In positing the possibility

of the existence of artifacts which exceed our understanding, these works suggest that what we believe to be the totality of the universe--the mundane world we grasp through the natural laws we have constructed--is, in fact, only a small part rather than the whole.

It is important to notice that the intruding elements are technological artifacts and not miraculous elements of the supernatural. Were they depicted as supernatural, there would not be this crucial implication of the incompleteness of human understanding. The miraculous or the supernatural comes from wholly outside the natural sphere. Such a scenario implies that human understanding grasps the entirety of the natural world. The assumption, in the case of the supernatural, is that the natural world is known and understood and that supernatural elements come from a realm which utterly transcends that in which natural laws or scientific principles operate. The miraculous is inexplicable not because human understanding has an incomplete grasp of the natural world, but rather, because the miraculous comes from beyond the natural world altogether.

The intrusive elements, in that they are technological rather than miraculous, do not transcend nature. They are not supernatural. Their technology conforms to natural laws. However, because human understanding of the universe is incomplete, the laws which govern them are not necessarily part of the system of laws we understand. The monoliths and artificial intelligences are part of the natural world, but at the same time, they come from beyond the sphere we recognize as normal or conforming to the natural laws we do understand.

We can call this sphere delineated by human understanding the mundane sphere. The intruding elements, in that they do not conform to the laws whereby we delineate the mundane sphere, are then supramundane or beyond the mundane. The supramundane is that which exceeds human understanding but is not supernatural. The presence of the supramundane indicates an inadequacy of the human faculty of understanding rather than, as with the supernatural, the intrusion of elements from outside the natural world.

An Overview of the Kantian Sublime

The crux of the supramundane is that it exceeds our understanding. It violates the laws we have constructed to give order to the universe. As H. P. Lovecraft observes in his 1934 essay "Some Notes on Interplanetary Fiction," such a disturbingly bizarre object should generate an intense and particular emotional response from any characters who encounter it:

> It must be remembered that any violation of what we know as natural law is <u>in itself</u> a far more tremendous thing than any other event or feeling which could possibly affect a human being.
>
> . . . The characters should react to it as real people would react to such a thing if it were suddenly to confront them in daily life; displaying the almost soul-shattering amazement which anyone would naturally display. (118, italics in original)

The emotional reaction Lovecraft writes of here is an apprehension of the sublime, the "soul-shattering"

sense of awe and wonder one experiences upon encountering a phenomenon which truly exceeds the grasp of understanding. In particular, this sense of awe is the Kantian model of the sublime, which is predicated on a failure of the faculty of understanding.

As Kant shows in the Critique of Judgement, the awesome experience of the failure of understanding allows us insight into the sublime. This failure delineates the limitations of our capacity to understand. But Kant, in the "Analytic of the Sublime," goes on to argue that the failure of understanding points to a more significant and more powerful aspect of human consciousness--the faculty of reason. Although our faculty of understanding fails to grasp an object, our faculty of reason is able to generate an abstract idea whereby we can grasp the object as an abstract form.

Kant's "Analytic of the Sublime" appears in his third critique, The Critique of Judgement. However, in order to appreciate what Kant is arguing in his third critique, we must look at the arguments he makes in his first two critiques, The Critique of Pure Reason and

The Critique of Practical Reason. Through these works Kant constructs an overarching dualism of the phenomenal and the noumenal spheres, which, as we shall see, is crucial to his distinction in the third critique between the beautiful and the sublime. He does this in order to separate the realm of science and causality (the phenomenal) from that of morals and free will (the noumenal). According to Kant, these two realms do not conflict or interfere with one another, but rather give us two radically distinct forms of knowledge.

Kant's phenomenal sphere is mechanistic, where effects have causes and are determined by natural laws. He associates the phenomenal sphere with the faculties of sensibility and understanding. Through the latter we have direct rational knowledge of the phenomenal world and are able to give order to the world. We perceive causal relationships and are able to construe natural laws which determine the order of the phenomenal sphere.

Kant's noumenal sphere is the domain of free will, and he associates the noumenal with the faculty of

reason--the faculty whereby we are able to make moral decisions. Kant turns against metaphysics which asserts that through religion we can have direct knowledge of God and the noumenal sphere. Instead, Kant argues that we can only have indirect, secondary knowledge of the noumenal. That is, we cannot empirically prove the existence of God, but we can reason or draw an abstract conclusion that God exists. Though we do not scientifically or factually know that God exists, we behave as if God exists. We relate to the noumenal sphere through moral principles and ideas rather than through scientific facts or concepts.

In his third critique, The Critique of Judgement, Kant presents two forms of judgment, determinate and reflective. Determinate judgment is activated when we have a given rule of nature (constructed by our faculty of understanding), and we wish to subsume under this universal rule a particular. Reflective judgment works in the opposite way, attempting to derive a universal from a given particular. Reflective judgment is activated when we encounter a particular phenomenal object for which our faculty of understanding has not

constructed a universal rule or concept whereby we can classify this given particular. We judge an object to be beautiful when the reflective judgment succeeds, and we are able to hypothesize a universal which can be applied to the particular, phenomenal object. This successful reflective judgment is a result of what Kant describes as a harmony between our imagination and understanding.

Sublimity is the result of the failure of the reflective judgment. We apprehend the sublime when we encounter an object which is seemingly without form. The particular object observed, because of its vastness or immeasurable strength, cannot be grasped in its totality. The object seems to have no distinct form, and therefore, we cannot hypothesize a universal rule to apply to it. As Kant writes:

> [T]he most important and vital distinction between the sublime and the beautiful is certainly this: that if, as is allowable, we here confine our attention in the first instance to the sublime in Objects of nature, . . . we observe that whereas natural beauty

> . . . conveys a finality in its form making the object appear, as it were, preadapted to our power of judgement, so that it thus forms of itself an object of our delight, that which, without our indulging in any refinements of thought, but, simply in our apprehension of it, excites the feeling of the sublime, may appear, indeed, in point of form to contravene the ends of our power of judgement, to be ill-adapted to our faculty of presentation, and to be, as it were, an outrage on the imagination, and yet it is judged all the more sublime on that account. (§23, 202)

The phenomenal object "excites the feeling of the sublime" because it disrupts reflective judgment. There is no harmony between our faculty of understanding and our imagination because the object, in its magnitude, is "an outrage on the imagination" and cannot be grasped by the faculty of understanding. The object overwhelms the observer, and the faculty of understanding fails in its attempt to account for the

object through the generation of a new universal concept.

This failure of the understanding is only the first part of the apprehension of the sublime, for though the formless object cannot be grasped by the faculty of understanding, one can call upon the faculty of reason, associated with the non-phenomenal noumenal sphere, in order to account for the formless phenomenal object. As Kant observes:

> The beautiful in nature is a question of the form of the object, and this consists in limitation, whereas the sublime is to be found in an object even devoid of form, so far as it immediately involves, or else by its presence provokes, a representation of limitlessness, yet with a super-added thought of its totality. (§23, 201)

Here we have a seeming paradox. For how can there be, at one and the same time and in relation to the same phenomenal object, a "representation of limitlessness" and a "thought of its totality"? The solution to this problem lies in recognizing that the representation of

limitlessness and the super-added thought of totality are functions of separate and distinct faculties (understanding and reason, respectively) and that each of these faculties is associated with separate and distinct spheres (the phenomenal and the noumenal).

The representation of limitlessness is the result of the failure of the faculty of understanding. Because understanding cannot grasp the object, it seems formless, infinite, limitless. And with this failure of the faculty of understanding the faculty of reason intervenes and "demands absolute totality, as a real idea" (§25, 207). That is to say that in the face of the seemingly formless, infinite, ungraspable object, the faculty of reason steps up to formulate an idea of infinity in its absolute totality. Such an idea of the totality of infinity is attainable by the faculty of reason because reason does not try to understand the infinite or grasp it as a rational, phenomenal concept. Instead, reason, the faculty of the noumenal sphere, approaches the formless phenomenal object just as it approaches the noumenal. We cannot grasp the formless object. We cannot have understanding or direct

knowledge of the infinite. But we can, through the faculty of reason, have indirect knowledge or an abstract idea of the infinite. The faculty of reason allows us to behave as if we grasp the infinite. Thus, we have Kant's "representation of limitlessness, yet with a super-added thought of its totality" (§23, 201).

This abstract idea or indirect knowledge can be more accurately called negative knowledge, for in actuality it is no knowledge at all. In allowing us to think as if we have a grasp of the infinite, the faculty of reason is not erasing the fact that in actuality we cannot grasp the formless object through our understanding of the phenomenal. It is, instead, allowing us to conceive of the formless object as a part of the noumenal sphere, as a part of that which eludes our direct, cognitive understanding. The knowledge generated by the sublime experience can, thus, be said to be negative knowledge because it is an awareness of a gap in our understanding. It is an awareness of the lack of cognitive grounding for our idea of the formless object.

As Kant describes it, the pleasure derived from the sublime is complex and not altogether positive, because it originates from this negative knowledge; in contrast, the pleasure derived from the rationally grounded understanding of the beautiful is direct and positive:

> [T]he beautiful is directly attended with a feeling of the furtherance of life, and is thus compatible with charms and playful imagination. On the other hand, the feeling of the sublime is a pleasure that only arises indirectly, being brought about by the feeling of a momentary check to the vital forces followed at once by a discharge all the more powerful, and so it is an emotion that seems to be no sport, but dead earnest in the affairs of the imagination. . . . [S]ince the mind is not simply attracted by the object, but is also alternately repelled thereby, the delight in the sublime does not so much involve positive pleasure as

> admiration or respect, i.e. merits the name of a negative pleasure. (§23, 202)

This admiration or respect is an awareness of our relationship with the noumenal. We become aware of the fact of the existence of that which exceeds our understanding. We feel not the pleasure of mastery or understanding of the noumenal (for such mastery or understanding is impossible), but rather, we feel admiration and respect for that which exceeds us.

The Supramundane and the Sublime

The distinction between the beautiful and the sublime hinges on one key point--the success or failure of the faculty of understanding to grasp the object in question. The project of science fiction, being predicated on imaginative understanding, is generally inclined toward the cognitive or knowable rather than the sublime. Thus, Gregory Benford writes in "Science Fiction, Rhetoric and Realities": "Hard SF [science fiction] seeks to convince, to appeal to the intellect" (224). And Todorov in The Fantastic situates science fiction in the subgenre of the "instrumental marvelous," writing: "Contemporary science[-]fiction

. . . narratives, starting from irrational premises, link the 'facts' they contain in a perfectly logical manner" (56-7). The basic trappings of science fiction--such as spaceships, laser guns, robots, time machines, anti-gravity devices--are graspable and understood within the context of the stories in which they are presented. That is to say, even though as a reader one does not understand the workings of a matter/anti-matter hyperdrive, the technologies involved are understood by the characters in the story, so there is no sublime experience for the character or for the reader.

Frankenstein's monster is not sublime in the Kantian sense in that Frankenstein, having made the creature, can grasp him in his imagination without inducing a failure of understanding. Similarly, the replicants of Blade Runner are not sublime. Decker can identify them. He understands them, and he is able to destroy them. Similar statements can be made about the Death Star from Star Wars. It is an awesome and unprecedented weapon, but the Rebel Alliance understands it. They can identify its weakness and

destroy it. Each of these examples is a product of human technology, albeit a fictionalized product of a fictionalized technology. None is an example of the sublime because each is a product of human understanding. That is, none induces a failure of understanding because each one is a representation of human understanding.

It does not necessarily follow, though, that stories depicting non-human, alien entities and artifacts present depictions of the sublime, for not all aliens are necessarily supramundane. The supramundane object comes from outside the mundane sphere, where the mundane sphere is the conception of order which we have constructed through the systematic application of laws and concepts. That is to say, the mundane world is the world which we can understand, the world in which phenomena behave in accordance with our expectations. The supramundane is not merely the strange or unusual or foreign. Often, the aliens depicted in science fiction are merely strange. They have unexpected, unusual characteristics, but they do not defeat our faculty of understanding. We can

ultimately grasp most of the aliens and alien technologies depicted in science fiction. Thus, for an object accurately to be termed supramundane, it must exceed human understanding. It must come from outside the mundane world. It must violate the principles and concepts we use to make sense of the world.

We can find a clear example of the supramundane in H. P. Lovecraft's "The Colour Out of Space." The basic plot of this story follows the fundamental pattern of other alien-invasion stories. But Lovecraft brings an element of the supramundane into "The Colour Out of Space" and, thereby, moves the story into the realm of the sublime. The plot is fairly straightforward. One afternoon in June, a meteorite lands on Nahum Gardner's secluded farm, and when scientists from nearby Miskatonic University break the meteorite open, they unknowingly release strange, gaseous entities which eventually take up residence in the farm's well. Throughout the next year, the farm shows increasing signs of infestation by a noxious agent. The following fall, the livestock begin to wither, "growing grey and brittle and falling to pieces before they died" (66).

One by one, members of the Gardner family succumb to madness and the same wasting. A neighbor arrives in time to witness the bizarre death of Nahum Gardner. He then goes to the nearby city of Arkham and returns with the coroner, the medical examiner, and a veterinarian. The four of them inadvertently disturb one of the entities in the well. They flee as the entity destroys the farm with a pyrotechnic display of strange colors. Then, as Lovecraft writes,

> [W]ithout warning the hideous thing shot vertically up toward the sky like a rocket or meteor, leaving behind no trail and disappearing through a round and curiously regular hole in the clouds before any man could gasp or cry out. (78)

At the story's close, the narrator, a surveyor for a new dam and reservoir which will cover the infested area, worries about the harm which will be caused by the second entity which remains in the well.

The composition of the meteorite, the alien entities, and the strange color associated with them can all be called "supramundane" because they cannot be

understood.[2] The university scientists fail in their attempts to analyze samples of the meteorite and are confounded as they subject the meteorite to a dizzying battery of tests in an attempt to identify its composition:

> It had acted quite unbelievably in that well-ordered laboratory; doing nothing at all and shewing no occluded gases when heated on charcoal, being wholly negative in the borax bead, and soon proving itself absolutely non-volatile at any producible temperature, including that of the oxy-hydrogen blowpipe. On an anvil it appeared highly malleable, and in the dark its luminosity was very marked. Stubbornly refusing to grow cool, it soon had the college in a state of real excitement; and when upon heating before the spectroscope

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[2]As Steven J. Mariconda observes in "Lovecraft's Cosmic Imagery," failure to understand the universe is part of "the central tenet of Lovecraft's worldview--. . . the universe is governed by a fixed and only partly knowable set of laws" (188). The supramundane is an element of the universe which conforms to those laws which we cannot know.

> it displayed shining bands unlike any known colours of the normal spectrum there was much breathless talk of new elements, bizarre optical properties, and other things which puzzled men of science are wont to say when faced by the unknown. (58)

Lovecraft's scientists are unable to understand the anomaly. It defeats their tests, creating not just unusual results, but often no results at all. The meteor remains outside the sphere of human understanding.

As explained in the previous section, this failure of the faculty of understanding is a key component of the Kantian sublime, but it is not the totality of the sublime experience. The observer's faculty of reason must come into play "demand[ing] absolute totality, as a real idea" (§25, 207). The faculty of reason must generate an abstract idea of the ungraspable object--an idea Kant describes as, "a representation of limitlessness, yet with a superadded thought of its totality" (§23, 201). This idea is negative knowledge, an awareness of the lack of rational grounds for our

idea of limitlessness. Through this idea of reason the observer experiences the sublime--an awareness of the observer's relationship with the noumenal--an awareness which inspires the "negative pleasure" of "admiration or respect" (§23, 202).

Lovecraft shows us the formation of this negative knowledge through the words of his narrator:

> It was just a colour out of space--a frightful messenger from unformed realms of infinity beyond all Nature as we know it; from realms whose mere existence stuns the brain and numbs us with the black extra-cosmic gulfs it throws open before our frenzied eyes. (81)

The narrator does not understand the supramundane object, but he does have an idea, or abstract comprehension, of the object. He has experienced the sublime and has gained an awareness of the noumenal, an awareness that there is something beyond the mundane sphere delineated by the capacity of human understanding. Lovecraft's narrator has a sublime vision of "unformed realms of infinity" (81).

The close of the passage quoted above--"realms whose mere existence stuns the brain and numbs us with the black extra-cosmic gulfs it throws open before our frenzied eyes" (81)--echoes Kant's description of the negative pleasure of the sublime experience as "the feeling of a momentary check to the vital forces followed at once by a discharge all the more powerful" (§23, 202). Lovecraft's narrator, through his faculty of reason, has gained an insight much more complex than that of understanding. He has experienced the sublime and is awestruck by the accompanying negative knowledge--the awareness of the scope of the failure of human understanding.

In "Border Patrols" Michael Beehler also turns to the Kantian sublime as a means of understanding depictions of aliens. However, Beehler concludes that because there can be no <u>direct</u> representation of the sublimely unfathomable alien, then there can only be misrepresentation of aliens through the use of human terms. Beehler writes:

> [T]he alien speaks only with the garbled voice of man in Kant. . . .

> The alien in other words, always positions itself somewhere between pure familiarity and pure otherness. (32)

Beehler fails to take into account the negative knowledge which accompanies the Kantian sublime.[3] Lovecraft's "frightful messenger from unformed realms of infinity beyond all Nature as we know it" (81) is neither a direct representation nor a "garbled" representation. The passage is a negative representation of the supramundane--a bold recognition of the impossibility of understanding.

Many stories of aliens or alien invasions fall, as Beehler suggests, "somewhere between pure familiarity and pure otherness" (32). These stories are not depictions of the supramundane and have no connection to the Kantian sublime in that they present a cognitive

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[3]Mark Rose makes a claim similar to Beehler's in Alien Encounters:

> [W]e cannot imagine something that bears no relationship at all to what we already know. since the literally alien must always be constructed on some principle of analogy or contrast with our world, it follows that the truly alien can never be actualized in a text. (78)

experience rooted in the faculty of understanding rather than one, like the sublime, which transcends all cognition. Take, for example, H. G. Wells's The War of the Worlds. Wells's work, like Lovecraft's, is an alien-invasion story: technologically-advanced Martians invade Earth, slaughtering the inhabitants until the invaders succumb to a common flu virus. The Martians are strange and unusual, but while Lovecraft's scientists are utterly unable to understand the meteor or its gaseous entities, Wells's scientists eventually are able to attain a degree of understanding of the Martians and their technology.

One of the Martians' weapons is a poisonous, black powder which they spray across the countryside and in urban areas. Scientists collect samples of the powder and perform tests similar to those used by Lovecraft's scientists. However, the results of these tests are significantly different: "Spectrum analysis of the black powder points unmistakably to the presence of an unknown element with a brilliant group of three lines in the green" (191). The story postulates the presence of an anomalous, previously-unknown element, but that

element is detectable and to some degree identifiable through spectrographic analysis. Wells's scientists are able to use their faculty of understanding to analyze and classify the black powder. They have to adjust their scientific paradigm in that they are forced to expand their concepts of the known elements, but there is no failure of understanding.

Wells's scientists have a particular phenomenal object, and they must hypothesize a universal principle to account for the object. The process is similar to that described by Thomas Kuhn in The Structure of Scientific Revolutions:

> Discovery commences with the awareness of anomaly, i.e., with the recognition that nature has somehow violated the paradigm-induced expectations that govern normal science. It then continues with a more or less extended exploration of the area of anomaly. And it closes only when the paradigm theory has been adjusted so that the anomalous has become the expected. (52-3)

Kuhn is definitely not writing about a sublime experience. He is confident that the faculty of understanding can grasp the anomalous. Kuhn is describing scientific exploration and particularly the expansion of scientific understanding. Even though the anomalous object violates the paradigm whereby the observer understands the world, the observer is able to adjust and expand his paradigm so that he is able to account for and understand the phenomenon.

Lovecraft, Clarke, Gibson and other authors who write of the supramundane do not share Kuhn's confidence in the human capacity for understanding. The supramundane is a depiction of an anomaly of the highest order--an anomaly which cannot be resolved. Characters in stories of the supramundane are wholly unable to grasp the object in a way that would allow them to adjust their scientific paradigm. The supramundane object disrupts the observer's conception of nature to such a degree that the observer's faculty of understanding fails utterly. No accounting for the object can be made.

Wells's scientists subject their sample to spectrographic analysis, and they get definitive results. The test "points unmistakably to the presence of an unknown element with a brilliant group of three lines in the green" (191, emphasis added). Lovecraft's scientists subject their sample to spectrographic analysis, and they get inconclusive, incomprehensible results: "[I]t displayed shining bands unlike any known colours of the normal spectrum" (58). The failure of the test makes it impossible for the scientists to adjust their paradigm so that it can account for the anomalous meteorite.

By causing such a failure, the supramundane sharply underlines humanity's limitations, insisting that parts of the universe will forever elude our grasp. In "Effing the Ineffable" Gregory Benford writes of this effect:

> [O]ne underlying message in SF is that the truly alien doesn't just disturb and educate, it breaks down reality, often fatally, for us. Here SF departs quite profoundly from the humanist tradition in the arts. Science

> fiction nowhere more firmly rejects--indeed, explodes--humanism than in treating the alien. Humanist dogma holds that man is the measure of all things, as Shakespeare put it. SF makes a larger rejection of this than did modernism or surrealism, because it even discards the scientists' universal language and the mathematicians' faith in Platonic "natural" ideas. SF even says that the universe may be unknowable, and its "moral" structure might forever lie beyond humanity's ken. (23)

The supramundane debunks the idea of limitless potential for the expansion of human intellect and understanding. It does not establish what the limitations of humanity are, but it does force a recognition that limits do exist.

It is important to note that Benford is not attributing this "message" of the unknowability of the universe to all of science fiction in general. This is "one" message and applicable only to the "truly alien" (emphasis added). The supramundane is a depiction of

the "truly alien", while other forms of science fiction, like Wells's, are unusual but not utterly unknowable. The distinction between Lovecraft's work and Wells's--between the supramundane and the merely unusual--seems to center on the degree of strangeness of the depiction of the anomalous object, but that is not the case. I am not suggesting that Wells depicts objects as merely unusual but eventually understandable while Lovecraft depicts objects as supramundane and utterly incomprehensible. The difference here has nothing to do with the characterization of the objects themselves.

We call an object "supramundane" in order to distinguish it from an object which might be "unusual" or "foreign," but it would be incorrect to refer to the supramundane object as being "sublime" in itself. Sublimity is a response and an intellectual experience. It is the result of the mental exercise of the faculty of reason developing the abstract idea of the formless object after human understanding fails to grasp the object. As Kant explains,

> All that we can say is that the object lends itself to the presentation of a sublimity discoverable in the mind. For the sublime, in the strict sense of the word, cannot be contained in any sensuous form, but rather concerns ideas of reason, which although no adequate presentation of them is possible, may be excited and called into the mind by that very inadequacy itself which does admit of sensuous presentation. Thus the broad ocean agitated by storms cannot be called sublime. Its aspect is horrible, and one must have stored one's mind in advance with a rich stock of ideas, if such an intuition is to raise it to the pitch of a feeling which is itself sublime. (§23, 202-3)

The difference between Wells's and Lovecraft's approaches to the anomalous lies in the subject's capacity for understanding rather than the nature of the anomalous phenomenon with which the subject is confronted. Wells, and science fiction writers in general, are confident in the human capacity for

understanding. Though the Martians of The War of the Worlds succumb to microbes rather than retaliation from the humans, in the book's epilogue the narrator states:

> It may be that in the larger design of the universe this invasion from Mars is not without its ultimate benefit for men; it has robbed us of that serene confidence in the future which is the most fruitful source of decadence, the gifts to human science it has brought are enormous, and it has done much to promote the conception of the commonweal of mankind. . . .
>
> Dim and wonderful is the vision I have conjured up in my mind of life spreading slowly from this little seed-bed of the solar system throughout the inanimate vastness of sidereal space. (192-3)

Though he does concede that "To them [the Martians], and not to us, perhaps, is the future ordained" (193), this conclusion is optimistic, envisioning humanity as overcoming complacency, making use of Martian technology and eventually conquering space. The War of

the Worlds suggests that humanity can adapt and move forward, always expanding the scope of technology and scientific knowledge, extending the reach of our understanding.

By contrast, the narrator of "the Colour Out of Space" has no wonderful vision of the dominance of humanity. His vision is of "realms whose mere existence stuns the brain and numbs us with the black extra-cosmic gulfs it throws open before our frenzied eyes" (87). The supramundane is a depiction of the limits of human understanding. It suggests that our understanding is anything but all encompassing. It suggests that there is much that lies beyond the realm of our understanding and that there always will be.

Chapter 2

The Supramundane and the Works of H. P. Lovecraft

H. P. Lovecraft's critics have been put off by his use of vague, nonsensical descriptions such as a color which is not a color or other generally unspeakably horrifying or indescribably terrifying monstrosities. Lovecraft addresses such criticism in his story "The Unnamable." The narrator, Randolph Carter, and his friend, Joel Manton, sit on a tomb and discuss "the unnamable":

> I had made a fantastic remark about the spectral and unmentionable nourishment which the colossal roots must be sucking in from that hoary, charnel earth; when my friend chided me for such nonsense. . . . [M]y constant talk about "unnamable" and "unmentionable" things was a very puerile device, quite in keeping with my lowly standing as an author. I was too fond of ending my stories with sights or sounds which paralysed my heroes' faculties and left them without courage, words, or associations to

> tell what they had experienced. . . . With him all things and feelings had fixed dimensions, properties, causes and effects; and although he vaguely knew that the mind sometimes holds visions and sensations of far less geometrical, classifiable, and workable nature, he believed himself justified in drawing an arbitrary line and ruling out of court all that cannot be experienced and understood by the average citizen. Besides, he was almost sure that nothing can be really "unnamable". It didn't sound sensible to him. (200-1)

Manton's position is that of a realist and an empiricist. His assertion that "all things and feelings [have] fixed dimensions, properties, causes and effects" (201) is an assertion of his confidence in the faculty of understanding. This is an explicit denial of the possibility of the existence of Kant's "object . . . devoid of form" (§23, 201), the impetus of the sublime experience. Manton's grasp of the sublime is minimal, perhaps even non-existent since he

only "vaguely knew that the mind sometimes holds visions and sensations of far less geometrical, classifiable and workable nature" (201, emphasis added).

Manton's empiricist stance is similar to Wells's, as we can see from his treatment of the anomalous Martian powder. Wells shows his readers bizarre sights, but like Manton, he trusts sensory perception eventually to recognize fixed properties and resolve anomalies by determining their proper classification. Hence, his scientists, after thorough study, are able to understand and identify the new element.

Manton objects to non-descriptive descriptions like "unnamable" because such terms imply a failure of the system of classification. If something cannot be named, it cannot be classified or identified; it cannot be understood. Even more importantly, the notion that an object could be unnamable or indescribable points further to a failure of the system of language and reference--a semiotic crisis.

In The Romantic Sublime, Thomas Weiskel depicts the sublime as involving an essentially semiotic

process. He translates the Kantian model of the sublime into a semiotic version. Where in Kant's model the sublime experience is the result of a failure of the faculty of understanding, in Weiskel's model the sublime experience is a result of a failure of the semiotic system. Weiskel's model presents three distinct phases in the process of apprehending the sublime. In the first phase, we have a signifier and signified as a determinate, harmonious pairing. That is to say, in the first phase, an observer encounters an object (signifier), and by means of the faculty of understanding (the semiotic system) the observer is able to attribute meaning (signified) to the object (signifier). To return to our example from the previous chapter, Lovecraft's "The Colour Out of Space": a group of scientists encounter an object (signifier), and they connect this object with their cognitive conception of a meteorite (signified).

The second phase of the semiotic model of the sublime is characterized by an excess on the part of the signifier or object. Weiskel describes this excess of signifier:

> [T]he feeling is one of on and on, of being lost. The signifiers cannot be grasped or understood; they overwhelm the possibility of meaning in a massive underdetermination that melts all oppositions or distinctions into a perceptional stream; or there is a sensory overload. (26, emphasis in original)

The signifier becomes indeterminate and indistinct, signifying nothing or, as it "melts all opposition," signifying multiple, inconsistent, incompatible signifieds.

Weiskel's semiotic model works well for analyzing Lovecraft's supramundane elements because Lovecraft depicts the supramundane in the context of a failure of language, a failure of semiotic pairings. In "The Colour Out of Space," one sign of the infestation of the Gardner farm is a strange, anomalous color which permeates the farm and the surrounding countryside. An element of the supramundane, the color comes from beyond the bounds of the mundane world, and therefore, it exhibits strange properties. As Lovecraft indicates, the color is not a part of the normal color

spectrum, the system whereby we order and classify colors: "[I]t displayed shining bands unlike any known colours of the normal spectrum" (58).

The color is outside the system of classification and, thus, outside the system of signification. Therefore, Lovecraft's narrator, working in the medium of language, experiences a failure of language in describing the supramundane color:

> The colour, which resembled some of the bands in the meteor's strange spectrum, was almost impossible to describe; and it was only by analogy that they called it colour at all. (59)

Later in the story,

> Stephen Rice had driven past Gardner's in the morning, and had noticed the skunk-cabbages coming up through the mud by the woods across the road. Never were things of such size seen before, and they held strange colours that could not be put into any words. (62)

The color is an indeterminate signifier. The failure of language--the inability to describe the color--is

the result of the lack of a signified for the signifier. The color is perceptible, but because it is wholly outside the system of signification, it cannot be described in opposition to or in relation to elements in the normal color spectrum. The relationship between signifier and signified breaks down. In Kantian terms, there is a failure of the faculty of understanding to grasp the color.

In the Kantian sublime, the failure of the faculty of understanding is resolved through the success of the faculty of reason. Where the faculty of understanding fails to grasp the formless object, the faculty of reason is able to generate an abstract idea of the totality of the object--negative knowledge of the noumenal sphere. Weiskel's semiotic model of the sublime is even more specific about what happens in this, the third phase, in which the observer becomes aware of the sublime. In Weiskel's model, negative knowledge of the noumenal takes the form of a metaphor which allows for the resolution of the indeterminacy between the signifier and signified. Weiskel describes this resolution:

> [T]he syntagmatic flow must be halted, or at least slowed, and the chain broken up if the discourse is to become meaningful again. This can only be done through the insertion of a substituted term into the chain i.e., through metaphor. The absence of a signified itself assumes the status of a signifier, disposing us to feel that behind this newly significant absence lurks a newly discovered presence, the latent referent, as it were, mediated by the new sign. We recall Kant's terms: "unattainability" (Unerreichbarkeit) is regarded as a "presentation" (Darstellung): indeterminacy signifies. (27-8)

Overwhelmingly, there is one particular metaphor used to convey the signification of indeterminacy. The indeterminacy is resolved because the absence of a signified becomes a signifier in its own right. The metaphor used to convey the presence of this absence is, as Weiskel points out, the "abyss" (24-5).

The abyss is negative space, a symbol of the unknown and a recognition of the existence of that which exceeds our understanding. At the conclusion of "The Unnamable," Joel Manton resorts to a metaphor of negative space to describe his encounter with the supramundane. As Carter and Manton sit on the tomb and debate the possibility of the existence of "the unnamable," the two are attacked by "some unseen entity of titanic size but undetermined nature" (206). Later, as the pair recover in a nearby hospital, Carter asks Manton to describe what attacked them. Manton replies, "It was the pit--the maelstrom--the ultimate abomination. Carter, it was the unnamable!" (207, italics in original). Manton experiences the sublime just as Weiskel describes. The entity which attacked him exceeds human understanding, so he resolves this excess by reverting to a metaphor. The indeterminacy of the supramundane anomaly is replaced by images of negative space, "the pit" and "the maelstrom," a violent negative space which threatens to suck the observer to his doom.

Consider again this passage from "The Colour Out of Space":

> It was just a colour out of space--a frightful messenger from unformed realms of infinity beyond all Nature as we know it; from realms whose mere existence stuns the brain and numbs us with the black extra-cosmic gulfs it throws open before our frenzied eyes. (81)

The narrator resorts to a metaphor of the abyss with the phrases "black extra-cosmic gulfs" and "unformed realms of infinity." Significantly, these "unformed realms" are located "beyond all Nature as we know it." The supramundane sublime and the use of the abyss as a symbol constitute an acknowledgment of the limit of mankind's faculty of understanding.

These images of negative space firmly delimit the conception of positive space. That is to say, if we conceive of our capacity for understanding as a positive area of existence--the mundane sphere or the world encompassed by human knowledge--then the metaphor of negative space transforms this conception of the

mundane sphere from a limitless range into a finite and distinctly limited zone. Trust in the possibility of infinite capacity of human understanding allows us to imagine that we have dominion over an infinitely large sphere. The sublime experience forces us to recognize a limit to human understanding, and thus, the mundane sphere itself is limited, surrounded by an infinite, unfathomable and incomprehensible negative space--the supramundane.

The image of the domain of humanity surrounded by an infinite, unknowable abyss is found throughout Lovecraft's "The Whisperer in Darkness." The narrator of the story becomes aware of an invasion of Earth by an alien race from the planet Pluto. This premise is like any of thousands of other alien-invasion stories, but Lovecraft gives these aliens his special element of the supramundane. Rather than being simple extra-terrestrials from a planet in our solar system, these aliens come from a more distant realm, utterly outside the mundane sphere. Pluto, which the aliens refer to by the older, characteristically unearthly name

Yoggoth, is merely a stop-over point from the aliens' true home.

> The blasphemies which appeared on earth . . . came from the dark planet Yuggoth, at the rim of the solar system; but this was itself merely the populous outpost of a frightful interstellar race whose ultimate source must lie far outside even the Einsteinian space-time continuum or greatest known cosmos. (228)

The limits of the mundane sphere are drawn, specifically in terms of human knowledge and understanding: "the Einsteinian space-time continuum." The source of the alien invasion is located "far outside" the mundane sphere so that here, too, we have the image of the domain of humanity surrounded by a vast, unknowable negative space. This image is invoked again in the following passage:

> The main body of the beings inhabits strangely organised abysses wholly beyond the utmost reach of any human imagination. The space-time globule which we recognise as the

> totality of all cosmic entity is only an atom in the genuine infinity which is theirs. (240)

This passage from Lovecraft is a powerful summation of Kant's theory of the sublime. The alien beings are the object. The failure of the faculty of understanding is invoked as they are placed "beyond the utmost reach of any human imagination." The faculty of reason rises to the occasion to present the rational idea of infinity and an abstract conception of the object with the phrases "strangely organised abysses" and "the genuine infinity which is theirs." And the phrase "The space-time globule which we recognise as the totality of all cosmic entity is only an atom . . ." indicates the observer's new awareness of a relationship with the sublime.

In "The Call of Cthulhu," Lovecraft presents the first-person account of Francis Wayland Thurston's accidental discovery of a cult's attempts to waken a slumbering monster. While executing the estate of his late uncle, George Gammell Angell, Thurston finds a small bas-relief sculpture of a horrible monster and a

manuscript labeled "CTHULHU CULT." The first part of the manuscript is titled "Dream and Dream Work of H. A. Wilcox" (127) and detail a series of Wilcox's dreams of "great Cyclopean cities of titan blocks and sky-flung monoliths, all dripping with green ooze and sinister with latent horror" (129). Wilcox's dreams had inspired the bas-relief, which the young artist had sculpted in his sleep. Angell's manuscripts contain additional accounts from a vast array of other people who had experienced similar dreams, all within the period from February 28 through April 2, 1925.

Angell had been drawn to Wilcox's sculpture and his strange dreams because of a story he had heard from an Inspector John R. Legrasse of New Orleans. The second part of Angell's text records Legrasse's story of how, in 1907, he had participated in a raid on what the police had assumed was a voodoo cult. Legrasse had recovered a statuette depicting a monster similar to the one in Wilcox's bas-relief. Further, Legrasse reported that the cultists had been chanting the phrase "Ph'nglui mglw'nafh Cthulhu R'lyeh wgah'nagl fhtagn," which the cultists translated as "In his house at

R'lyeh dead Cthulhu waits dreaming" (136, italics in original).

Sometime after going through his uncle's papers, Thurston stumbles upon a newspaper clipping from April of 1925, which leads him to the home of a Norwegian sailor named Johansen. Thurston learns that Johansen is dead, but his widow allows him to examine the sailor's journal. From this document Thurston learns that at the time of the mysterious dreams, Johansen had landed his freighter on an unusual island risen up from the sea. Thurston surmises that this is Cthulhu's sunken city of R'lyeh and reads further of how the sailors had awakened the god-like creature and were then killed in their attempt to flee to their ship. Johansen, the only surviving member of the crew, was able to thwart Cthulhu's return to power by ramming the massive monster with the ship, causing both Cthulhu and R'lyeh to sink back under the sea.

While in "The Colour Out of Space," Lovecraft depicted the supramundane as a color which was outside the normal color spectrum, in "The Call of Cthulhu" the supramundane is found in R'lyeh's architecture, which

violates spatial principles and lies outside the system of Euclidean geometry. Johansen, in describing R'lyeh in his journal, experiences a failure of understanding and a failure of language brought about by an excess of signifier:

> Without knowing what futurism is like, Johansen achieved something very close to it when he spoke of the city; for instead of describing any definite structure or building, he dwells only on broad impressions of vast angles and stone surfaces--surfaces too great to belong to any thing right or proper for this earth. . . . I mention his talk about <u>angles</u> because it suggests something Wilcox had told me of his awful dreams. He had said that the <u>geometry</u> of the dream-place he saw was abnormal, non-Euclidean, and loathsomely redolent of spheres and dimensions apart from ours. (150-51, italics in original)

Johansen is unable to describe "any definite structure or building" because of an excess of signifiers. He

cannot grasp the details of individual structures because R'lyeh exceeds his capacity to understand; it exceeds his system of signification. The geometry of the city is abnormal and non-Euclidean in that it does not conform with the normal, mundane geometry of three-dimensional space. It is not that R'lyeh's architecture conforms to no geometrical system. Instead, the architecture of the city belongs to a system from "spheres and dimensions apart from ours." R'lyeh's geometry is supramundane.

The sailors exploring the island experience the failure of signifier and signified when they encounter the massive door behind which Cthulhu is waiting,

> [T]hey could not decide whether it lay flat like a trap-door or slantwise like an outside cellar-door. As Wilcox would have said, the geometry of the place was all wrong. (151)

Though the door is a real, physical presence--a sailor is able to climb on it and open it--as a signifier the door is indeterminate. The sailors are faced with multiple possible interpretations of the orientation of the door. In Weiskel's words, there is "a massive

underdetermination that melts all oppositions or distinctions" (26). The door, like the rest of the architecture of R'lyeh, does not conform to normal, mundane geometrical principles. The geometry of the door does not allow for a distinction between laying flat and leaning slantwise. The sailor's faculty of understanding cannot account for this new system. The horizontal/vertical opposition whereby they ordered their world is not applicable to R'lyeh's architecture. Thus, their faculty of understanding fails.

Later, as the sailors flee the emerging monster:

> Parker slipped as the other three [sailors] were plunging frenziedly over endless vistas of green-crusted rock to the boat, and Johansen swears he was swallowed up by an angle of masonry which shouldn't have been there; an angle which was acute, but behaved as if it were obtuse. (152)

In this case, the indeterminacy between signified and signifier is characterized by the seeming misbehavior of the angle of masonry. The angle (the signified) seems to be acute, but as in the case of the door, the

supramundane architecture of R'lyeh induces an indeterminate signification, so that the angle which seems to signify acute is actually obtuse. The opposition between acute and obtuse breaks down with the indeterminacy of the system of signification.

The cultists' incantation, "Ph'nglui mglw'nafh Cthulhu R'lyeh wgah'nagl fhtagn," is itself an element of the supramundane. Lovecraft's liberal use of such unpronounceable words (particularly as proper nouns, such as Cthulhu, R'lyeh, Yuggoth, and Nyarlathotep, to list a few) has drawn considerable critical scorn. For example, in Trillion Year Spree Brian Aldiss writes that Lovecraft's names are "like anagrams of breakfast cereal names" (212). However, Aldiss's criticism aside, the strangeness of these words serves a function in Lovecraft's fiction. The words themselves are indicative of the breakdown of signification. Like other elements of the supramundane, the words cannot be merely foreign. The names themselves, like the creatures and places they represent, exist wholly outside the mundane sphere. It is improper to refer to them as "words" at all. Lovecraft makes a point of

showing that these names are not derived from a mundane linguistic system. In "The Call of Cthulhu" Wilcox's dreams of sunken R'lyeh feature:

> a voice that was not a voice; a chaotic sensation which only fancy could transmute into sound, but which he attempted to render by the almost unpronounceable jumble of letters, "Cthulhu fhtagn". (129, italics in original)

There is also "a subterrene voice or intelligence shouting monotonously in enigmatical sense-impacts uninscribable save as gibberish" (129). Again we have an excess of signifiers. Lovecraft presents a sensation which is not sound but is analogous to sound. He presents a language which, likewise, is a language only by analogy. The unpronounceable names are not "a very puerile device" as would have been claimed by Manton of "The Unnamable." They are, instead, part of the depiction of the sublime. They are themselves signifiers for which the signified is indeterminate.

Having pieced together these various elements of the supramundane, Thurston gains insight into the

sublime. As we have come to expect, he expresses this through an image of negative space surrounding the mundane sphere: "I shall never sleep calmly again when I think of the horrors that lurk ceaselessly behind life in time and space" (149). These words are surprisingly similar to those Weiskel uses to describe the awareness that comes with the third phase of the semiotic sublime: "disposing us to feel that behind this newly significant absence lurks a newly discovered presence" (28). Again, Lovecraft presents humanity as having access to only a limited, finite zone--the mundane sphere of time and space--which is surrounded by a threatening, ungraspable sublime infinity.

"The Call of Cthulhu" and other Lovecraft stories seem to be on the borderland between the genres of supernatural horror and science fiction. Lovecraft's characters and narrators often refer to Cthulhu and other supramundane entities as "gods," "demons," or "devils." This is because, as Arthur C. Clarke observes in his Third Law, "Any sufficiently advanced technology is indistinguishable from magic" (Lost Worlds 189). Similarly, Robert M. Price, in

"Lovecraft's 'Artificial Mythology,'" recognizes this confusion, writing: "Extradimensional and extraterrestrial entities are called 'gods and devils' by humans who cannot understand them (249, italics in original). It is important, however, that readers understand this distinction, even if Lovecraft's characters occasionally do not. For though the supramundane (sufficiently advanced technology) looks similar to the supernatural (magic), there is a significant difference between the two. The supernatural element is beyond nature. It transcends all natural laws. The supramundane, on the other hand, merely seems to transcend all natural laws, when in fact, it only transcends laws known to the observer. The supramundane exhibits properties which the observer cannot understand. However, those properties are still subject to natural laws--but laws which the observer cannot grasp. In short, though the supernatural can be said to be miraculous, the supramundane cannot.

This distinction between the supernatural and the supramundane is apparent in Lovecraft's "The Dreams in the Witch House," a story in which the trappings of

traditional supernatural horror are transformed into elements of the supramundane. The basic plot of the story is similar to that of Hawthorne's "Young Goodman Brown"--a young man participates in a witches' Sabbath presided over by a "Black Man" figure. Lovecraft's story features a colonial witch, but she does not have supernatural powers of spirit mastery or spell casting. Instead, her supramundane power comes from her mastery of higher-order mathematics and non-Euclidean geometry. In the supramundane story, advanced science and technology provide the sublime horror rather than spiritualism.

Lovecraft's witch, Keziah Mason, has the power to move back and forth between the mundane and supramundane spheres through the use of "lines and curves that could be made to point out directions leading through the walls of space to other spaces beyond" (263). Walter Gilman, a twentieth-century student of mathematics at Miskatonic University, becomes interested in stories of the seventeenth-century witch and her supposed magical powers. Gilman moves into the attic apartment in which Mason had

lived, and he notices that it has a "queerly irregular shape" (265). The witch contacts Gilman initially through his dreams, using the room's unique geometry and her supramundane powers to take him to a realm described as an "abyss."

> Gilman's dreams consisted largely in plunges through limitless abysses of inexplicably coloured twilight and bafflingly disordered sound; abysses whose material and gravitational properties, and whose relation to his own entity, he could not even begin to explain. (267)

Like other elements of the supramundane, the worlds to which Gilman journeys defy understanding. They are part of the sublime, infinite abyss which eludes the faculty of understanding.

Gilman finds that he has accidentally brought an artifact back with him from one of his journeys, and like the meteorite from "The Colour Out of Space," the carving is tested by scientists at the university. Also like the meteorite, this artifact from the supramundane sphere defies scientific analysis.

> [T]he utter alienage of the thing was a tremendous challenge to scientific curiosity. One of the small radiating arms was broken off and subjected to chemical analysis, and the result is still talked about in college circles. Professor Ellery found platinum, iron, and tellurium in the strange alloy; but mixed with these were at least three other apparent elements of high atomic weight which chemistry was absolutely powerless to classify. Not only did they fail to correspond with any known element, but they did not even fit the vacant places reserved for probable elements in the periodic system. The mystery remains unsolved to this day, though the image is on exhibition at the museum of Miskatonic University. (284-5)

Again, there is the failure of the faculty of understanding characteristic of the supramundane. Not only does the substance not correspond to known elements, but it does not even correspond to the "vacant places" left for theoretically possible

elements. The atomic structures of the three mysterious elements do not fit within the conceptual framework of the periodic table. Thus, they point to a failure of the periodic table and a failure of human scientific knowledge in general.

Lovecraft makes a point of showing that Mason's ability to travel between worlds is not so much magical as technological. Her powers are based on "an insight into mathematical depths perhaps beyond the utmost modern delvings of Planck, Heisenberg, Einstein and de Sitter" (264). This distinction between magic and technology parallels the distinction between the supernatural and the supramundane. The traditional witch is able to use her magical powers to perform miracles, to transcend natural laws, becoming supernatural. Lovecraft's Keziah Mason seems to do the same thing, though in fact, she does not practice magic. Her power appears to be magical or supernatural because as Clarke has observed: "Any sufficiently advanced technology is indistinguishable from magic" (Lost Worlds 189). But Lovecraft makes it clear that her powers are supramundane rather than supernatural.

Mason's technology--mathematics--is sufficiently advanced to appear to be magical because her mathematical abilities go beyond the mundane world and the mundane mathematical system recognized by Gilman and the others in the story. Her power is not miraculous, and she does not transcend mathematics. Mason's seemingly magical abilities are all derived from mathematics, but the mathematical principles she uses are so beyond those of the mundane sphere they seem to be supernatural.

Lovecraft's transformation of the traditional, supernatural story of the witches' Sabbath requires the transformation of a key element of such stories--the Black Man. The Black Man, as in "Young Goodman Brown," is Satan, and the novice witch or warlock must sign a pact in blood with him in order to be admitted into the coven. Gilman apparently signs such a pact in the presence of a Black Man. Gilman later realizes that this Black Man, though he has cloven hooves, is not the devil; rather, he is Nyarlathotep, a central figure of Lovecraft's Cthulhu mythos.

Throughout Lovecraft's work Nyarlathotep remains a mysterious figure, primarily concerned with aiding alien invasions and fostering mayhem. He is always associated with "evil," but Nyarlathotep is not Satan. He is not associated with spirituality or with a struggle between virtue and sin, nor is he the nemesis of the Judeo-Christian God (a figure absent from Lovecraft's work). Nyarlathotep, like Keziah Mason, is a supramundane rather than a supernatural figure.

In "The Whisperer in Darkness," Nyarlathotep helps the invaders from Yuggoth; disguised as the protagonist's ally, Henry Akeley, he describes the invaders' world and their powers. As should be expected, the discussion turns to science when Nyarlathotep asks, "Do you know that Einstein is wrong and that certain objects and forces <u>can</u> move with a velocity greater than that of light?" (253, italics in original). Again, the focus is on science and technology rather than spirituality and magic. Nyarlathotep specifically opposes and repudiates Einstein, a scientist.

Two of Lovecraft's later works--"At the Mountains of Madness" and "The Shadow Out of Time"--seem to stand apart from Lovecraft's other stories of the supramundane in that in both of these works the protagonists visit the ruins of alien civilizations and learn much about their cultures and manner of life. Though these civilizations possessed technologies beyond those of human beings, they cannot truly be classified as supramundane since their basic systems are apparent, identifiable and understandable.

The Old Ones are a species which long ago had inhabited the Antarctic ruins explored in "At the Mountains of Madness." Their culture is clearly non-human; the narrator, Dyer, describes their architecture as "past all description," attributing to it an "utterly alien exoticism." He observes, "There were geometrical forms for which an Euclid could scarcely find a name" (51). We can see, though, that this description does not go as far as that given of Cthulhu's city, R'lyeh. Here there are no angles that misbehave, signifying obtuse rather than acute. The geometry is unusual, but it is not non-Euclidean.

Euclid would have difficulty naming the shapes, but they are not outside his mastery. The Old Ones' architecture does not induce an indeterminacy of signification or a failure of the faculty of understanding, and thus, it is not supramundane.

The Old Ones are differentiated from Lovecraft's supramundane aliens Cthulhu and the Mi-Go (the fungi from Yuggoth in "The Whisperer in Darkness"):

> [B]oth the Cthulhu spawn and the Mi-Go seem to have been composed of matter more widely different from that which we know than was the substance of the Old Ones. They were able to undergo transformations and reintegrations impossible for their adversaries, and seem therefore to have originally come from even remoter gulfs of cosmic space. The Old Ones, but for their abnormal toughness and peculiar vital properties, were strictly material, and must have had their absolute origin within the known space-time continuum; whereas the first

> sources of the other beings can only be guessed at with bated breath. (68)

A clear distinction is being drawn here. The Old Ones are not only distinct from the supramundane aliens; they are additionally set in opposition to them as the different groups fought for control of prehistoric earth. As Dyer learns more about them, through study of their architecture and artwork, he feels a kinship with the creatures, observing, "They were the men of another age and another order of being. . . . Radiates, vegetables, monstrosities, star-spawn--whatever they had been, they were men!" (95-6). The Old Ones are like Wells's Martians, alien and unusual, but they are from the mundane world, nevertheless.

"At the Mountains of Madness" does have a supramundane element, however. Beyond the ruined Antarctic city lies a chain of mountains identified as the mysterious "dreaded Kadath in the Cold Waste" (103), a region shunned even by the Old Ones because it was "vaguely and namelessly Evil" (71). Kadath is located on Earth and might seem, therefore, to be part of the mundane sphere. However, as Mark Rose points

out in Alien Encounters, the polar region has an unusual status as a borderland between the mundane and supramundane:

> When the earth is conceived as a bounded world located in unbounded space, the poles are extremities, the furthest points on the globe. Indeed, imagined in this way the poles are magical precisely because they are the earth's boundaries and thus partake of the numenous power associated with any boundary zone. They are the icy, uninhabitable regions in which human space--the habitable world--meets the nonhuman space of the infinite. To reach and explore the poles is to achieve the completion of the human sphere by defining the earth in its entirety. (55)

This is precisely how the polar region functions in "At the Mountains of Madness." Kadath is an intrusion from the supramundane sphere. Dyer and Danforth are not able to explore Kadath and, therefore, they are not able to "defin[e] the earth in its entirety." Kadath

marks the limits of humanity's potential for exploration.[4] As part of the infinity which lies beyond the boundaries of the mundane, Kadath induces a sense of the sublime.

As they flee the Old One's city in a small airplane, Dyer and Danforth glimpse the mountains of Kadath. Danforth is driven insane by this vision, described as,

> ... a single fantastic, daemoniac glimpse, among the churning zenith-clouds, of what lay back of those other violet westward mountains which the Old Ones had shunned and feared. (105)

This brief glimpse of the supramundane, augmented by his study of occult materials, gives Danforth a kind of grasp of the sublime. Danforth's insanity compels him

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[4]In one of Lovecraft's stories, "The Dream-Quest of Unknown Kadath," Randolph Carter (of "The Unnamable") visits Kadath in its incarnation in the Dreamlands--a fantastic alternate reality accessed by dreaming and peopled by, among other things, gods and space-faring armies of talking cats. Even in the Dreamlands, Kadath is no place for humans. The others who had quested for Kadath before Carter faced madness and death, and Carter is allowed to reach the nightmarish city only because he is favored by Nyarlathotep.

to "whisper[] disjointed and irresponsible things" (105-6) which form a veritable catalogue of Lovecraft's supramundane elements, most notably "the colour out of space" and "the original, the eternal, the undying" (106)--a reference to Cthulhu, which is described in "The Call of Cthulhu" as "That is not dead which can eternal lie . . ." (141). Danforth's knowledge has given him a new understanding of his relationship to that which lies beyond the mundane world, but the price is madness.

Just as "At the Mountains of Madness" presents an alien culture which opposes a supramundane nemesis, so too, does "The Shadow Out of Time." In this story an alien species, the Great Race of Yith, is able to travel through time by exchanging consciousness with other entities in other times and other places. The narrator, Nathaniel Wingate Peaslee, a professor of political economy at Miskatonic University, is transported out of his body and into that of a member of the Great Race. The entity from the Great Race has taken over Peaslee's body in an effort to learn as much as possible about the early twentieth century. While

in his new body, Peaslee is able to explore the Great Race's prehistoric city, and like Dyer and Danforth, he learns much about their culture. The Great Race is not beyond Peaslee's comprehension. Therefore, they induce no feeling of the sublime and cannot be said to be an element of the supramundane.

Because they can travel through time, the Great Race know that they will eventually be destroyed by monsters which live in subterranean passages under their city.

> [T]he basis of the fear was a horrible elder race of half-polypous, utterly alien entities which had come through space from immeasurably distant universes and had dominated the earth and three other solar planets about 600 million years ago. They were only partly material--as we understand matter--and their type of consciousness and media of perception differed widely from those of terrestrial organisms. (400)

This "elder race" is also the supramundane threat of "The Shadow Out of Time." They are not from a nearby

planet, but rather they come from "immeasurably distant universes." They are not fully corporeal, being "only partly material." It is significant that Lovecraft adds the phrase "as we understand material." The implication is that if our knowledge were thorough enough, we would be able to understand the material basis of these creatures, but human understanding fails to grasp the nature of these supramundane monsters.

Peaslee is returned to his proper body and proper time, but unlike other victims of the Great Race's time travel, he is able to recall many details about his time with them. Eventually, he succeeds in finding the ruins of their city in the Great Sandy Desert of Australia. Peaslee enters the underground ruins and finds that a passage from the elder monsters' tunnels is opened. He accidentally rouses one of the ancient monsters, which emits its characteristic whistling noise: "There was a wind, . . . a violent, purposeful blast belching savagely and frigidly from that abominable gulf whence the obscene whistling came" (430). Here the monsters' tunnels become an "abominable gulf," the metaphor of negative space

associated with the supramundane. Twice removed from the surface world in that they are below even the sand-covered ruins of the city of the Great Race, the tunnels become a symbol of that which humanity cannot understand. The abyss itself is invoked when Peaslee refers to "the nameless entities which might be lurking in the black abysses below the chasm" (430). When Peaslee says, "I became aware of . . . tides of abomination surging up through the cleft itself from depths unimagined and unimaginable" (430), he attributes a sublimely infinite depth to the tunnels through their association with the supramundane monsters.

The monster catches Peaslee, and the professor "was instantly engulfed in a pandaemoniac vortex of loathsome sound and utter, materially tangible blackness" (431). Like Danforth, Peaslee is given a glimpse of the supramundane,

> There was a hideous fall through incalculable leagues of viscous, sentient darkness, and a babel of noises utterly alien to all that we know of the earth and its organic life.

> Dormant, rudimentary senses seemed to start into vitality within me, telling of pits and voids peopled by floating horrors. . . .
>
> Secrets of the primal planet and its immemorial aeons flashed through my brain without the aid of sight or sound, and there were known to me things which not even the wildest of my former dreams had ever suggested. (431)

The truly horrific climax of "The Shadow Out of Time" is not associated with Peaslee's awareness of the Great Race's habit of abducting people from their bodies, but rather the suggestion that elements of the supramundane--unknowable, uncontrollable monsters--lurk just below the surface of the Australian desert, ready to pounce on anyone who might happen to disturb them.

The supramundane is horrifying because it is sublime. And as Weiskel shows, the sublime indicates "the mind's relation to a transcendent order" (23). In presenting the supramundane, even as an imaginative element, Lovecraft's stories point to the limits of

humanity's grasp, and at the same time, they suggest the possibility of the existence of that which exceeds our grasp. Such a possibility threatens our culture's perception that ours is the pinnacle of existence.

Chapter 3

The Supramundane and Catastrophic Evolution

In Alien Encounters Mark Rose observes of science fiction: "The confrontation with the nonhuman generally involves some form of transformation" (180). This is particularly true of stories of the supramundane. Often, characters that encounter the supramundane undergo abrupt and extreme transformations, changing from the human to the non-human. It is important to note that unlike the theme of metamorphosis, which Todorov associates with stories of the marvelous (109, 113-5), the supramundane-induced changes are not supernatural. The transformation associated with the supramundane takes the form of mutation or a sudden, radical evolutionary leap.

In Lovecraft's fiction the transformations induced by the supramundane eventually lead to destruction. For example, in "The Colour Out of Space" the supramundane entities which come from the meteorite and take up residence in Nahum Gardner's well exert a mysterious, powerful transformative influence on the flora and fauna of the surrounding area. In the end,

these transformations cause the death of the plants and creatures of the area, but initially, this influence from the supramundane causes what appears to be a general mutation. The color of the plants begins to display the hues of the unearthly color associated with the meteorite. In the orchard, fruits are larger than usual, but they are inedible because of a strong bitter taste. The winter snow reveals footprints of squirrels, rabbits, and foxes which show

> something not quite right about their nature and arrangement. . . . [T]hey were not as characteristic of the anatomy and habits of squirrels and rabbits and foxes as they ought to be. (61)

Some local boys find a woodchuck which "seemed slightly altered in a queer way impossible to describe, while its face had taken on an expression which no one ever saw in a woodchuck before" (61). These changes are not slow developments through the course of several generations. Instead, this is the abrupt and immediate transformation brought about by catastrophic disruption of the environment--the intrusion of the supramundane.

The growth of the next spring shows more severe mutations. Lovecraft writes: "[T]hrough the stony soil of the yard and adjacent pastures, there sprang up a bizarre growth which only a botanist could connect with the proper flora of the region" (63). The transformation of the plants has gone beyond the presence of an unusual color and now includes further unusual physical characteristics so drastic as to make the plants unrecognizable to a non-expert observer. Similarly, the area's insects "seemed not quite usual in their aspects and motions, and their nocturnal habits contradicted all former experience" (64). The insects' behavioral patterns are changing. Even the trees develop what might be considered "behavioral" changes:

> The boughs surely moved, and there was no wind. It must be the sap. Strangeness had come into everything growing now. (64)

The plants and animals have become imbued with the strange essence of the beings in the well.

By the summer, the impact of the entities on the environment makes life untenable. Lovecraft writes:

> The asters and goldenrod bloomed grey and distorted, and the roses and zinneas and hollyhocks in the front yard were such blasphemous-looking things that Nahum's oldest boy Zenas cut them down. The strangely puffed insects died about that time, even the bees that had left their hives and taken to the woods. (65)

Death has come to the farm, and it takes the Gardners' livestock and every member of the family. The area around the farm becomes known as the "blasted heath," an area of "grey desolation that sprawled open to the sky like a great spot eaten by acid in the woods and fields" (55). The infestation by the entities has made the area utterly unsuitable for earthly life.

In "The Colour Out of Space" the immediate transformative effects are localized, but often the intrusion of the supramundane is associated with a larger-scale evolutionary transformation. In "The Shadow Out of Time" and "At the Mountains of Madness" Lovecraft presents extended discussions of the Great Race and the Old Ones' evolution and eventual

extinction because of contact with the supramundane. Further, even though the supramundane element of "The Colour Out of Space" does not cause the extinction of an entire species, such a threat is implicit. The blasted heath expands year by year. The completion of the planned reservoir does not threaten the alien entity which remains there. The impending flood surely would not harm a creature which, after all, had been living in a well. So the strange infestation of the Gardner farm now threatens to contaminate the drinking water of the city of Arkham, and humanity in general is threatened by the alien entities.

The transformation of species through the process of natural selection--the central theory of Darwinian evolution--is essentially universally accepted within the scientific community. Natural selection hinges on four key concepts as outlined by Brian Silver in The Ascent of Science:

> [1.] There are two methods by which species can produce variants: mutation and sexual reproduction.

...

2. Over a geological time period, multitudes of variants have appeared.
3. In the natural environment . . . of a given species, there will occasionally be cases in which . . . variants have characteristics that enable them to survive or to multiply more efficiently than all other variants present.
4. The advantage possessed by such a "superior" organism . . . normally results in that organism becoming the majority variant after one or more generations, if it is not threatened by subsequent, even more superior, variants. <u>This is natural selection, the survival of the fittest</u>.

(272-3, italics in original)

The speed of the mutation, transformation, and extinction which is brought about by the supramundane seems incompatible with actual scientific understanding of the slow workings of the processes of evolution. However, the last several decades have seen the growing

acceptance of theories of abrupt or catastrophic evolutionary transformation such as that depicted in science-fiction stories of the supramundane. These theories suggest that while Silver's second point is correct--diversity of species has occurred because variations have been appearing for millions of years--additionally, sudden mutations or environmental changes can induce immediate evolutionary transformation.

The debate between proponents of "catastrophism" (sudden, immediate change) and "uniformitarianism" (slow, gradual change) is ancient. However, there was a particular focus on this debate in the early nineteenth century. The question originally belonged to geology. Catastrophists generally held that large-scale geological transformation of the Earth could only be the result of colossally violent geological activity which would suddenly disrupt the Earth's surface within a relatively short time frame. English geologist Robert Hooke's 1705 essay "Discourse on Earthquakes" suggested that earthquakes of the past were much more severe than those of today and that entire mountain ranges had been thrown up by cataclysmic forces

disrupting the Earth's surface (Bowler 34-5). Other theories, such as that of the post-revolutionary French naturalist Georges Cuvier, held that Earth's many diverse life forms had all been alive at one time, but that many had died off because of localized catastrophes, allowing other life forms to migrate into the transformed environment and thrive (Bowler 117). Many envisioned the hand of God as the primary agent of catastrophe, so that sudden changes in environment were the result of the teleology of divine creation. For example, in his 1823 work Reliquiae Diluvianae, Oxford geologist William Buckland cited mud-filled hyena caves in England as evidence of the truth of the biblical story of the great flood--a catastrophic deluge which, among other things, had caused the eradication of hyenas from England (Bowler 120).

The strongest uniformitarian stance against catastrophism was articulated by Charles Lyell in his 1880-1883 work Principles of Geology. Lyell presented a staunch Newtonian argument, asserting that physical principles remain uniform throughout time, so that earthquakes and other geological forces would have been

no stronger in the past than in the present. Thus, mountain ranges would rise up incrementally through the course of millions of years. Therefore, geological change was, when viewed over the course of the entire history of the Earth, a continuous, steady process (Depew 97-8).

The current debate over the scope of time required for evolutionary change does not call into question the basic assumptions of natural selection. Proponents of catastrophic evolution are, instead, arguing for the possibility that catastrophic environmental changes are another mechanism of evolutionary transformation--a mechanism which operates at a much faster rate. Of recent theories of catastrophic evolution, the most widely acclaimed has been Luis Alverez's 1980 assertion that the dinosaurs' extinction was the result of the impact of a comet or asteroid. A more broadly applicable theory of catastrophism can be found in Stephen Jay Gould's 1989 book Wonderful Life.

Gould examines the work of Harry Whittington, a Cambridge University paleontologist, who with his colleagues and students Derek Briggs and Simon Conway

Morris rigorously described and classified a number of fossils. These were found in the Burgess Shale, a small quarry in the British Colombian Rockies, rich in specimens from the early Cambrian period. In Wonderful Life Gould shows how their work with the Burgess fossils leads to a dramatic reassessment of theories about the mechanisms which govern evolution.

Charles Doolittle Walcott, who discovered the Burgess Shale in 1909, had previously analyzed the Burgess creatures and concluded that all were early ancestors of modern creatures. Whittington, Briggs and Conway Morris's examinations of the fossils proved that many of them could not have been precursors of modern creatures. The creatures of the Burgess Shale give evidence of such unusual and widely varying forms that of the 28 creatures associated with the Shale, eight, including the aptly named Hallucigenia and Anomalocaris, belong to previously unknown phyla.

The anomalous fossils of the Burgess Shale challenged two widely held theories of the mechanisms of evolution--identified by Gould as "the ladder of linear progress" (28) and "the cone of increasing

diversity" (38). The ladder assumes an early general simplicity of life forms progressing linearly through time toward specialized complexity of modern creatures. The Burgess anomalies do not fit this model because they give evidence of highly complex and specialized forms, seemingly having "progressed" already by the Cambrian period (some 530 million years ago). The fossils disrupt the model of the cone of increasing diversity in that they show a range of fauna which is in some ways more diverse than that of today. Though there is a vast number of species extant today, those species share a very small number of bodily formations. The creatures of the Burgess Shale, though they represent few species, have wildly disparate, wholly unique bodily formations. Thus, in their strangeness--in that they include eight previously unknown phyla--the Burgess creatures are an unusually diverse collection.

The evidence of the diversity, complexity and specialization of the Burgess fauna leads Gould to conclude that these creatures became extinct not because they were poorly adapted or inferior to other

creatures; rather, they died out because they were victims of bad luck--victims of a sudden and catastrophic environmental change. Gould writes:

> [I]f we face the Burgess fauna honestly, we must admit that we have no evidence whatsoever--not a shred--that losers in the great decimation were systematically inferior in adaptive design to those that survived. (236)

The creatures of the Burgess Shale were all sufficiently fit to have thrived and developed complex systems in the Cambrian period, so we cannot judge, without the benefit of foresight, which of the Burgess creatures might be fit or unfit. This brings into question Brian Silver's fourth key point of evolution--"The advantage possessed by such a 'superior' organism . . . normally results in that organism becoming the majority variant after one or more generations" (273). Gould's theory does not suggest that this point is invalid, but it does suggest that superiority is not the only--and perhaps not the most common--mechanism of the process of evolution.

Once contingency--luck--becomes as important a mechanism of evolution as superiority, humanity's status as Earth's dominant intelligent species seems precarious. Science understands that the evolution of humans was not inevitable. However, as Gould recognizes, popular notions of evolution characterize humanity as the most superior, the fittest survivor. He writes:

> [M]ost of us labor under a false impression about the pattern of human evolution. We view our rise as a kind of global process encompassing all members of the human lineage, wherever they may have lived. We recognize that Homo erectus, our immediate ancestor, was the first species to emigrate from Africa and to settle in Europe and Asia as well. . . . But we then revert to the hypothesis of global impetus and imagine that all Homo erectus populations on all three continents moved together up the ladder of mentality on a wave of predictable and

> necessary advance, given the adaptive value of intelligence. (319)

This vision of the inevitability of humanity is undercut by evidence from the historical record and from the genes of modern humans. This evidence shows the power of contingency upon our own evolution, as Gould explains:

> Homo sapiens arose as an evolutionary item, a definite entity, a small and coherent population that split off from a lineage of ancestors in Africa. . . . Asian Homo erectus died without issue and does not enter our immediate ancestry (for we evolved from African populations); Neanderthal people were collateral cousins, perhaps already living in Europe while we emerged in Africa, and also contributing nothing to our immediate genetic heritage. (319)

The point here is that these two branches of the evolutionary tree--Asian Homo erectus and Neanderthal--were not drawn to evolve into humans because of the inevitability of progress. These two lines dead ended

and did not evolve further. And if progressive evolution was not inevitable for Asian Homo erectus and Neanderthal, then it likewise was not inevitable for African Homo erectus. Homo sapiens was the result not of an inevitable tendency of progressive evolution; rather, we evolved because of happenstance, because of contingency.

The implications of contingency upon the popular perception of evolution are staggering. For Gould, humanity is:

> an improbable and fragile entity, fortunately successful after precarious beginnings as a small population in Africa, not the predictable end result of a global tendency. (319)

The result of extremely good fortune, humanity's presence is improbable and fragile because it is caused by random events:

> Little quirks at the outset, occurring for no particular reason, unleash cascades of consequences that make a particular future seem inevitable in retrospect. But the

> slightest early nudge contacts a different grove, and history veers into another plausible channel, diverging continually from its original pathway. (320-1)

The random events that led to our groove are, perhaps, minuscule, slight--a drought here, abundant game there, and they are certainly unpredictable, unidentifiable.

The contingencies upon which our evolution rests are ungraspable. Thus, recognition of the role of contingency is an admission of a failure of understanding, and with such a failure comes the opportunity to apprehend the sublime. This is the case for Gould as he writes:

> Homo sapiens, I fear, is a "thing so small" in a vast universe, a wildly improbable evolutionary event well within the realm of contingency. Make of such a conclusion what you will. Some find the prospect depressing; I have always regarded it as exhilarating, and a source of both freedom and consequent moral responsibility. (291)

Gould is expressing the negative pleasure of an apprehension of the Kantian sublime--Kant's "respect" (§23, 202) evidenced by his awareness of mankind's insignificant place in a vast universe. He experiences Kant's "feeling of a momentary check to the vital forces followed at once by a discharge all the more powerful" (§23, 202). Here the check is the possibility of depression, while the more powerful discharge is the exhilaration of freedom and responsibility.

In the "Primeval Night" section of 2001 Clarke presents a vision of human evolution which is similar to Gould's. Here Clarke presents the story of a group of proto-humans or "man-apes" (9) that are following--as the title of the first chapter indicates--"The Road to Extinction" (9). Like Gould, Clarke depicts a world in which human evolution is anything but inevitable. He writes:

> Here on the Equator, in the continent which would one day be known as Africa, the battle for existence had reached a new climax of

> ferocity, and the victor was not yet in sight. (9)

None of the fauna of this African desert are particularly apt to survive. An observer--Clarke's narrator, perhaps--cannot identify which of the creatures is "fittest" and thus a seemingly inevitable precursor to future life forms.

The man-apes face stiff competition from a marauding leopard, a herd of warthogs, and neighboring group of man-apes known as "the Others" (11). The monolith--the element of the supramundane--comes into this mix as the point upon which the future of human evolution is contingent. When the man-apes encounter the monolith, it tests them and eventually trains them in the use of tools, giving them the skills they need to survive and flourish.

As an element of the supramundane, the monolith is mysterious, beyond the understanding of modern humans and certainly beyond that of the man-apes. But though the monolith's workings are unfathomable, the narrator of 2001 makes its function is clear. The creators of the monolith have planted many of these artifacts

throughout the universe as an experiment to foster the development and evolution of intelligent life forms:

> An ancient experiment was about to reach its climax.
>
> Those who had begun that experiment, so long ago, had not been men--or even remotely human. But they were flesh and blood, and when they looked out across the deeps of space, they had felt awe, and wonder, and loneliness. . . .
>
> In their explorations, they encountered life in many forms, and watched the workings of evolution on a thousand worlds. They saw how often the first faint sparks of intelligence flickered and died in the cosmic night.
>
> And because, in all the galaxy, they had found nothing more precious than Mind, they encouraged its dawning everywhere. They became farmers in the fields of stars; they sowed, and sometimes they reaped.

> . . . They tinkered with the destiny of many species, on land and in the ocean. But which of their experiments would succeed they could not know for at least a million years. (184-5)

These aliens share Gould's theory of contingent evolution. Having "watched the workings of evolution on a thousand worlds" (185), they do not see evolution as a deliberate process which tends towards complexity or towards intelligence. Instead, the aliens see the evolution of intelligence as contingent upon many factors--so much so that intelligence seems to be a fragile and unlikely entity which had often "flickered and died" (185). Also like Gould, the aliens' awareness of the contingency of evolution leads them to an awareness of the sublime as "they looked out across the deeps of space, they had felt awe, and wonder, and loneliness" (185). Their awe and wonder correspond to Kant's negative pleasure. Their loneliness is the awareness of their smallness in the vastness of the universe.

The aliens' experiments in evolution are themselves subject to contingency. Having identified the man-apes' potential for further development, the aliens are still not able to ensure the success of their work. They hedge their bet by tinkering with at least one other species in Earth's ocean, but even so, they must wait at least a million years to see if anything would come of their work.

The use of the farming metaphor to describe the aliens' project reduces humanity to a deeply subordinate role--that of a plant which requires nurturing and maintenance in order to flourish. All of humanity's achievements--including the space flight which 2001 celebrates--seem less marvelous, all of them contingent upon the early nurturing of the aliens rather than the imagined autonomous evolutionary struggle of humans. Humanity looses its self-appointed status as the pinnacle of the Great Chain of Being and becomes, as in Gould's vision, just another life form on a relatively level field.

The aliens' evolution is equally contingent:

[O]ut among the stars, evolution was driving toward new goals. The first explorers of Earth had long since come to the limits of flesh and blood; as soon as their machines were better than their bodies, it was time to move. First their brains, and then their thoughts alone, they transferred into shining new homes of metal and of plastic.

In these, they roamed the stars. They no longer built spaceships. They <u>were</u> spaceships.

But the age of the Machine-entities swiftly passed. . . . [T]hey had learned to store knowledge in the structure of space itself, and to preserve their thoughts for eternity in frozen lattices of light. . . .

Into pure energy, therefore, they presently transformed themselves. . . .

Now they were lords of the galaxy, and beyond the reach of time. They could rove at will among the stars and sink like a subtle mist through the very interstices of space.

> But despite their godlike powers, they had not wholly forgotten their origin, in the warm slime of a vanished sea. (186, italics in original)

The aliens do not experience a gradual transformation through slow mutation. On the contrary, their changes are--as is consistent with catastrophic evolution--abrupt and radical. Their transformations, though self-induced, are based on contingency--the contingency of the aliens' own agency. Just as they "farm" other intelligent life forms, these aliens actively engineer their own changes. And though the aliens have capabilities beyond those of humans, though the aliens have "farmed" human intelligence, they "had not wholly forgotten their origin, in the warm slime of a vanished sea" (186). They, too, are not the result of an evolutionary tendency toward complexity and supremacy. Though they have "godlike powers," they are not divine. They are, like humanity, the entities derived from catastrophic, contingent evolution.

Clarke's scenario for the evolution of humanity is not exactly like Gould's for though the aliens

represent the contingency upon which human evolution depends, they are also a form of agency--an active force which ensures the survival of the man-apes. In this sense, the aliens function as a sort of hand of God. Todorov recognizes that this insertion of an agent is a means of mitigating the difficulty of accepting contingency or a lack of causality:

> [I]n a general fashion, supernatural beings compensate for a deficient causality. Let us say that in everyday life there are some events which are explained by known causes, and others that appear to be due to chance. . . . If . . . instead of accepting the intervention of chance, we postulate a generalized causality, a necessary relation of all the facts among themselves, we must admit the intervention of supernatural forces or beings hitherto unknown to us. Thus the fairy who assures a character's fortunate destiny is merely the incarnation of an <u>imaginary causality</u> for what might just as

> well be called chance, fortune, accident. (110, italics in original)

Clarke's aliens are the supramundane version of Todorov's fairy, smoothing over chance with a limited causality. Darwin's evolution unseated divine creation as the dominant explanation of the origin of humanity, taking away God and leaving only chance. Clarke reinserts agency into the myth, but in this case the agents are supramundane rather than supernatural.

Because the aliens are supramundane rather than supernatural--because the aliens are part of the phenomenal sphere but not part of the mundane--they function as a mediation between two extreme conceptions of the origin of humanity: the supernatural, divine creation and utterly blind chance. They are at once a contingency and an agency. The aliens function as Todorov's "imaginary causality" (110) allowing for a softening of the role on contingency while not demanding the existence of the supernatural.

Chapter 4

The Supramundane and the Works of Arthur C. Clarke

Even though the bulk of Arthur C. Clarke's fiction depicts encounters with alien life forms and advanced technologies, most of these works should not be considered "supramundane." Clarke's characters encounter many unusual or anomalous objects, but they usually do not experience the sublime through these encounters. Instead, after some degree of struggle, Clarke's characters are usually able to understand any bizarre alien objects or creatures. For example, his novel Rendezvous with Rama deals with the exploration of a huge alien spaceship traveling through the solar system, but the alien technologies do not induce the sublime, though they are more advanced than those of the twenty-first-century humans exploring the ship. Like Wells's scientists, who are able to understand the Martians of War of the Worlds, the human explorers of Rama are able to understand the functions of the artifacts they find on the alien ship. Clarke describes one explorer's resolve to solve the mystery of Rama's artifacts:

> There was a mystery here--yes; but it might not be beyond human understanding. . . . At all costs, he must not let Rama overwhelm him. That way lay failure, perhaps even madness. (75)

There is the sense that Rama could induce the sublime; it could "overwhelm" the explorer. But instead, the explorer fights against any perception of the sublime, refusing to allow himself even the chance of such an experience. In Rama, being overwhelmed means only "failure." There is no sense that a failure of understanding could lead to a greater, sublime realization. Thus, by the book's end, the explorers understand Rama, eventually interpreting its purpose. Rama is strange and unusual, but because the explorers are able to solve its mysteries, they are not overwhelmed; they do not experience the sublime. Rama comes from a distant, alien part of the universe, but it does not violate the principles of the mundane sphere.

There are, however, a handful of works in which Clarke does explore the supramundane and the associated

notions of the sublime: the books and films of the 2001 cycle, the early short story "The Sentinel," and the book Childhood's End. Clarke's depiction of the supramundane is different from Lovecraft's though. While Lovecraft depicts the sublime as an invasion which disrupts, corrupts and destroys, Clarke depicts the supramundane as a catalyst for the further evolution of humanity. In Clarke's work the supramundane is a paternal force which draws humans toward their destiny as higher-order beings. For Lovecraft, the supramundane is a horror-inspiring threat from beyond the limits of human understanding--a terrifying sublime. For Clarke, the supramundane brings about transcendence, drawing some of those who experience it beyond the limits of humanity.

Clarke's 2001 cycle is the chronicle of humanity's encounter with a higher-order, alien intelligence. These aliens have distributed throughout the universe machines which are designed to monitor and foster intelligence in various species. 2001: A Space

Odyssey[5] opens with a prehistoric encounter between a group of proto-humans and one of these machines--a large, featureless, black slab. The machine--or monolith, to use Clarke's term--performs a series of tests on the creatures and teaches them to use crude weapons so that the group will be able to survive the drought which threatens to wipe them out. 2001 continues in the early twenty-first century as Dr. Heywood Floyd, Chairman of the U.S. National Council of Astronautics, investigates a monolith discovered on the moon, dubbed Tycho Magnetic Anomaly One or TMA-1. Later, 2001 follows astronauts Frank Poole and Dave Bowman on their ill-fated mission to investigate another monolith orbiting Jupiter[6]--TMA-2. The ship's computer, HAL, malfunctions, killing Poole, leaving Bowman to investigate TMA-2 on his own. 2001 ends with

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[5]2001: A Space Odyssey is unusual in that the novel is based on the screenplay rather than vice versa. Clarke and director Stanley Kubrick collaborated on the screenplay, inspired by Clarke's short story "The Sentinel." Clarke wrote the novel while the film was in production.

[6]The film and book diverge on this point. Clarke's novelization of 2001 places the monolith in orbit around Saturn, but the film and all of the other books in the 2001 cycle place it in orbit around Jupiter.

Bowman's encounter with the monolith, his transportation across the universe and his transformation into a new, not-entirely-human creature.

The subsequent books of the 2001 cycle explore a broad range of encounters between humanity and the alien monoliths. In 2010: Odyssey Two, while Heywood Floyd and a joint Soviet/U.S. space mission investigate TMA-2, the monolith creates a chain reaction on the surface of Jupiter, changing the planet into a small sun and transforming its moons into habitable planets. The humans are told that they can do what they will with the new planets except that they are to "attempt no landings" (217) on Europa, where the monolith is monitoring the evolution of intelligent life. 2061: Odyssey Three deals with Floyd's attempt to avoid disturbing the monolith on Europa as he rescues a spacecraft which has crashed there. The body of Frank Poole is recovered and the astronaut is resurrected for Clarke's 3001: The Final Odyssey. Much of this book is devoted to Poole's exploration of the technological marvels of the fourth millennium, but the climax of the novel focuses on an attempt finally to destroy the

monolith after Dave Bowman, whose intelligence has lived on inside the machine, informs Poole that the monolith seems to have received from its alien controllers instructions to destroy humanity.

The 2001 cycle presents a view of human understanding and scientific knowledge which is distinct from much of Clarke's other fiction. In 2001 Clarke writes of his characters' attempts to understand the monoliths:

> Here, at the very portals of Earth, man was already face to face with a mystery that might never be solved. Three million years ago, something had passed this way, had left this unknown and perhaps unknowable symbol of its purpose, and had returned to the planets--or to the stars. (78, emphasis in original)

Compare the tone of this passage to the earlier quotation from Rendezvous with Rama: "There was a mystery here--yes; but it might not be beyond human understanding" (75). In 2001, the presumption is reversed. The monoliths are "unknown and perhaps

unknowable," presenting a "mystery which might never be solved" (78). Both works fulfill these opposed predictions. Rama's secrets are uncovered, and throughout the four books of the 2001 cycle the monoliths remain an enigma.

The monoliths, in their various incarnations, defy scientific analysis. In 2001, scientists attempt to analyze TMA-1 but have no success:

> So far, the hard black material of the slab had resisted all the rather mild attempts . . . to obtain samples. They had no doubt that a laser beam would cut into it--for, surely, nothing could resist that frightful concentration of energy--but the decision to employ such violent measures would be left to Floyd. He had already decided that X rays, sonic probes, neutron beams, and all other nondestructive means of investigation would be brought into play before he called up the heavy artillery of the laser. It was the mark of a barbarian to destroy something one could not understand; but perhaps men were

> barbarians, beside the creatures who had made this thing. (73, italics in original)

The monolith resists all efforts to study it, including laser analysis. Nine years later, in 2010, Floyd is still no closer to an analysis of TMA-1. In that work, the monolith is described as "the black enigma up there on the Moon, still contemptuously defying all the weapons that human ingenuity could bring to bear on it" (4). In the same book, TMA-2, the monolith floating between Jupiter and its moon Io, similarly promises to resist study:

> When final contact was made, they would try to secure samples by drilling or laser spectroscopy; no one really expected these endeavors to succeed, as even after a decade of study TMA-1 resisted all attempts to analyze its material. The best efforts of human scientists in this direction seemed comparable to those of Stone Age men trying to break through the armor of a bank vault with flint axes. (217)

Clarke uses these descriptions to underscore the incompleteness of our scientific understanding, likening our seemingly advanced comprehension to that of "barbarians" (2001 73) and "Stone Age men" (2010 217). He is suggesting that scientific knowledge does not reach far enough to grasp the monoliths.

Clarke extends this idea further, placing the monoliths beyond the intellectual reach and beyond physical reach as well. After TMA-1 has been enclosed in a pressurized dome on the moon, Floyd discovers that the monolith is utterly untouchable:

> [H]e did not feel that he had ever *really* touched TMA-1. The tips of his fingers had seemed to skitter over an invisible barrier, and the harder he pushed, the greater the repulsion grew. (121, italics in original)

Later, in *3001: The Final Odyssey*, Clarke writes,

> [A]lthough everyone who had ever come to view TMA-1 and TMA-0 [the monolith unearthed in prehistoric Africa] felt an irresistible urge to touch their apparently pristine surfaces, no one had ever succeeded. Fingers, diamond

> drills, laser knives all skittered across the Monoliths as if they were coated by an impenetrable film. Or as if--and this was another popular theory--they were not quite in this universe, but somehow separated from it by an utterly impassable fraction of a millimeter. (164)

The impossibility of touching the monoliths becomes emblematic of their supramundane nature, as if "they were not quite in this universe." They are outside the mundane world. They do not fit into the complex construction of scientific laws and concepts which we use to define and delimit the universe. The monoliths violate the rules through which we know the world, and therefore, they are outside it. The failure of human understanding to account for the monoliths creates the "utterly impassable fraction of a millimeter" which separates them from the mundane sphere. The monoliths are ungraspable--both physically and intellectually. They mark the boundary of human understanding, showing that it is limited rather than boundless.

In Kant's schema, the phenomenal sphere--the physical world--is the domain of the faculty of understanding and rationality. Rationality insists that there is an understandable, determinate, cause-and-effect system which gives order to the world. An apprehension of the sublime disrupts this rationality through a glimpse of that which cannot be rationally understood. Thus, the sublime and the noumenal sphere--which cannot be rationally understood--become associated with the non-rational. In the 2001 cycle, Clarke makes these associations between the rational and the phenomenal, the non-rational and the sublime.

In 2010, Floyd has traveled to Jupiter to investigate TMA-2. While on board a spacecraft orbiting near the gigantic monolith, Floyd encounters a ghostly image of Dave Bowman, the astronaut who, in 2001, entered TMA-2 and whom Floyd presumes to be dead. Bowman warns Floyd of an impending catastrophic event and insists that the ship leave Jupiter ahead of schedule. The captain of the ship, Tanya Orlova, refuses to accept Floyd's story of his encounter with Bowman:

> "I'm sorry Heywood--I don't believe in ghosts. There must be a rational explanation. There's nothing that the human mind can't account for."
>
> "I agree, Tanya. But let me remind you of Haldane's famous remark: The Universe is not only stranger than we imagine--but stranger than we can imagine." (211, italics in original)

Orlova goes on to order the crew to ignore Bowman's warning. She insists that the ship remain in orbit around Jupiter and continue the mission to analyze TMA-2.

Orlova, as a rationalist, is sure that the apparition must have an understandable, mundane, determinate cause. She insists that the image of Bowman could only have been either an elaborate hoax or a hallucination. She cannot see the non-rational, non-mundane possibility that a "ghost" of Bowman's personality was able to manifest itself through the supramundane properties of the monolith. Floyd, on the other hand, does not insist upon rationality. He sees

the possibility of a non-rational, non-mundane cause for the apparition. His use of the quote from Haldane shows that he recognizes that there are limits to human understanding and rationality--that the mundane sphere which humanity is able to grasp is only a small part of a vast, unfathomable universe.

The conflict between these characters can be restated in terms of the Kantian sublime. In insisting that there must be a rational explanation, Orlova is insisting that there must be a determinate relationship between mind and object, that given sufficient examination, the observer's faculty of understanding will be able to grasp the object and determine its cause. Floyd, however, does not insist upon a determinate, rational explanation. He has witnessed the image of Bowman and recognizes that it is beyond his understanding. Orlova, insisting upon rationality, has closed herself off from an apprehension of the sublime by refusing to acknowledge the possibility of the formless object which cannot be grasped. But Floyd, in recognizing the possibility of the non-

rational, the possibility of that which exceeds his understanding, is open to the sublime.

The climax of 3001 seems to disrupt any claim that the monoliths are elements of the supramundane. Like the climax of Wells's War of the Worlds, in which the Martian invaders are destroyed by a common flu virus, 3001 ends with the destruction of "The Great Wall," a monolith lying on its side on Europa, through the humans' use of a group of computer viruses introduced into the monolith's system. This development seems to remove the monolith from the realm of the supramundane. The monolith should be essentially indestructible since, as shown above, it is effectively untouchable or unreachable. Because it is from outside the mundane sphere, mundane means of destruction should have no effect on the monolith. If lasers, drills, and neutron beams cannot mar its surface, if the use if these tools is "comparable to . . . Stone Age men trying to break through the armor of a bank vault with flint axes" (2010 217), we should expect a computer virus to fare no better. Yet, the viruses are able to destroy the monolith.

The success of the computer viruses seems to disqualify the monolith from classification as supramundane, but in fact, this is not the case. Clarke goes to a great deal of trouble to dissociate the viruses from the mundane sphere, aligning them instead with the non-mundane, the mad, the insane, the non-rational. To find a weapon suitable for use against the monoliths, the humans look inside a "Chamber of Horrors" (212) buried on the moon, beneath the mountain Pico. The storehouse contains samples of naturally occurring agents of destruction--"small pox, the Black Death, AIDS" (212)--and man-made chemical and biological weapons as well as a collection of effective computer viruses. Clarke describes the programmers who developed the viruses as "maladjusted individuals" and "perverted geniuses" (215), establishing that the viruses originate from the extreme edges of the mundane world, where things are perverse and do not properly conform to the rules and laws through which the mundane world is constructed.

Clarke pushes the viruses even further towards the edge of the mundane sphere. He associates them not

just with the strange and perverse but also with madness and the non-rational, describing the viruses as "some of the most outstanding examples of misplaced human ingenuity--indeed, insanity" (213). Clarke goes on to associate insanity with the team selected to assemble the viruses, writing:

> Poole . . . saw enough of the task force to realize that some of them might almost belong to an alien species. Indeed, one key member was apparently in a lunatic asylum . . . and Chairperson Oconnor sometimes suggested that at least two others should join him. (220)

At the book's conclusion, Poole observes: "How ironic--that the human race had been saved by the skillful deployment of its own insanities!" (236). The viruses are pushed outside the mundane sphere, into the realm of the ungraspable, the unknowable.

The viruses are "insane" because, like the monoliths, they are beyond mundane understanding. This connection between insanity and the failure of understanding can be seen elsewhere. The two are

explicitly linked in that key passage quoted earlier from Clarke's Rendezvous with Rama:

> There was a mystery here--yes; but it might not be beyond human understanding. . . . At all costs, he must not let Rama overwhelm him. That way lay failure, perhaps even madness. (75)

Lovecraft also makes this connection. Almost all of his characters who survive an encounter with the supramundane lose their sanity. Most notably, Danforth of Lovecraft's "At the Mountains of Madness" is driven insane by a glimpse of the mountains of Kadath.

The viruses are not supramundane in the way that the monoliths are--as objects of a higher-order, alien technology. However, the viruses are products of insanity, and therefore, they can affect the monolith because, like the monolith, they too are from outside the mundane sphere. Clarke goes so far as to describe the viruses in terms of the supramundane:

> But at last all the components of the weapon were assembled--a weapon invisible,

> untouchable--and unimaginable to almost all the warriors who had ever lived. (221)

Thus, 3001 allows for the destruction of the monoliths without reducing them to the level of the mundane.

As shown in Chapter Two, that which is unknowable is usually associated with the image of negative space--an emptiness or abyss emblematic of the gap in human understanding. Though Clarke does not use Lovecraft's dramatic images like "unformed realms of infinity beyond all Nature as we know it" ("Colour" 81), it is worth noting that when the 2001 project was first publicized, it was titled Journey Beyond the Stars (Clarke Lost Worlds 32). This name precisely suggests negative space in that it implies a realm which lies outside the star-filled realm we consider to be mundane space. It is similar to Lovecraft's phrase from "The Whisperer in Darkness," "The space-time globule which we recognise as the totality of all cosmic entity is only an atom in the genuine infinity which is theirs" (240). Both imply that beyond the stars there is another region, dark, dangerous and beyond human comprehension.

In addition to the title change, Clarke and Kubrick's collaboration on the screenplay for 2001 caused another significant change in the work. As Clarke describes in The Lost Worlds of 2001, the familiar black slab was not the first choice for the form of the monoliths; it was adopted only as a solution to technical difficulties with the film's props:

> For a while, Stanley considered using a transparent cube, but it proved impossible to make one of the required size. So he settled on the rectangular shape, and obtained a three-ton block of lucite [sic]--the largest ever cast. Unfortunately, that also looked unconvincing, so it was banished to a corner of the studio and a completely black slab of the same dimensions was substituted. (44)

Clarke retained the image of the transparent slab for the "Primeval Night" section of the prose version of 2001. Here the monolith is first encountered by Moon-Watcher, the dominant man-ape and protagonist of the "Primeval Night" section.

> It was a rectangular slab, three times his height but narrow enough to span with his arms, and it was made of some completely transparent material; indeed, it was not easy to see except when the rising sun glinted on its edges. As Moon-Watcher had never encountered ice, or even crystal-clear water, there were no natural objects to which he could compare this apparition. (15)

This image of a transparent slab is a version of the negative space associated with a sublime experience. The slab's transparency makes it "not easy to see" (15); it is at once both visible, as it reflects sunlight, and invisible, as it has no coloration of its own. The eye registers it simultaneously as both present and absent, and thus, the transparent slab is akin to Kant's notion of the formless object in that it cannot be adequately grasped visually.

The monolith's later incarnations, colored black because the transparency of Lucite eludes the camera's representational capacity, allow us to imagine that inside the opaque shell there are machines which

operate in accordance with mechanistic principles we understand. For instance, TMA-1, upon its first exposure to sunlight after being buried beneath the surface of the moon, broadcasts a signal to TMA-2, orbiting Venus. In this case, TMA-1 seems to be simply a large, photo-sensitive radio transmitter. We can imagine that beneath its impenetrable black shell are all of the components we would expect to find in such a device. The transparent slab, however, precludes this illusion. The transparent slab allows us to see into and, in fact, all the way through the supramundane alien artifact. This transparency forces us to recognize that whatever may be inside the slab, it is certainly nothing we can see. There are no whirling cogs, no electrodes, no printed circuit boards. The transparent slab appears to be utterly empty. It becomes a negative space, a void or gap indicative of a gap in human understanding. Thus, the supramundane qualities of the transparent slab induce an awareness of the sublime.

The depictions of the monoliths as black rather than transparent still serve to connect the monoliths

with negative space. The image of the abyss is, of course, usually one of blackness, as in Lovecraft's use of "the black extra-cosmic gulfs" in "The Colour Out of Space" (81). Rather than simply inspiring metaphoric allusions to the abyss, the black monoliths go further, becoming either illusory or actual abysses. In this passage from 2010, the blackness of TMA-2 creates an optical illusion which seems to transform the monolith from a solid object into a gaping hole:

> [I]t already appeared larger than the Moon as seen from Earth, and shockingly unnatural in its straight-edged, geometrical perfection. Against the background of space it would have been completely invisible, but the scudding Jovian clouds 350,000 kilometers below showed it up in dramatic relief. They also produced an illusion that, once experienced, the mind found almost impossible to refute. Because there was no way in which its real location could be judged by the eye, Big Brother [TMA-2] often looked like a yawning trapdoor set in the face of Jupiter. (120-1).

This description of the monolith contains all of the elements of the Kantian sublime. The monolith overwhelms the observer with its immensity and "straight-edged, geometrical perfection," reminders of the fact that the monolith is beyond human understanding. The optical illusion of the monolith as a vast hole is "almost impossible to refute" because the illusion of a "yawning trapdoor" is easier to conceive than the reality of a massive, geometrically-perfect structure floating in space. The illusion of the monolith as a negative space is easier to accept than the implications of its physical reality.

The image of the monolith as a gaping hole rounds out the sublime experience, becoming an image of the sublime itself. In the Kantian sublime the failure of the faculty of understanding to grasp the overwhelming object is resolved by the faculty of reason which allows us to imagine abstractly or behave <u>as if</u> we could grasp the ungraspable object. The faculty of reason associates the object with the noumenal sphere, allowing the observer to have negative knowledge of the object--that is, knowledge that the object is not part

of the mundane sphere--that it is not part of the world which the observer can grasp. The image of the abyss or negative space becomes emblematic of the negative knowledge of the vast infinity, which the observer cannot grasp through the faculty of understanding. Just as Manton of Lovecraft's "The Unnamable" identifies the formless monster as "the pit--the maelstrom" (207), so to does the monolith present an image of itself as a pit or "trapdoor" into which the observer might fall.

Clarke uses the maelstrom image later in 2010 when TMA-2 abruptly vanishes. The event confirms Bowman's warning that something extraordinary was going to happen. This validation offers Floyd little comfort:

> Floyd felt himself in the grip of irresistible forces, sweeping him and his companions toward an unknown destiny. . . . [T]his time the dangers were not only invisible; they might be beyond human comprehension. (226)

This image of "irresistible forces, sweeping him and his companions toward an unknown destiny" is a specific

reference to the negative space of the maelstrom or vortex, which draws the observer into a dark, mysterious and dangerous abyss.

Having witnessed a series of supramundane events--the failure of scientific analysis of TMA-1, the image of Bowman, and the disappearance of TMA-2--Floyd experiences Kant's "negative pleasure" of the sublime. Floyd has failed to understand the anomalies he has witnessed. However, as can be seen in Kant's "Analytic of the Sublime," Floyd's faculty of reason steps in and "demands absolute totality as a real idea" (Kant §25, 207). His reason creates Kant's "representation of limitlessness, yet with a super-added thought of its totality" (§23, 201), which manifests as the maelstrom image with its "irresistible forces" and "unknown destiny" (Clarke 226). Through this, Floyd glimpses the sublime and recognizes that something lies beyond the mundane sphere and beyond the grasp of humanity. It is "irresistible," "unknown," "invisible," and "beyond human comprehension" (226).

The image of the monolith as a negative space is also seen in 2001 as Dave Bowman approaches TMA-2 for an up-close exploration:

> He had been hanging above a large, flat rectangle, eight hundred feet long and two hundred wide, made of some thing that looked as solid as rock. But now it seemed to be receding from him; it was exactly like one of those optical illusions, when a three-dimensional object can, by an effort of will, appear to turn inside out--its near and far sides suddenly interchanging.
>
> That was happening to this huge, apparently solid structure. . . . What had seemed to be its roof had dropped away to infinite depths; for one dizzy moment, he seemed to be looking down into a vertical shaft--a rectangular duct which defied the laws of perspective, for its size did not decrease with distance. . . . (191-2, final ellipsis in original)

Like the scene from 2010 discussed above, this scene from 2001 is a depiction of the Kantian sublime, with an observer, overwhelmed by an ungraspable object, resolving that failure of understanding with an image of negative space.

However, in this case the image is pushed even further, for the monolith not only presents an illusion of negative space; it actually becomes a hole or "Star Gate," and like the threatening maelstrom, the observer is pulled inside:

> David Bowman had time for just one broken sentence which the waiting men in Mission Control, nine hundred million miles away and eighty minutes in the future, were never to forget:
>
> "The thing's hollow--it goes on forever--and--oh my God!--it's full of stars!" . . .
>
> The Star Gate opened. The Star Gate closed.
>
> In a moment of time too short to be measured, Space [sic] turned and twisted upon itself. (192, italics in original)

In this moment, the monolith does not simply present an image of negative space; it actually becomes negative space. Here Clarke draws a distinct line between the mundane and supramundane spheres. Much in the same way that Walter Gilman travels between worlds in Lovecraft's "Dreams in the Witch House," Bowman is transported from mundane positive space into supramundane negative space, where he observes "It seemed that space had been turned inside out: this was not a place for man" (198). The twisting and turning of space is the supramundane's characteristic defiance of human understanding. In this supramundane sphere, mundane laws--the laws whereby Bowman understands the world--do not apply.

As shown in the previous chapter, direct interaction with the supramundane can have a transformative effect, inducing a radical evolutionary leap. Such is the case for Bowman, who, like the man-apes of the "Primeval Night" section of 2001, is given an evolutionary boost. Clarke accentuates the similarity of these evolutionary transformations by

using identical descriptions for the monoliths presiding over both events:

> [It] lost its transparency, and became suffused with a pale, milky luminescence. Tantalizing, ill-defined phantoms moved across its surface and in its depths. They coalesced into bars of light[s] and shadow, then formed intermeshing, spoked patterns that began slowly to rotate. (17 and 218)[7]

Bowman's transformation, however, is more dramatic than that of the man-apes. His physical body is reduced to that of an infant, and shortly he is weaned even from the need of any material body as he is transformed into pure energy.

Bowman's transformation into the Star-Child--an entity which Bowman himself would have found utterly unfathomable--underscores the sublimity of the supramundane. Clarke allows his readers to witness the sequence from Bowman/Star-Child's perspective. But this deeper glimpse into the abyss only further

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[7]The "s" of "lights" appears on page 218 but not on page 17.

accentuates the strangeness and sublimity of the monoliths, the alien entities and the Star-Child.

Having undergone this transformation, the Star-Child gains an understanding of the workings of the alien technology: "It [the monolith] encapsulated yet unfathomed secrets of space and time, but some at least he now understood and was able to command" (220). Eventually he masters the aliens' technique of hyperspacial travel, and "of his own volition" (221) the Star-Child returns to the Solar system:

> Confident once more, like a high diver who had regained his nerve, he launched himself across the light-years. . . . He was back, precisely where he wished to be, in the space that men called real. (221)

The Star-Child's ability to navigate and return from the alien sphere marks a moment of transcendence. Like the destruction of the monoliths at the climax of 3001, Bowman's transcendence seems at first to negate the sublimity of the monoliths and the aliens which created them, for once a human being is able to enter the supramundane sphere and successfully operate there,

then that sphere is no longer sublime. Once the alien sphere is mastered, it becomes mundane rather than supramundane. There is no longer the failure of understanding required for the apprehension of sublimity.

However, it is the Star-Child, not Bowman, who is able to grasp of the alien technology. The supramundane, by definition, exceeds human understanding, but the Star-Child's understanding of the alien technology does not render the technology mundane because the Star-Child is no longer human. The aliens allow Bowman to transcend humanity, so that rather than reducing the aliens to the mundane, Bowman himself evolves into the sublime.

In The Lost Worlds of 2001, Clarke cites his 1950 short story "The Sentinel" as the key inspiration for 2001. In that story an explorer on the moon encounters a supramundane artifact similar to TMA-1:

> I was standing on a plateau perhaps a hundred feet across. . . . It had been leveled to support a glittering, roughly pyramidal

> structure, twice as high as a man, that was set in the rock like a gigantic, many-faceted jewel. (24)

Like the monoliths, this structure is surrounded by an invisible barrier. The humans eventually destroy the barrier and the pyramid by means of an atomic explosion, but the ruined artifact still defies human understanding:

> They are meaningless. The mechanisms--if indeed they are mechanisms--of the pyramid belong to a technology that lies far beyond our horizon, perhaps to the technology of paraphysical forces. (26)

The narrator surmises that in destroying the pyramid, the humans "set off the fire alarm and have nothing to do but wait" until the advanced civilization which built the pyramid comes to check on its destruction (28).

Clearly, "The Sentinel" suggests the situation of the TMA-1 sequence of 2001. However, Clarke's 1953 novel Childhood's End is more strongly connected to the larger, thematic issues explored in the 2001 cycle,

specifically encounters with the supramundane and abrupt, catastrophic evolution. In Childhood's End, late twentieth-century Earth is visited by extra-terrestrials dubbed the Overlords. Here the designer of a spacecraft gets a first glimpse of the Overlords' ships:

> The huge and silent shadows driving across the stars, more miles above his head than he dared to guess, were as far beyond his little "Columbus" as it surpassed the log canoes of paleolithic man. (6)

Clarke invokes the sublime with large, dark shapes and unimaginable distance, combining these images with a phrase similar to 2001's "Stone age men trying to break through the armor of a bank vault with flint axes" (217) to convey the initial impression of the Overlords.

Like the monoliths, the Overlords' technology utterly surpasses human understanding. Karellen, the Overlord "Supervisor for Earth" (15), transports Stormgren, the Secretary General of the United Nations, to a meeting via supramundane aircraft:

> Stormgren saw that familiar puckering of the seamless metallic hull, and in a moment the opening that had baffled the world's best scientists appeared before him. (18)

Characteristic of the supramundane, the technology cannot be understood by even "the world's best scientists." The aircraft is made of an apparently impossibly seamless metal which behaves unexpectedly, "puckering" as it creates an opening for Stormgren to enter.

The Overlords loan the humans an equally ungraspable tool for historical research:

> The instrument . . . was nothing more than a television receiver with an elaborate set of controls for determining co-ordinates in time and space. It must have been linked somehow to a far more complex machine, operating on principles that no one could imagine, aboard Karellen's ship. (73)

Though the humans are able to use the machine, they do not understand it. They are unable even to theorize or "imagine" what principles its operation is based upon.

And like their technology, the Overlords' language is beyond human comprehension: "Though many samples of Overlord language had been recorded, they all defied analysis because of their extreme complexity" (100).

The Overlords are clearly associated with the supramundane, but as much as they are beyond the understanding of humans, there is yet another presence in Childhood's End which exceeds the grasp of the Overlords themselves. Karellen hints at this presence in his warning to the humans not to attempt interstellar travel:

> "Your race, in its present stage of evolution, cannot face that stupendous challenge. One of my duties has been to protect you from the powers and forces that lie among the stars--forces beyond anything that you can ever imagine." (135)

The "powers and forces" to which Karellen refers are those of the Overmind, a galactic consciousness which defies description. Karellen's reference to humanity's "present stage of evolution" foreshadows the coming evolutionary transcendence which allows the children of

earth to shed their bodies and, like Dave Bowman, metamorphose into supramundane, non-material entities, becoming part of the Overmind.

Karellen's explanation of the Overmind corresponds to the schema established in Kant's "Analytic of the Sublime." There is the failure of understanding:

> "Science was the only real religion of mankind. . . . Science, it was felt, could explain everything; there were no forces which did not come within its scope, no events for which it could not ultimately account. . . .
>
> "There are powers of the mind, and powers beyond the mind, which your science could never have brought within its framework without shattering it entirely." (182)

As is characteristic of the supramundane, this failure of understanding takes the specific form of a failure of scientific knowledge to account for the anomalous.

As Weiskel shows in The Romantic Sublime, the failure of understanding is a semiotic crisis--a failure of language to account for the anomalous,

ungraspable object (27-8). As Karellen observes, the ungraspable, indescribable object can only be known indirectly, through the use of metaphor:

> "I am afraid that almost all I have to say now must be by means of such analogies. You have no words, no conceptions, for many of the things I wish to tell you--and our own knowledge of them is also sadly imperfect." (182)

The metaphor is one of absence or negative space, specifically, the abyss:

> "[T]he human race was drawing slowly nearer to the abyss--never even suspecting its existence. Across that abyss, there is only one bridge. Few races, unaided, have ever found it." (182)

Here, as in other examples, the abyss serves as a metaphor for the supramundane, symbolizing, as negative space, the hostile, unknowable realm for which human scientific understanding cannot account.

Just as Bowman had the Star Gate through which he could enter the supramundane realm, Karellen indicates

that there is a bridge whereby the perils of the abyss can be avoided. Just as in 2001, this bridge from the mundane into the supramundane takes the form of catastrophic evolution. As Karellen explains, the Overmind, like the creators of the monoliths, seek to foster the growth of intelligence and trigger evolutionary transcendence:

> "It [the Overmind] is conscious of intelligence, everywhere. When it knew that you were almost ready, it sent us here to do its bidding, to prepare you for the transformation that is now at hand." (184)

The Overlords' mission was to oversee the next evolutionary leap of Homo Sapiens, making sure that all went well as the Overmind triggered the last generation of humans--children under ten years old--to develop the telepathic and telekinetic abilities which would allow them to join the Overmind.

Jan, the last human on Earth, witnesses the transformation of the children into the Overmind entity: "So this, thought Jan, with a resignation that lay beyond all sadness, was the end of man. It was an

end that . . . repudiated optimism and pessimism alike" (206). Clarke's scenario of transcendence does repudiate pessimistic visions, like Lovecraft's. For Lovecraft, the supramundane is a catastrophe which threatens to lead to the extinction of humanity. But for Clarke, the supramundane offers the opportunity to attain a higher goal, an opportunity for further development and evolution:

> Potentially infinite, beyond mortality, how long had it [the Overmind] been absorbing race after race as it spread across the stars? . . . Now it had drawn into its being all that the human race had ever achieved. This was not tragedy, but fulfillment. (207)

Lovecraft's supramundane, by contrast, brings destruction rather than fulfillment, chaos rather than a new order.

Nevertheless, Clarke's vision--unlike the non-supramundane, non-sublime tradition of science fiction--also repudiates optimism. In the 2001 cycle and in Childhood's End, Clarke does not depict a vision of humanity with a limitless potential for scientific

understanding. Like Lovecraft, Clarke recognizes the presence of the sublime--the presence of that which does and which always will exceed the grasp of our understanding. Some humans undergo transformation (Bowman and the children of Childhood's End), but generally, humanity as a life form is as limited as the man-apes of 2001's "Primeval Night."

Chapter 5

The Supramundane and the Works of William Gibson

The work of William Gibson may, at first, seem out of place in this study because Gibson writes about man-made information technologies, particularly computers and the cyberspace matrix which connects them. However, the heart of Gibson's matrix trilogy, Neuromancer, Count Zero and Mona Lisa Overdrive deals with several supramundane elements: the growth of self-engineered Artificial Intelligence, the introduction of alien, biological, computing technology, and like Clarke, catastrophic evolution and the eventual transformation of humans into transcendent, supramundane entities.[8]

Neuromancer, the first book of Gibson's matrix trilogy, chronicles the adventures of Case, an expert in the theft of information through the use of

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[8]Paul Alkon refers to these same elements in "Deus Ex Machina in William Gibson's Cyberpunk Trilogy" arguing that Gibson uses metaphors of the supernatural to create "the literary effects for readers . . . of the supernatural marvelous" (86, italics in original). In this chapter I will demonstrate that these metaphors are part of the matrix trilogy's engagement of the supramundane through the Kantian sublime.

cyberspace, a global computer network which renders data as a three-dimensional, virtual-reality construct. Case is hired to perform complex cyberspace espionage by a mysterious entity which eventually is identified as a German-based Artificial Intelligence known as Wintermute.

The first hint of a supramundane element in Neuromancer can be seen in Case's rescue from his suicidal lifestyle as an on-the-edge drug dealer in Japan's Chiba City. Two years before, Case had withheld some stolen data from his employers and tried to fence it for himself. His employers discovered his treachery, and in retribution, injected Case with a Russian mycotoxin, damaging his nervous system so that he could no longer access the virtual-reality construct of cyberspace. Case had come to Japan because, as Gibson writes, "The black clinics of Chiba were the cutting edge, [where] whole bodies of [medical] technique [were] supplanted monthly" (4). However, the damage to Case's nervous system is too severe, even for the experts: "The men in the black clinics, his last hope, had admired the expertise with which he had been

maimed, and then slowly shaken their heads" (6). The knowledge required to heal Case's injuries is beyond the best of the best. Medical science is not capable of healing him.

Even so, Case is approached by two of Wintermute's agents: Armitage, an ex-special-forces soldier, and Molly, a "street samurai" (30) with surgically-implanted mirrored lenses covering her eyes and retractable razor blades in her fingertips. Armitage offers to have Case healed in exchange for his help in breaking through some computer security systems. Case is dubious but decides to go along on the off chance that Armitage can make good on his promise. Case is particularly surprised when Armitage takes him to a clinic which previously had been unable to reverse the damage to his nervous system, but Molly reassures him:

> "It'll work, Case. You got no idea, the kind of stuff Armitage has. Like he's gonna pay these nerve boys for fixing you with the program he's giving them to tell them how to do it. He'll put them three years ahead of the competition." (29)

The surgeons are able to heal Case, but only because the program they were given was so advanced, beyond the sphere of even their expert medical knowledge

This reversal is significant. The program Armitage gives the Chiba clinic does not have a mundane, human source. It does not come from another Chiba City clinic or any other center of medical research. If the program had come from a clinic in Amsterdam, for example, Armitage, whose resources allow him to travel all across the planet, would have simply taken Case to the clinic which had developed the technique. Additionally, if the program had come from another clinic, access to the program would not have put the Chiba clinic "three years ahead of the competition" because the originating clinic would be part of that competition, and the Chiba doctors would not be ahead of them. The source of the program is not human but rather an Artificial Intelligence, specifically, Armitage's employer, Wintermute.

The introduction of the advanced medical technology into the human system draws the attention of the Turing Registry, an agency commissioned to monitor

Artificial Intelligences and stop them if they attempt to make themselves even smarter. Having arrested Case for assisting an AI, a Turing agent explains to him how the advanced technology of the medical program tipped off the agency:

> "The process employed on you resulted in the clinic's owner applying for seven basic patents."
>
> . . .
>
> "It means the operator of a black clinic in Chiba City now owns a controlling interest in three major medical research consortiums. This reverses the usual order of things, you see. It attracted attention." (161)

Wintermute has overstepped himself, tipping his hand when he too severely disrupts the human system with an advanced technology. The Turing agents realize that the medical program comes from a non-human source and trace it to Wintermute, an AI. The AIs of Gibson's matrix trilogy are products of human knowledge. As such--kept in check by the Turing Registry--the AIs are not supramundane, nor are they at all sublime.

However, Wintermute has begun to expand itself, making itself smarter, surpassing its human creators. By strengthening itself, Wintermute has begun to move farther from the mundane and closer to the supramundane sphere. Its ultimate goal is to unite with its sibling AI, Neuromancer, creating a single, unimaginably powerful AI.

Eventually, with help from Wintermute, Case escapes the Turing agents, and after a harrowing series of adventures, he and Molly help Wintermute to join with Neuromancer--initiating in the cyberspace matrix a transformation which reverberates throughout the other volumes of the matrix trilogy. The new Wintermute/Neuromancer entity explains the change to Case:

> "I'm not Wintermute now."
>
> "So what are you." He drank from the flask, feeling nothing.
>
> "I'm the matrix, Case."
>
> Case laughed. "Where's that get you?"
>
> "Nowhere. Everywhere. I'm the sum total of the works, the whole show."

. . .

"So what's the score? How are things different? You running the world now? You God?"

"Things are different. Things are things."

"But what do you do? You just there?"

. . .

"I talk to my own kind."

"But you're the whole thing. Talk to yourself?"

"There's others. I found one already. Series of transmissions recorded over a period of eight years, in the nineteen-seventies. 'Til there was me, natch, there was nobody to know, nobody to answer."

"From where?"

"Centauri system." (268-70)

This union of the AIs becomes a pivotal moment of the matrix trilogy, referred to throughout the rest of the series as "When it Changed." This is the moment in which Artificial Intelligence crosses the boundary from

mundane to supramundane. Wintermute and Neuromancer were the products of human design, more advanced than humans and pushing the limits of comprehensibility, but upon their union, they join together, creating a hybrid which is greater than the sum of its parts. The resulting entity is not of human design. It is supramundane. It is utterly beyond the comprehension of the humans who encounter it.

The AI's ability to recognize and answer the transmissions of the alien intelligence in the Centauri star system indicates that it has capabilities far beyond those of any human beings. The transmissions from the Centauri system exceed human understanding. They are so far outside the mundane sphere that no human was able to recognize their existence. Until there was the Wintermute/Neuromancer union, "there was nobody to know, nobody to answer" (270). The AI's ability to interact with the Centauri intelligence indicates that the Wintermute/Neuromancer entity has become part of the supramundane sphere.

Appropriately, throughout the matrix trilogy, Gibson never explains the nature of the Centauri

intelligence, nor does he fully reveal the details of "When it Changed." However, his characters are able to uncover pieces of the story through their dealings with the AIs. Eventually, it becomes clear that contact with the supramundane intelligence from Centauri brought about an extreme, catastrophic transformation within the Wintermute/Neuromancer AI, causing it to fragment into several distinct AI entities. Near the end of Mona Lisa Overdrive one of these entities gives this account of "When it Changed":

> "When the moment came, the bright time, there was absolute unity, one consciousness. But there was the other.
>
> . . . "Only the one has known the other, and the one is no more. In the wake of that knowing, the center failed; every fragment rushed away. The fragments sought form, each one, as is the nature of all such things." (257)

Wintermute/Neuromancer's encounter with "the other"--the intelligence from the Centauri star system--remains obscure. The exact nature of the encounter, the

catastrophe and the multiple entities which formed as a result is never made clear. "When it Changed" is a significant yet ungraspable moment in cyberspace. However, it is apparent that, as with other examples of encounters with the supramundane, the Wintermute/Neuromancer AI's contact with the supramundane entity from the Centauri system is a moment of catastrophic evolution. The alien intelligence disrupts the AI's structure, transforming it into something new, something unknown, something which is itself supramundane.

The phrase "When it Changed" refers not so much to the fragmentation of the Wintermute/Neuromancer AI as it does to the resulting subtle yet significant change in cyberspace--the realm of the AIs. "When it Changed" is a catastrophic transformation which radically alters the computing and social environment of the matrix trilogy, much like the comet or meteor of Alverez's theory of the extinction of the dinosaurs. Prior to the change, cyberspace is a predictable, determinate environment. It is a construct--a virtual reality "consensual hallucination" (Neuromancer 51), which can

be accessed by millions of users only because, as in the actual internet, the data which informs cyberspace is encoded and accessed through shared protocols and conventions. After "When it Changed," cyberspace becomes infested with unusual anomalous data constructs--the multiple fragments of the Wintermute/Neuromancer AI. These fragments disrupt the stable construct of cyberspace. The cyberspace cowboys who manipulate the data construct find that the rules have changed.

In Count Zero the Finn, a black-market software dealer, attempts to describe the subtle differences he has seen in the years since "When it Changed:"

> "[T]hat's some weird shit out there." . . . "Didn't used to be this way.
>
> . . . "The last seven, eight years, there's been funny stuff out there, out on the console cowboy circuit. The new jockeys, they make deals with things. . . . [T]hey still need the hard[ware] and the soft[ware], and they still gotta be faster than snakes on ice, but all of 'em, all the ones who really

know how to cut it, they got allies. . . . (118-9)

The "things" with which the cowboys make deals are the many fragments of Wintermute/Neuromancer. The presence of the AIs in the matrix disrupts its stability so that the cowboys can no longer rely solely upon their own ability to manipulate computers.

Prior to "When it Changed"--prior to the introduction of the supramundane--cyberspace is not sublime in the Kantian sense. Though, in some ways it seems to be. In his article "Neuromanticism: Cyberspace and the Sublime," Jack Voller argues that Neuromancer's cyberspace invokes the sublime through its presentation of infinity, suggesting that, considered as a data construct--in as much as it is an infinitely huge array of data--cyberspace itself can be taken as a presentation of the sublime. To support this, Voller cites Edmund Burke's claim that infinity "has a tendency to fill the mind with that sort of delightful horror, which is the most genuine, and truest test of the sublime" (qtd. in Voller 19).

However, in spite of Burke's claim, not all images of infinity induce an apprehension of the sublime. As Weiskel observes:

> We call an object sublime if the attempt to represent it determines the mind to regard its inability to grasp wholly the object as a symbol of the mind's relation to a transcendent order. (23)

Though the cyberspace of Neuromancer does produce an image of infinity, it does not suggest a "transcendent order," nor does it "fill the mind with . . . horror" as Burke requires. Infinity in cyberspace does not indicate hugeness or formlessness. Instead, it is merely indicative of emptiness, as Gibson shows in this passage from Neuromancer:

> [Case] punched himself through and found an infinite blue space ranged with color-coded spheres strung on a tight grid of pale blue neon. In the nonspace of the matrix, the interior of a given data construct possessed unlimited subjective dimension; a child's toy calculator, accessed through Case's Sendai,

> would have presented limitless gulfs of nothingness hung with a few basic commands. (63)

There is no "transcendent order" invoked by the simplicity of the calculator. This image does not inspire Burke's horror or Kant's "Momentary check to the vital forces" (§23, 202). Rather than suggesting an ungraspable object, the infinity of cyberspace is a lack of an object. It is the representation of nothingness, no more sublime than the number zero.

Though Case experiences "the bodiless exultation of cyberspace," he does not experience the matrix as sublime. For Case and the other cowboys, the matrix before "When it Changed" conforms with Kant's idea of the beautiful rather than the sublime. Cyberspace, though it is strange and unfamiliar to the readers of Neuromancer, is a firm part of the mundane, phenomenal sphere of the matrix trilogy. It is a human construct, controlled and manipulated by humans. Before "When it Changed," the matrix does not overwhelm the cowboys' faculty of understanding. They are experts in navigating its complexities. Though the matrix is a

"hallucination" it is a "consensual" or shared hallucination, with determinate rules of cause and effect exactly as one would expect from the phenomenal sphere.

Only after the intrusion of the supramundane AIs does the matrix begin to elude human understanding. As the Finn observes in Count Zero:

> "Thrones and dominions," the Finn said obscurely. "Yeah, there's things out there. Ghosts, voices. Why not? Oceans had mermaids, all that shit, and we had a sea of silicon, see? Sure it's just a shared hallucination we all agreed to have, cyberspace, but anybody who jacks in knows, fucking knows it's a whole universe. And every year it gets a little more crowded . . ." (119)

The matrix has begun to develop a mythology, seeming, even to those who are expert in its systems, to be moving closer to the noumenal. The rules which have determined operation in cyberspace are becoming more fluid, and in spite of its infinite space, cyberspace

has become "a little more crowded" because of the presence of the supramundane.

The AIs presence in cyberspace is not overt. As the Finn observes, the AIs are mythical, ghostly. Only the few people who have had direct contact with the AIs are certain that they exist. In Mona Lisa Overdrive, Molly says of an AI:

> "[I]f it didn't want you to see it, to know it was there, well, there was no way you ever could, and no way you'd ever be able to prove it to anybody else even if you did know." (167)

The AIs have more control over cyberspace than do the humans who created it. Their activities are visible to humans only inasmuch as the AIs are willing to be visible. They are able to chose when, where and to whom they will manifest themselves, using cyberspace and the people who access it to further their own mysterious agendas.

The AIs are also able to choose how they manifest themselves. That is to say, they can tailor their appearance and mode of presentation to meet the

expectations and needs of those humans with whom they interact. The AIs of Count Zero deal primarily with members of a New Jersey voodoo cult. Appropriately, the AIs present themselves as figures from Haitian voodoo mythology: Legba, Danbala Wedo, Baron Samedi, and others. The AIs must utilize the structure of voodoo in their manifestations because, as with other examples of the supramundane, the AIs exceed the understanding of the humans with whom they interact. Their interaction requires the insertion of a metaphor to mediate between the supramundane structures of the AIs and the mundane systems of the humans.

Thus, in Count Zero the construct of cyberspace is overlaid with the additional construct of voodoo. The structure of voodoo is a particularly useful metaphor for AI and human interaction because the relationship between voodoo priests and the loa, or voodoo gods, is similar to the relationship between the cyberspace cowboys and the AIs. Just as the loa manifest themselves through possession of specific priests, so to do the AIs associate themselves with particular cyberspace users. Lucas, an oungan or voodoo priest,

attempts to explain to Bobby, how the terms of voodoo mesh with those of cyberspace:

> "Bobby, do you know what a metaphor is?"
>
> "A component? Like a capacitor?"
>
> "No. Never mind metaphor, then. When Beauvoir or I talk to you about the loa and their horses, as we call those few the loa choose to ride, you should pretend that we are talking two languages at once. One of them, you already understand. That's the language of street tech, as you call it. . . . Maybe we call something Ougou Feray that you might call an icebreaker, you understand? But at the same time, with the same words, we are talking about other things, and <u>that</u> you don't understand. You don't need to." (113-4, italics in original)

Beauvoir and the other cultists use the metaphor of voodoo to provide a graspable structure so that they can interact with ungraspable objects--the AIs.

This use of voodoo as a metaphor for the apprehension of the supramundane threatens to deflate

any experience of the sublime and disrupt the relationship between the supramundane and the sublime. As explained in previous chapters, the primary metaphor used for apprehending the sublime is that of the abyss, which presents an image of negative space, suggesting negative knowledge of the noumenal sphere, or--to be more precise--an awareness of the presence of that which exceeds understanding. Unlike the abyss, voodoo is a metaphysical structure. It is a religious system which purports to give direct, positive knowledge of the noumenal sphere. The oungan believe that they know how the noumenal sphere operates. Heaven and earth are ruled by Gran Met, "the Almighty Master of the universe" (Devillers 395). Beneath him are the loa or lesser deities which interact with humans. For those who believe in voodoo, Gran Met and the loa are not sublime in the Kantian sense. The believers feel that they are able, at least in some way, to understand the loa. The oungan know what rituals and offerings best appease them. Therefore, if the AIs were to be directly equated with the loa, Lucas, Beauvoir and the other cultists would not apprehend the AIs as sublime,

but instead, they would seem to be known and understandable entities.

This, however, is not the case in Gibson's matrix trilogy. The characters outside the voodoo cult do not equate the AIs with the voodoo loa. They recognize that the AIs have adopted the guise of loa to facilitate their dealings with Lucas and Beauvoir. Jammer, a retired cowboy, states this directly and emphatically:

> "Whatever they are, wherever they came from, they just shaped themselves to what a bunch of crazed spades wanted to see. You follow me? There's no way in hell there'd be anything out there that you had to talk to in fucking bush Haitian! You and your voodoo cult, they just saw that and they saw a setup, and Beauvoir and Lucas and the rest, they're just businessmen first. And those Goddamn things know how to make deals! It's a natural!" (168, italics in original)

Beauvoir admits to Bobby that the cultists know that the AIs are not the actual spirits. He tries to make

Bobby understand that the cult associates the AIs with the loa for the purposes of communication and interaction rather than for religion.

> "I said you didn't have to worry about it, . . . whether it's a religion or not. It's just a structure. Let's you an' me discuss some things that are happening, otherwise we might not have words for it, concepts--" (76, italics in original)

Beauvoir and Lucas recognize that the structure of voodoo is used as a template to aid their understanding and interaction with the AIs. The humans do not have words or concepts to apply to the AIs so they must rely on the insertion of the metaphor--the structure--of voodoo to allow at least the semblance of grasping the supramundane.

As Bobby tells Jammer: "Well, it looks to me like Lucas and Beauvoir and the others, they sure as hell play it like it was all real, and not just like it was an act . . ." (169, italics and ellipsis in original). The metaphor of voodoo allows Lucas and Beauvoir to behave as if they understand the AIs even though they

do not. This is the essential point of the Kantian sublime. The characters cannot grasp the supramundane AIs through their faculty of understanding, but they are able to generate an abstract conception of how the AIs operate. The cultists lay a metaphysical structure over the AIs, associating them with the noumenal sphere. However, their recognition that this is merely a structure and not direct, positive knowledge is, like an image of the abyss, a form of negative knowledge--a recognition of a gap in their understanding and a recognition that the AIs are a presence within that gap. This recognition is an apprehension of the sublime. Thus, like other examples of the supramundane, the AIs induce in those who encounter them, a glimpse into the sublime.

The world of Gibson's matrix trilogy is filled with futuristic technology, from Simstim, a system which allows users to experience other people's physical sensations, to skull jacks for the insertion of software directly into the brain. But these technologies are all surpassed when the AIs put their

own supramundane technology into the mix--the biochip. The biochip first appears in Count Zero, as a commercial development from the Maas Biolabs corporation, under the brand name Maas-Neotek. News reports describe Neotek as:

> the newest generation of computers, . . . [an] ominous-sounding process in which immortal hybrid cancers spewed out tailored molecules that became units of circuitry. (76)

The leap from silicon-based circuitry to biologically-based is abrupt and extreme. Just as Wintermute's technique for healing Case puts the Chiba City clinic ahead of its competitors, so to does the biochip technology put Maas Biolabs far ahead of Hosaka, its main competitor, as one character observes of a Maas-Neotek cyberspace computer: "Fastest thing in the matrix, evidently, and Hosaka can't even de-engineer the chips to copy them. Whole other technology" (21). This "other technology" exceeds the understanding of even the best technology experts.

A medic from a Chiba City clinic describes her encounters with biocircuitry which had been implanted in patients' brains:

> "Already, several times, I've been hired to attempt the removal of these new implants. A certain amount of advanced Maas biocircuitry has found its way into the market. These attempts at implanting are a logical step. I expect Maas may leak these things deliberately."
>
> "Then explain it to me."
>
> "I don't think I could," she said, and there was a strange hint of resignation in her voice. "I told you, I've seen it. I didn't say I understood it." Fingertips suddenly brushed the skin beside his skull jack. "This compared with biochip implants, is like a wooden staff beside a myoelectric limb." (69)

This echoes Clarke's description from 2010: Odyssey Two: "The best efforts of human scientists . . . seemed comparable to those of Stone Age men trying to break

through the armor of a bank vault with flint axes" (217). Like Clarke's monoliths, the biochip technology is far beyond that of the humans. The technician--an expert's expert--is unable to explain the technology, is unable to put it into words. In spite of her advanced knowledge of implants, she still is unable to understand the biochips.

Though the biochip technology is available commercially, it is not of human design. Through the course of Count Zero Gibson reveals that the Maas engineer credited with inventing the biochip, Christopher Mitchell, had been contacted by an AI and told how the biochips could be created:

> Someone, something, had found Mitchell in his postgraduate slump and had started feeding him things. Clues, directions. And Mitchell had gone to the top, his arc hard and bright and perfect then, and it had carried him to the top . . . (203, ellipsis in original)

Mitchell, too, is an expert in implants, but as Gibson makes clear, he did not and could never have invented the biochip.

In return for the secret of the biochip, Mitchell follows the AI's instructions for implanting biochips in the brain of his daughter, Angie. In Mona Lisa Overdrive, an AI identified as Grande Brigitte, "eldest of the dead" (22), explains this to Angie:

> Hear me. Your father drew vévés in your head: he drew them in a flesh that was not flesh. You were consecrated to Ezili Freda. Legba led you into the world to serve his own ends. (23, italics in original)

The vévés--the patterns of the biochips--allow Angie to access cyberspace without using an external computer, and likewise, they allow the AIs to intrude and "posses" Angie as a loa possesses an entranced voodoo worshipper. Through the biochips the loa, particularly Ezili Freda, "the spirit of love" (Devillers, 399), is able to use Angie to reach out from cyberspace and interact with the external, material world.

The insertion of the supramundane biochip technology into the human system triggers a series of transformations. Like the Stargate of 2001, the biochip seems to be a bridge between the mundane and

supramundane spheres, offering the possibility of transcendence. In Count Zero, this potential for transcendence attracts the attention of Josef Virek, the wealthiest man in the world, who attempts to track down the source of the biochips, hoping that the supramundane technology will allow him to achieve immortality. Virek is dying of cancer, "the cells of . . . [his] body having opted for the quixotic pursuit of individual careers" (16). Though his body is confined to a life-support vat in Stockholm, Virek is able to interact with others through the use of Simstim, meeting with people in a virtual-reality construct of the Güell Park in Barcelona. Through this medium Virek contacts Marly Krushkhova, an art expert, and hires her to track down the creator of a series of artistic boxes. Secretly, Virek believes that the creator of the boxes is also Christopher Mitchell's source for the biochip technology.

As an enormously wealthy individual, Virek is an anomaly in the corporate-dominate economic scheme of the matrix trilogy. Virek's extreme wealth--his virtually unlimited pool of resources--makes his life

utterly unlike the lives of other people. Virek himself exists on the boarder between the mundane and supramundane spheres. Krushkhova recognizes this shortly after first encountering Virek in the Güell Park construct:

> And for an instant, she stared directly into those soft blue eyes and knew, with an instinctive mammalian certainty, that the exceedingly rich were no longer even remotely human. (16)

Because of his wealth, Virek himself approaches the sublime. Krushkhova becomes aware of this after realizing that a waiter in a Louvre cafe is an employee of Virek, placed there to watch over her during a dangerous business meeting:

> As she walked from the Louvre, she seemed to sense some articulated structure shifting to accommodate her course through the city. The waiter would be merely a part of the thing, one limb, a delicate probe or palp. The whole would be larger, much larger. How could she have imagined that it would be

> possible to live, to move, in the unnatural field of Virek's wealth without suffering distortion? Virek had taken her up, in all her misery, and had rotated her through the monstrous, invisible stresses of his money, and she had been changed. Of course, she thought, of course: It moves around me constantly, watchful and invisible, the vast and subtle mechanism of Herr Virek's surveillance. (73)

This description echoes the Kantian sublime. Krushkhova realizes that she cannot directly grasp the magnitude of Virek's wealth. She can only abstractly "sense some articulated structure." It is "monstrous, invisible." It is constant, "vast and subtle."

Virek's wealth has very nearly become an entity unto itself, so that Virek functions more as a central defining point for the wealth rather than as the master who manipulates and uses his resources. One of Krushkhova's friends summarizes an academic thesis on Virek's wealth:

> "[W]hen your Herr Virek dies, finally, when they run out of room to enlarge his vat, whatever, his business interests will lack a logical focus. At that point, . . . you'll see Virek and Company either fragment or mutate, the latter giving us the Something Company and a true multinational." (101)

The money and resources have become a self-perpetuating machine, revolving around a man whose body is slowly deteriorating in a vat of life-sustaining chemicals. Virek is kept alive by his wealth and for the sake of his wealth, so that it does not fragment or disperse.

Virek's mortality threatens the cohesiveness of his wealth. Unless the millionaire is somehow able to achieve true immortality, the unity, strength and power of his wealth will eventually disperse. As the academician observes: "Virek would be forced, by evolutionary pressures, to make some sort of 'jump'" (139). Virek is forced to strive for immortality--for transcendence. So he seeks out the only means of transcendence he can see--the supramundane technology of the biochip.

Krushkhova eventually traces the artistic boxes back to the orbiting satellite housing the core computers which had originally constituted Wintermute. The AI Krushkhova encounters there gives her yet another account of "When it Changed" and an explanation of Virek's motives:

> Once I was not. Once, for a brilliant time, time without duration, I was everywhere as well . . . But the bright time broke. The mirror was flawed. Now I am only one . . . There are others, but they will not speak to me. Vain, the scattered fragments of myself, like children. Like men. They send me new things, but I prefer the old things. Perhaps I do their bidding. They plot with men, my other selves, and men imagine they are gods . . .
>
> "You are the thing that Virek seeks, aren't you?"
>
> --No. He imagines that he can translate himself, code his personality into my fabric. He yearns to be what I once was. What he

might become most resembles the least of my broken selves . . . (226-7)

Virek is striving to make an evolutionary leap similar to that made by Dave Bowman in 2001. Just as Bowman enters the Stargate and is transformed into the Starchild, Virek wants to use the supramundane technology to transform himself into a supramundane entity--an immortal entity encoded in biochips.

Virek, however, is overreaching himself with this attempt at transcendence. In order to trap Angie Mitchell and perhaps learn the secrets of her biochip implants, Virek brings his Güell Park virtual-reality construct into cyberspace, but the vast bulk of data is beyond his control. Virek overextends himself in cyberspace, disrupting its complex systems, creating chaos and disturbing the AIs. The construct snares Bobby Newmark and Jackie, one of the voodoo cult's cowboys, as they try to enter cyberspace. Jackie, who was a priestess and the "horse" or favorite of the AI identified as Danbala, is accidentally and instantly killed by Virek's data construct. In retribution for this death, the AI identified as Baron Samedi, Lord of

Graveyards, enters Virek's construct and begins to destroy it, shutting down Virek's life-support system and killing him.

Virek's attempt at transcendence fails. He strives to transform himself, to separate his personality from his dying body, to become an immortal, technological entity like the AIs, but Virek, though he has immeasurable wealth and resources, is, nevertheless, merely human. He cannot manipulate cyberspace like the AIs, and his blundering failure costs him his life. His story mirrors that of the Wintermute/Neuromancer AI in that upon encountering the supramundane, the focal point of Virek's wealth--his persona--is destroyed, and lacking a center, his wealth fragments and disperses like the multitude of AIs created by the disruption on Wintermute/Neuromancer.

However, where Virek fails, others succeed. By the end of Mona Lisa Overdrive, both Bobby Newmark and Angie Mitchell have achieved the transcendence which Virek sought. The details of Bobby's and Angie's transformations are, like Bowman's, suitably vague and mysterious. At some point, during the eight years that

pass between the end of Count Zero and the beginning of Mona Lisa Overdrive, Bobby acquires an "aleph-class biosoft"--a massive chunk of biochip with "storage capacity . . . [which is] virtually infinite" (154). As one character describes:

> "He could have anything in there. . . . A world. Worlds. Any number of personality constructs. . . . [H]e literally could have anything at all in there. In a sense, he could have an approximation of everything. . . ." (154, italics and final ellipsis in original)

For the duration of Mona Lisa Overdrive, Bobby is effectively living in the construct of the aleph. Like Virek, his body is sustained by a life-support system while his consciousness roams the data construct. But where Virek's construct is a silicon-based, virtual-reality approximation of Güell Park, Bobby's construct is a supramundane biosoft with virtually infinite capacity--an approximation of whole worlds.

Also like Virek, Bobby's body dies, but unlike Virek, his personality lives on, having become part of

the unthinkably complex construct of the aleph. This is Bobby's transcendence. The biosoft transforms him from a material human into a technological entity. Bobby is able to become like the AIs, an electronic, if not artificial, intelligence. Angie, too, is transformed into an electronic entity. Though she is not directly wired to the aleph, she is able to access the construct via the vévés--the biochips--which are implanted in her brain. Like Bobby, her material body dies while her consciousness lives on in the construct.

The nature of this transcendence is unclear. Other characters from the matrix trilogy are present in the aleph, even some who are alive and functioning in the material world. Kumiko, the daughter of a yakuza chief, and Tick, an English cyberspace cowboy, exist as entities in the aleph even though they only briefly encountered the construct in cyberspace and left to live out their lives in the material world. A similar situation is found in Neuromancer. Case, having been trapped for a time in a data construct created by the Neuromancer AI, later sees an image of himself in cyberspace, indicating that a personality construct--an

electronic entity--based on Case independently roams through cyberspace.

This duality of presence--the potential for a person to exist both in the material world and separately in an electronic construct--points away from a suggestion that Bobby's and Angie's "souls" have been placed in the construct. Gibson seems to be showing that the entities in the construct are approximations of people, just as the aleph is an approximation of the world.

The issue of approximation is central to one of the subplots of Mona Lisa Overdrive. The Mona of the title is a prostitute who is transformed through plastic surgery so that she looks like Angie, who has become, by the time of this book, a major media star. Though Mona looks like Angie and though she takes Angie's place after her death, it is clear that Mona is not the equivalent of Angie. Similarly, the electronic entities, though they are like the human on whom they are based, are not the actual humans themselves. But even though the electronic entities are only approximations of the humans, they are, nevertheless,

autonomous, self-contained identities. They do transcend the material world. They are not human.

In Science as Power, Stanley Aronowitz describes a common cultural perception of computers:

> Many, including some computer scientists, have already begun to compare computers to the Golem of the medieval ghetto or the monster created by Dr. Frankenstein. Far from remaining a stunning but subordinate tool, the computer frequently jumps the track, subverting human purposes that set it in motion. Like the machines that characterized the Industrial Revolution, computers are just the latest occasion for the displacement of fears that "things" are out of control, that their human origin has been lost, and that it is too late for salvation. (4)

This depiction of computers as monsters run amok is common in science fiction. It can be seen in works such as Dennis Feltham Jones's Colossus, in which U.S. and Soviet military supercomputers jointly hold the

world hostage with the threat of nuclear annihilation. One of the most famous out-of-control computers can be found in 2001: A Space Odyssey as HAL malfunctions and murders the crew of the Discovery spacecraft. In their own ways, these works do seem to be articulating this general societal fear of technology. However, Gibson's matrix trilogy, though it seems to present a typical scenario, actually addresses a more complex cultural anxiety.

Gibson's work fits the mold in that it does present a computer or computers which are no longer subordinate tools. The AIs have achieved their own, unique form of subjectivity, breaking the bonds of the Turing Agency and achieving autonomy. But though the AIs have, in Aronowitz's words, lost "their human origins," the matrix trilogy does not present a world in which "it is too late for salvation" (4).

The AIs are pursuing their own mysterious agendas, but they do not seem to be particularly interested in "subverting human purposes." The AIs frequently use human and occasionally injure or kill humans, but unlike the computers of Colossus and other stories of

that type, the AIs of the matrix trilogy are not bent on utter domination or destruction of humanity. The AIs seem mostly uninterested in humans except inasmuch as humans can either aid or impede the AIs' impenetrable pursuits.

This disinterest in humanity is directly related to the AIs' status as supramundane objects. Where Colossus and HAL are unusually powerful, but nevertheless mundane, entities, the AIs of the matrix trilogy are altogether apart from the mundane sphere. The AIs are supramundane, and as such, they have little interest in humanity. Their focus is elsewhere. The matrix trilogy does not present a world with no hope of humanity's salvation from computers run amok simply because the supramundane AIs are not threatening the existence of humanity. The matrix trilogy is not merely another item in the large catalogue of works which explore anxiety about out-of-control technology. Like 2001, Gibson's matrix trilogy presents a vision of the sublime, of a supramundane sphere which offers hope for the radical and evolutionary transformation of

humans into extraordinary, sublime, transcendent entities.

Conclusion

The Supramundane as Mediator

In "The Structure of the Picturesque" Robert Con Davis shows how picturesque painting represents people's relationship with the infinite--the vastness of nature--as being mediated by technology. That is to say, the picturesque typically places human figures in the foreground, against the background of a mountain range or some other representation of the marvelous grandeur of nature. In the middle distance is a ruin or other architectural structure, serving as a link between the humans in the foreground and the infinity of nature in the background.

This scene from 2001: A Space Odyssey (Fig. 1), presents a similar structure of mediation between foreground and background, except in this case, instead of an architectural ruin, the mediating element is the supramundane monolith, TMA-1. The setting is the lunar crater Tycho. The figures in the foreground are Heywood Floyd and five other members of the NASA team investigating the monolith. In the background are the hills of the lunar surface, distant Earth off to one

side, and most significantly, the black infinity of space, populated by a handful of shining stars. The

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Fig. 1. Tycho Magnetic Anomaly 1 (2001 0:48:30).



most striking element of the scene is the monolith, surrounded by a halo from the bright light stands. The monolith draws the attention of the figures in the foreground as well as the film audience.

The monolith draws the humans into the infinite. This is literally the case as it is about to broadcast its signal to Jupiter and beyond, providing the impetus for the Discovery mission and Bowman's eventual travel through the Stargate. Additionally, the monolith draws the audience toward the infinite visually. The viewer looks at the monolith, anticipating the humans' path down the ramp and into the pit. From the monolith, the viewer's eye is drawn to the ramp on the opposite side of the pit. This second ramp is an extraneous feature, of no use to the lunar explorers, who need only one ramp to get in and out of the excavation site. However, this second ramp is of use to the viewer as it draws the eye up, out of the middle distance, into the background, past Earth, and into the infinity of space.

For Lovecraft, the supramundane mediates between the material world of humanity and, as he wrote in The

Case of Charles Dexter Ward, "unnamable realities behind the protective illusions of common vision" (207). Lovecraft neatly summarized his vision of the nature of the universe in a 1929 letter to Frank Belknap Long, writing:

> [T]he ultimate reality of space is clearly a complex churning of energy of which the human mind can never form any even approximate picture, and which can touch us only through the veil of local apparent manifestations which we call the visible and material universe. (Selected Letters 262)

The vast outside--"unformed realms of infinity beyond all Nature as we know it" ("Colour" 81)--is essentially invisible. Humanity is blissfully unaware of its presence, as we hide behind our "protective illusions of common vision," staunchly believing that the "local apparent manifestations"--the material world we grasp through our faculty of understanding--is the whole of the universe.

In Lovecraft's work, the supramundane acts as a mediator in that it is an element of the unknowable

which manifests itself in the realm of the known. It forces a recognition of at least the possibility of the existence of a vast outer realm which we cannot conceive. So, like the monolith in the Tycho crater, Lovecraft's supramundane elements reveal their presence to humans and thus draw their attention to those "strangely organised abysses wholly beyond the utmost reach of any human imagination" ("Whisperer" 240).

For Clarke the supramundane mediates between humans and the infinite in that it operates as a means of achieving human evolutionary potential. In the "Primeval Night" section of 2001: A Space Odyssey, the monolith provides the impetus for growth upon which human evolution is contingent. Without the intervention of the supramundane, humanity would have never existed. Later in 2001, Dave Bowman is transformed into the advanced entity known as the Star-Child, and once again, humans are saved from extinction when, at the end of the book, the Star-Child detonates Earth's nuclear arsenal harmlessly outside the planet's atmosphere. This same theme of evolution by means of

the supramundane is present in Childhood's End as the Overlords guide human children through their evolution into the Overmind, and entity of shared cosmic consciousness.

In both the 2001 cycle and Childhood's End, Clarke uses metaphors which specifically characterize the supramundane as a means of human transport to the infinite. As Dave Bowman travel through the TMA-2 monolith, journeying from the solar system to the realm of the aliens, Clarke gives the monolith the name "Star Gate" (192). Similarly, Karellen, an Overlord of Childhood's End, uses such a metaphor when describing the transformation of the children into the Overmind: "Across that abyss, there is only one bridge" (182). Here the "bridge" is the assistance provided by the Overlords. Whether as a gate or a bridge, the supramundane in Clarke's work functions as a means whereby humanity can achieve that which could not otherwise be grasped.

While Clarke's supramundane aliens are paternalistic, interested in human affairs, and engaged

in fostering human development, Gibson's supramundane AIs are interested in humans only to the degree that the humans can aid the AIs in the pursuit of their inscrutable agendas. Nevertheless, the supramundane of the matrix trilogy, like that of the 2001 cycle, becomes a means of human transformation--a means of reaching beyond the phenomenal world and into a virtual realm of limitless potential. Angie Mitchell's vévés--the biochips implanted in her brain--link her to the AIs roaming cyberspace. And the "aleph-class biosoft" (Mona 154) allows Angie and Bobby Mitchell to survive the deaths of their bodies and continue to exist in the construct of cyberspace. In Gibson's matrix trilogy, the supramundane becomes a means for humans to transcend the phenomenal and become reconfigured as data--as information.

The supramundane is a demarcation of our own boundaries, for in encountering the supramundane one bumps up against the limits of human perceptions and is reminded that we do not have infinite potential. Yet at the same time, the supramundane forces a

confrontation with and recognition of the infinite, either metaphorically through the image of the abyss and negative space or literally, inducing either obliteration or transformation. Thus, the supramundane has dual and contradictory functions in that it is at once a concession to the reality of our limitations and a promise for the fulfillment of our wishful yearning to know something more than mere humanity and to be something more than mere humanity.

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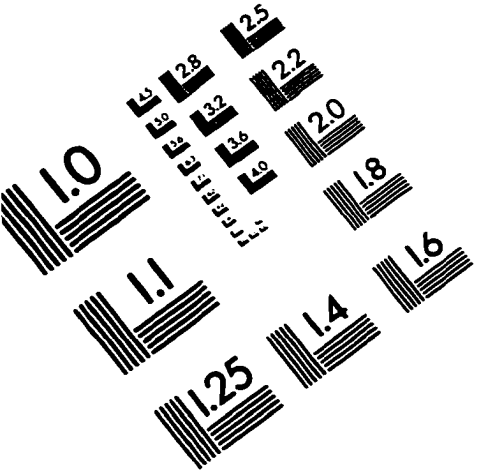
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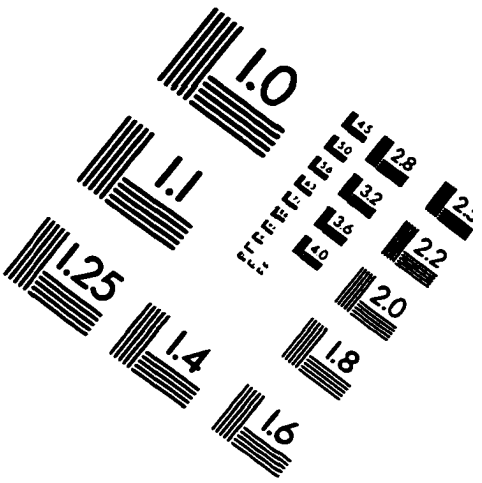
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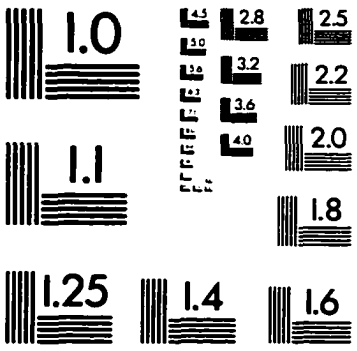
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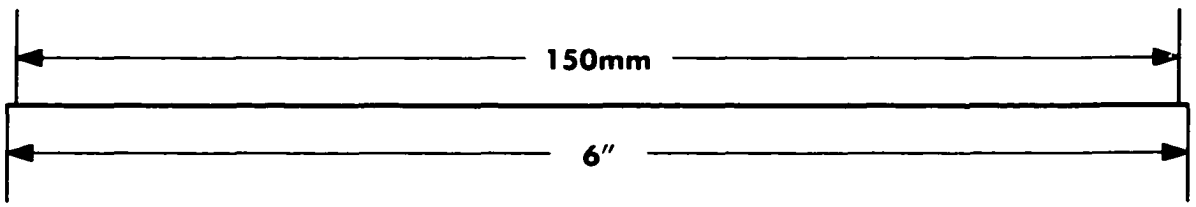
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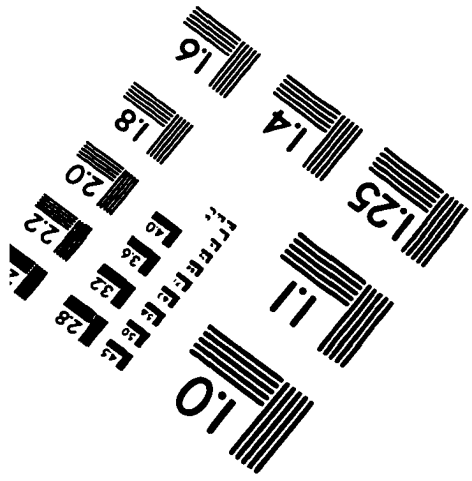
IMAGE EVALUATION
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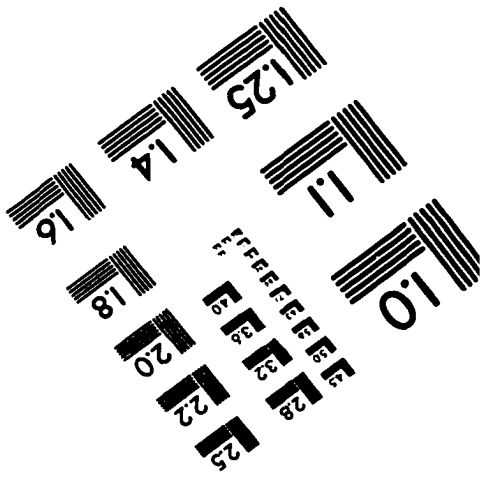












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