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The Gothic Origins of Science Fiction

PATRICK BRANTLINGER

Whether science fiction can achieve the stature of "mainstream" fiction may depend on the possibility of its developing into a "realism of the future." According to Robert Scholes, we don't now have such a realism, except maybe in the forecasting done by banks and insurance companies. But if science fiction could become a form of realistic prophecy, it might rival mainstream fiction esthetically, and it would excel it in social relevance.[1] A difficulty for this argument arises from the fact that the conventions of science fiction derive from the conventions of fantasy and romance, and especially from those of the Gothic romance. Science fiction grows out of literary forms that are antithetical to realism, so that the idea that it may evolve into a "realism of the future" is at best problematic.

At the same time, science fiction has been moving in the direction of increased realism, or at least of increased seriousness—John Brunner's novels may be read as approximations of a "realism of the future," and other recent writers—Ursula Le Guin, Anthony Burgess, William Golding, Stanislaw Lem—have been making it respectable if not exactly realistic.[2] Something like the same movement towards realism can also be traced in the history of the Gothic romance—in Britain, all the way from that frivolous original, *The Castle of Otranto*, through such great works as James Hogg's *Confessions of a Justified Sinner* and Emily Brontë's *Wuthering Heights*, down to the domestication of Gothic in the sensation novels of the 1860s, and in America from Charles Brockden Brown through Poe to Hawthorne and Melville.[3] But it is also true that the more realistic a Gothic romance or a science fiction story is, the more it ceases to be a Gothic romance or a science fiction story, because contradicting the conventions of these forms. *Wuthering Heights* is an example among Gothic romances—if it is a Gothic romance. And Golding's *Inheritors* and Burgess's *Clockwork Orange* are examples among science fiction—if they are science fiction. I intend to focus more on the conventions that define the two genres than on individual works that break through the conventions to new forms or that bend them into paradoxical shapes. By doing so, I hope to suggest why it has been difficult—maybe impossible—for science fiction to become a "realism of the future." If it is going to rival mainstream fiction in artistic seriousness and social relevance, it may have to do so on grounds other than realism.

Of course "realism" may refer to structural features of artworks, but it may

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[1] Robert Scholes made this argument in a lecture on "Fiction and the Future" given at Indiana University, February 28, 1978. See also his *Structural Fabulation* (Notre Dame, Indiana: University of Notre Dame Press, 1975) and, with Erik S. Rabkin, *Science Fiction: History, Science, Vision* (New York: Oxford University Press, 1977).

[2] Scholes cited John Brunner's *The Sheep Look Up* as at least an approximation of a "realism of the future."

[3] A good account of the development of Gothic in Britain may be found in Joan McTigue Zirker, *The Gothic Tradition in English Fiction, 1764–1824* (Indiana University Doctoral Dissertation, 1974).

also mean cognitive or epistemological validity. Depending on their skill, authors can invest any literary genre with such validity. But the conventions of genres also impose limits and carry a significance partly traditional and partly structural. The conventions of both Gothic and science fiction work against realism in both senses. Although some authors have produced stories in one genre or the other that are fully realistic in the second sense—works of great esthetic power and profound meaning—most stories in both genres necessarily fail to be realistic in either sense. The awkwardness of Darko Suvin's recent defense of science fiction as "the literature of cognitive estrangement" derives partly from this fact.[4] Suvin acknowledges that "90 or 95 percent of SF production is strictly perishable stuff." His term "cognitive" can therefore only refer to "the 5 to 10 percent of SF that is aesthetically significant" (vii). By making the exceptional "5 to 10 percent" the rule for science fiction, Suvin cannot explain why so much of the genre fails to be cognitive and hence falls outside his definition.

Though some works of science fiction achieve a very high level of meaning and esthetic quality, "cognitive" is simply the wrong word for the genre as a whole. The central message of the Gothic romance form, involving an assertion of the power of the irrational over the rational, is also the message of most science fiction. *The Time Machine, 1984, Perelandra, Dune* all continue the romantic reaction against the secularization and rationalization of life that began in earnest with the democratic and industrial revolutions of the late eighteenth century. Science fiction is thus really anti-science fiction, a form of apocalyptic fantasy verging on religious myth. "The dream of reason produces monsters," reads the title of one of Goya's etchings. That sentence might provide a better clue to the nature of science fiction than either "realism of the future" or "cognitive estrangement." I am suggesting that the conventions of both Gothic and science fiction involve a rejection or a symbolic putting to sleep of reason; they are both forms of apocalyptic nightmare fantasy characterized by themes of demonic possession and monstrous distortion (Darko Suvin's "estrangement"). I am also suggesting that both genres involve the idea that *reason taken to extremes* "produces monsters." In the Gothic romance, extreme reason may take the form of revolutionary or religious fanaticism, though it is more often dissociated from social context and related to individual madness. In science fiction, extreme reason takes the form of science itself and of its chief manifestation, technology. The subjective imagery of lunacy and nightmare becomes the imagery of the external world of machines and mass society.

The thesis that Gothic and science fiction are historically related forms of apocalyptic fantasy has been ably explored by David Ketterer in *New Worlds for Old,* and by several other writers.[5] In his popular history of science fiction, *Billion Year Spree,* Brian Aldiss declares that the first science fiction novel was

[4] Darko Suvin, *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre* (New Haven and London: Yale University Press, 1979).

[5] David Ketterer, *New Worlds for Old: The Apocalyptic Imagination, Science Fiction, and American Literature* (Bloomington: Indiana University Press, 1974). See also several of the essays in Thomas Clareson, ed., *SF: The Other Side of Realism* (Bowling Green, Ohio: Bowling Green University Popular Press, 1971).

Frankenstein, which happens also, of course, to be a classic of the Gothic romance genre.[6] Many other romance writers can also be counted among the pioneers of science fiction, perhaps especially in America, where Hawthorne, Poe, and Melville all produced hybrid works somewhere between Gothic and modern science fiction—works like Hawthorne's "The Artist of the Beautiful," in which the hero rivals nature by creating a mechanical butterfly, and Melville's "The Bell-Tower," which has been called "one of the first robot stories in English."[7] Of course one can push the origins of science fiction back much farther than *Frankenstein*. Robert Philmus's survey starts with Francis Godwin's *The Man in the Moone* in 1638 (in which the hero, Gonsales, rides to the moon in a sedan chair drawn by swans).[8] And according to some SF-ish speculators, those wheels of light that Ezekiel saw were really UFOs, an idea that fits in very nicely with what might be called *Star Wars* theology. It is also possible to make the origins of science fiction more recent than *Frankenstein*. The first writers conscious of producing a special genre were Jules Verne in the 1870s and H. G. Wells in the 1890s. But Wells himself, as Aldiss notes, believed that he had merely transposed elements of Gothic into what he called "scientific romances." "It occurred to me," Wells writes, "that instead of the usual interview with the devil or a magician, an ingenious use of scientific patter might with advantage be substituted. . . . I simply brought the fetish stuff up to date, and made it as near actual theory as possible."[9]

If we regard *Frankenstein* as at least a clear, early example of cross-fertilization between the Gothic romance and science fiction, two facts about it are worth stressing. One is that Mary Shelley's fictions express a reaction against the Promethean radicalism of her husband, and of her father and mother—William Godwin and Mary Wollstonecraft—as well. The fate of her "modern Prometheus" is the contrary of the fate of the mythological liberator depicted in *Prometheus Unbound*.[10] While the very phrase Gothic romance suggests a reaction against things modern and rationalized, there is also an important sense in which the whole development of science fiction from *Frankenstein* forward has been characterized by an anti-Promethean, anti-utopian, anti-scientific pessimism.

And the second fact worth stressing is that Mary Shelley's story contains many of the patterns that show up in modern science fiction. Most obviously, there is the incarnation of reason, Victor Frankenstein himself, the progenitor not only of his monster but also of a long line of mad scientists, through Stevenson's Dr. Jekyll and Wells's Dr. Moreau down to the Dr. Strangeloves of the present. These are

[6] Brian W. Aldiss, *Billion Year Spree: The True History of Science Fiction* (New York: Schocken Books, 1976), pp. 20–31.

[7] H. Bruce Franklin, *Future Perfect: American Science Fiction of the Nineteenth Century* (New York: Oxford University Press, 1966), p. xi.

[8] Robert M. Philmus, *Into the Unknown: The Evolution of Science Fiction from Francis Godwin to H. G. Wells* (Berkeley: University of California Press, 1970), pp. 13–14.

[9] Quoted by Aldiss, *Billion Year Spree*, pp. 8–9.

[10] See Lee Sterrenburg, "Mary Shelley's Monster: Politics and Psyche in *Frankenstein*," in *The Endurance of Frankenstein: Essays on Mary Shelley's Novel*, ed. U. C. Knoepflmacher and George Levine (Berkeley and Los Angeles: University of California Press, 1979).

the rationalizers, the would-be straighteners of the crooked, the followers of
Blake's Urizen (a name to be translated as either "horizon" or "your reason").

> *Lo, a shadow of horror is risen*
> *In Eternity! Unknown, unprolific,*
> *Self-closed, all-repelling: what Demon*
> *Hath formed this abominable void,*
> *This soul-shuddering vacuum? Some said*
> *"It is Urizen."* [11]

The Book of Urizen might be read as a Gothic romance, in which Blake's version
of the mad scientist dreams up monsters: "his world teemed vast enormities . . .
Dread terrors, delighting in blood."

The mad scientist is one item that shows up often in modern science fiction;
the monstrous invention that destroys life instead of enhancing it is another.
In Urizen's case, that invention is Urizen himself, or the universe viewed ration-
ally. Frequently in science fiction the destructive creation is organic, homicidal
clones, mutant insects, and the like. But perhaps more frequently the monster is
mechanical, clearly disorganic or anti-natural, like the treacherous computer HAL
in *2001*, or Dr. Rossum's robots in *R.U.R.*, or the deviant machinery in Stanislaw
Lem's *The Futurological Congress*. In the hallucinatory year 2039, Lem's pro-
tagonist discovers that computers and robots run by the law of least resistance.
If it's easier to evade a task than to perform it, a smart machine will evade the
task. And since all the machines are smart, Lem presents us with a vast comic
array of perverse technology. There are "fudgerators" and "drudge-dodgers,"
"malingerants" and "dissimulators." And there is even an extremely clever
machine called a "mimicretin," which is "a computer that plays stupid in order,
once and for all, to be left in peace." [12]

In Lem's novel, as in a great deal of science fiction, technology backfires.
Instead of a single homicidal monster, Lem's future world is full of mechanical
lemons—clockwork oranges—not homicidal ones, it is true, but nonetheless
deviant, crazy, demonic, synecdoches for the failure of technology as a whole.
And instead of one mad scientist, Lem's novel is full of them also. One can think
of science in general as Lem's version of Victor Frankenstein, or one can think of
the members of the Futurological Association who assemble at the Hilton Hotel
in Costa Rica to pool their prophecies and thus save the world from the various
crises that unbridled scientific technology has caused. The salvage schemes of
Lem's futurologists all contradict each other. And their conference ends cata-
strophically when the Hotel is accidentally blown up by the Costa Rican armed
forces battling revolutionaries in the streets. Not only do Lem's scientific
prophets fail to save the world, but they fail even to make it through a single

[11] William Blake, *The Book of Urizen*, in *Selected Poetry and Prose*, ed. Northrop Frye (New York: Modern
    Library, 1953), p. 164.
[12] Stanislaw Lem, *The Futurological Congress* (New York: Avon Books, 1976), p. 84.

day of their agenda. So much for prophecy—let alone for actively planning the future—by science.

The Frankenstein pattern, in which the dream of the mad scientist produces monsters, is an unfailing formula for catastrophe. Susan Sontag has suggested that the whole genre of science fiction is based on "the imagination of disaster." Rather than with science, she says, "the science fiction film . . . is concerned with the aesthetics of destruction, with the peculiar beauties to be found in wreaking havoc, making a mess. And it is in the imagery of destruction that the core of a good science fiction film lies." [13] I would qualify her assessment only by insisting that the genre is indeed about science, or rather about the failures of science that lead to disaster. Perhaps the quintessential work of science fiction is the report given by one of Lem's futurologists before the Hilton collapses. He gives it in a numerical code, because overcrowded conditions necessitate an acceleration of the proceedings:

> Stan Hazelton . . . threw the hall into a flurry by emphatically repeating: 4, 6, 11, and therefore 22; 5, 9, hence 22; 3, 7, 2, 11, from which it followed that 22 and only 22!! Someone jumped up, saying yes but 5, and what about 6, 18, or 4 for that matter; Hazelton countered this objection with the crushing retort that, either way, 22.

And then Lem's protagonist, Ijon Tichy, turns to the number key in Hazelton's paper and discovers that 22 means "the end of the world."

To the argument that number 22—or the imagination of disaster—is the governing principle of science fiction, the objection can be made that many science fiction stories are optimistic—even utopian—about the future. Those two recent box office smashes, *Star Wars* and *Close Encounters*, are far from being dystopian fantasies. Darth Vader may live on after the end of *Star Wars*, but there can be no doubt that the Force, and good all-American boys like Luke Skywalker, will triumph in future star wars—although the thought of future star wars, even of the movie variety, is a dampener. And in *Close Encounters*, the threat of demonic invasion that makes the first part of the film suspenseful degenerates into a kind of saccharine mush at the end, when those spindly, well-behaved, ghostly embryos come traipsing down from their big chandelier to return the lost and to waft the happy hero off into unknown—or perhaps only ill-defined—beatitudes. Anyway, much other science fiction seems also optimistic, perhaps especially space flight stories that show people using future technology to explore the universe, conquering the unknown through science. Captain Kirk and Dr. Spock don't conjure up or create monsters, they only blunder into them. And there are numerous stories in which scientists appear as heroes—even saviors—of mankind, using their knowledge to ward off disaster, or the irruption of the demonic, or number 22. Rather than the scientist as Faustian magician invoking demons, we get the scientist as exorcist.

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[13] Susan Sontag, "The Imagination of Disaster," in *Against Interpretation* (New York: Dell, 1969), p. 215.

But even optimistic science fiction is still about the monstrous or the demonic, and about at least the threat of social or cosmic disaster. Furthermore, in most examples of it there is a break from present reality, a radical disjunction from the world as we know it, a displacement in time or space or both that implies catastrophe, that is itself a kind of formal catastrophe or abrupt violation of realism, even though the content of a specific story may depict a state of future bliss. This is what Darko Suvin means by "estrangement." In this pattern of radical disjunction from the actual—what might be called the structural expression of the imagination of disaster—lies the central bond between science fiction and the Gothic romance.

As in science fiction, events in Gothic romances are often distanced in time and space, though the time is usually the past instead of the future, and the place is usually another country—sinister Italy or wicked France—instead of another planet or galaxy. A chief difference between the two types of story is that the scale of disaster tends to be individual and inward in the Gothic romance, while it is external, social, often cosmic in science fiction. There is only one mad scientist and one monster in *Frankenstein*, but there is an epidemic of them in *The Futurological Congress*. And, while the mayhem caused by Mary Shelley's ogre is restricted to his creator's family and friends, Lem's dystopian vision paints a future in which political and technological mayhem has become the human condition.

The Gothic romance is characterized by a set of literary conventions that internalize or subjectify events, thus emphasizing the break from reality. These internalizing conventions include frame-tale narration; the use of unreliable narrators; the pattern of the double or of the ghostly, demonic alter ego; claustrophobic motifs of imprisonment, secret passages, coffins and catacombs; and metaphors that liken events to demonic possession or—what is usually the same thing—to lunacy. These are the conventions of the inward journey, into the heart of darkness of the narrator or the protagonist, through which a Gothic romance becomes an analogue for a nightmare or a delirious dream vision (much as in Goya's etching, which shows a sleeping writer surrounded by nightmare demons).

Perhaps the most familiar—certainly among the most extreme—examples of these conventions can be found in Poe's tales of terror—frame narration in *Narrative of A. Gordon Pym*, the use of unreliable narrators like the delirious opium addict of "Ligeia," imprisonment and burial alive in "The Pit and the Pendulum" and elsewhere, the pattern of the double in "William Wilson" and many other stories, and metaphors of demonic possession and madness in all of them. In "The Fall of the House of Usher," the break from reality—the dream-like internalization of events suggested by Poe's use of these conventions—reaches a kind of solipsistic extremity in the treatment of the house, with its "vacant and eyelike" windows and the zigzag fissure that runs down it like a crack in a skull, as a metaphor for the mind of Roderick Usher. Its collapse mirrors Roderick's, a collapse into madness. But Roderick himself is a shadowy double for the teller of the tale, the nightmare the narrator is having. And behind this level of dreaming

appears still another one, in which both Roderick and the narrator are the ghostly doubles of Poe, the demons whom he invokes through his obsessive art and who possess him, the nightmare that *he* is having. "Usher" expresses the central message of the Gothic romance form: internal disaster, the disintegration of a mind, the coming loose from the real world that is madness or death or both.

It may seem far-fetched to suggest that "Usher" is both Gothic romance and science fiction, but Ray Bradbury wrote a story based on Poe's tales which he called "Usher II" and included in his *Martian Chronicles*. Everything in Bradbury's fantasy happens much as in Poe, except that it happens on Mars and that half the characters are robots. The connection between Gothic and science fiction that is reflected by Bradbury's "Usher II" is noticeable in several of the features of "Usher I." First, there is Roderick Usher's insanely reasoned theory of the sentience of all vegetable matter. Next, much of Roderick's reading falls into a fantastic-utopian category close to science fiction. His books include "the Heaven and Hell of Swedenborg; the Subterranean Voyage of Nicholas Klimm . . . ; the Chiromancy of Robert Flud . . . ; the Journey into the Blue Distance of Tieck; and the City of the Sun of Campanella." [14] But what is most like later science fiction are the motivations of the narrator and of Roderick: morbid, demented curiosity on the part of the narrator; and morbid, demented intellectual sensitivity on the part of Roderick—diseased reason, in short.

Whether or not "The Fall of the House of Usher" can reasonably be called science fiction, Poe is important in this context both because he illustrates the internalizing conventions of the Gothic romance and because he is often cited, along with Mary Shelley and H. G. Wells, as the inventor of science fiction, just as he is often cited as the inventor of the detective story. What all three types of story have in common in his practice are the conventions of Gothic and also Goya's paradox, or the perception that at some extreme limit reason turns into its opposite: into nightmare, delirium, ruin. In the detective stories, as Albert Hutter says, "the relentlessly logical process of ratiocination is thrown into question by a deeper irrationality." [15] And in the stories closest to science fiction —for example, the exploration fantasies like "Descent into the Maelstrom"— extremes of curiosity about the unknown are synonymous with the death-wish impulses of the curious. Thus, when the ship is caught up in the maelstrom and death seems inevitable, the old man finds delirium and lucid rationality merging within himself. He begins to view the whirlpool with "the keenest curiosity," as a kind of scientific puzzle, and it is precisely because he starts reasoning about it in the midst of his insane terror that he escapes to tell his story. Rather than producing monsters, reason here would seem to bring salvation. But what is more significant than the old man's escape is the identification of reason and madness at the story's center, in the midst of the maelstrom. Similarly, A. Gordon Pym's

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[14] Edgar Allan Poe, "The Fall of the House of Usher," in *Selected Prose and Poetry*, ed. W. H. Auden (New York: Holt, Rinehart and Winston, 1962), p. 13.

[15] Albert D. Hutter, "Dreams, Transformations, and Literature: The Implications of Detective Fiction," *Victorian Studies*, December, 1975, p. 191.

motive for stowing away on board the Grampus may be seen either as an impulse to destroy himself or as an insatiable curiosity driving him onward into the unknown. The two are really one.

The theme of self-destructive reason in Poe may be explained psychologically in terms of the rationalization of death-wish impulses. The most important link between Gothic and science fiction may be the pattern of necrophilia—"the imagination of disaster"—that characterizes Poe's fiction and that is an obvious feature of Gothic fantasies. In *The Anatomy of Human Destructiveness*, Erich Fromm defines necrophilia as "the passion to destroy life and the attraction to all that is dead, decaying, and purely mechanical." [16] Fromm writes of a "necrophiliac character formation" that he associates with fascism and that he sees spreading "throughout our cybernetic industrial society." He is mistaken (he simply over-looks the whole development of the Gothic tale of terror) when he says that "the spirit of necrophilia was expressed first in literary form by F. T. Marinetti in his *Futurist Manifesto* of 1909" (31). (Perhaps he means only the spirit of modern necrophilia.) But Marinetti's celebration of speed and war and destructive mechanism shares much with science fiction. Of course I do not mean that science fiction is a literary expression of the fascist mentality. Genres do not have politics, though they certainly do have tendencies toward specific sets of values. A writer can employ a genre almost as easily to mock its implicit values as to affirm them, but the critical or cognitive component in "90 to 95 percent" of both science fiction and Gothic fantasy is already low or nonexistent. In any case, in common with Gothic, science fiction is a form of fantasy that expresses necrophiliac impulses in various ways. Often—in dystopias, for example—science fiction issues warnings about these tendencies (dehumanization, destructive technology, ecological catastrophe, etc.). More often it just expresses them without exploration of their meaning and hence without criticizing them.

These necrophiliac tendencies are of course irrational or even actively anti-rational and regressive. The internalizing or subjectivizing conventions of the Gothic romance may be generally described as regressive—descents into mael-stroms or madness or nightmares involving the suppression or the symbolic destruction of the waking, rational ego.[17] The internalizing conventions of Gothic do not always apply to later science fiction, just as they do not always apply to later detective fiction. But one can still find many stories that employ them. I have already suggested the persistence of the Frankenstein pattern. "Sword and sorcery" fantasies and also necrophiliac horror stories of the H. P. Lovecraft variety, both often included in surveys of science fiction, are both clear descend-ants of Gothic. Further, stories about invasions from outer space, from *War of the Worlds* through *Childhood's End* down to *Close Encounters*, recall patterns of demonic possession, but on a social instead of a subjective scale. Stories about clones and holograms, and often ones about time travel, organ transplants, and androids, recall the pattern of the demonic double. And there are numerous

[16] Erich Fromm, *The Anatomy of Human Destructiveness* (New York: Holt, Rinehart and Winston, 1976), p. 6.
[17] See my essay, "Novels, Romances, and Psychoanalysis," *Criticism*, Winter, 1975, pp. 15–40.

examples of frame narration and unreliable narrators in science fiction, often suggesting that the stories themselves are hallucinations, dream-visions, or nightmares. Except for frame narration, just about all the conventions of Gothic occur in *The Futurological Congress*. Lem's narrator, Ijon Tichy, probably sets a record for unreliability; he hallucinates three-fourths of the novel from a sewer underneath the ruins of the Hilton Hotel—shades of the secret passages and dungeons in Anne Radcliffe, Monk Lewis, and Poe. And what he hallucinates fits very well the description that is often applied to dystopian fantasies like *1984*—the future as nightmare. If the real future is going to be anything like what he has dreamed, Tichy decides when he wakes up, he would rather stay in the sewer.

Gothic romancers based their works on the eighteenth-century theory of the sublime, the chief end of which was to arouse terror. Hence the phrase, "the Gothic tale of terror." Science fiction writers have perhaps forgotten about eighteenth-century sublimity, but of the two main theories that most of them adopt to explain their work, one still comes close to it. This is the idea that science fiction aims at arousing wonder, apparent in such early magazine titles as *Amazing* and *Astounding* and *Thrilling Wonder Stories*. "It is good to renew one's wonder," says Bradbury at the start of the *Martian Chronicles*. "Space travel has again made children of us all." [18] And whether in Gothic or in science fiction, fear and wonder are seen at least vaguely as the opposites of reason, as when Brian Aldiss writes that "the sense of wonder is in essence a religious state, blanketing out criticism" (158).

The wonder-arousing theory contradicts the other main theory that science fiction writers often adopt, which is that their work is in fact scientific, a rational or "cognitive" activity. Darko Suvin offers perhaps the most complex and formidable version of this theory. And Isaac Asimov, John W. Campbell, and some other writers might almost be accused of imitating Emile Zola in insisting that their stories work on the model of laboratory experimentation. An offshoot of the cognitive theory is the idea of extrapolation, according to which the writer, cognizant of current theories and of scientific method, traces some aspect of the present into the future, into some hypothetical time and space, observing the results through the lens of his fiction. It is on the basis of the extrapolation theory that the most extravagant claims are made for science fiction, as for instance that it is *real* prophecy, not just prophecy of the tea-leaves, cocaine, loose-minded variety. Thus, Isaac Asimov (who ought to know better, of course, both as a scientist and as a writer) declares that science fiction is "the *only* literature of relevant ideas." "When Aristotle fails," says Asimov, "try science fiction." [19] Somewhat closer to the truth might be the remark of John W. Campbell, who says that the "fundamental purpose" of science fiction is "to make accurate, loose prophecies of general trends." [20] Drop the word "accurate,"

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[18] Ray Bradbury, *The Martian Chronicles* (Garden City, New York: Doubleday, 1958).

[19] Isaac Asimov quoted in *Tomorrow, and Tomorrow, and Tomorrow. . .* , ed. Bonnie L. Heinte, Frank Herbert, Donald A. Joos, and Jane Agorn McGee (New York: Holt, Rinehart and Winston, 1974), p. vii.

[20] John W. Campbell, "Science Fiction and the Opinion of the Universe," *Saturday Review*, May 12, 1956, p. 43.

stress the word "loose," and perhaps one can extrapolate from his remark a true definition of science fiction. In *New Maps of Hell*, Kingsley Amis also adopts a version of the extrapolation theory, or at least of the theory that science fiction must somehow be scientific, but he adds that "most of the science is wrong anyway, and its amount is such that one might as well be reading Westerns in the hope of finding out about ranching methods." [21]

Proponents of the cognitive theory of science fiction and the related idea of extrapolation must make so many qualifications to accommodate "estrangement" that they wind up in illogicalities. An example that proves Amis's point is Thomas Scortia's essay on science fiction in which he tries to define it as "the imaginary experiment." Scortia has to make the damning admission that "the conventions of science fiction often violate fundamental logic." This happens, he says, in time-paradox stories like David Gerrold's novel, *The Man Who Folded Himself*. Scortia then makes the even more damning admission that "many of the conventions of science fiction betray basic errors of science." Thus, the expansion of living creatures beyond their normal size, as in the case of the giant ants in the movie *Them*, contradicts the square-cube law:

> *Doubling the linear dimensions of the beast will quadruple the cross-sectional area of legs and the absorptive area of lungs and gut while multiplying the mass of the creature by eight times. It becomes obvious that after several such expansions, the beast's legs will not support it while the lungs will not be able to absorb enough oxygen or the gut enough food to sustain the mass of the creature.*[22]

If only Gregor Samsa had known the square-cube law, one thinks, he would have had no problem. (It is at least a relief to know that we don't need to add giant ants to our list of worries, no matter what future nightmare our mad scientists are concocting for us.)

What is interesting about the extrapolation theory—quite apart from its intrinsic weakness as a defense of science fiction—is that it, too, betrays the structural link between reason and madness that characterizes all science fiction. Ursula Le Guin seems to recognize this when, in her preface to *The Left Hand of Darkness*, she writes that "Strictly extrapolative works of science fiction generally arrive somewhere between the gradual extinction of human liberty and the total extinction of terrestrial life"—in other words, at number 22.[23] She then likens the extrapolation process to feeding food additives to rats to see if these cause cancer. "Almost anything carried to its logical extreme becomes depressing," she says, "if not carcinogenic"—which is of course another way of saying that reason taken to extremes produces monsters. Extrapolation in science fiction is a

[21] Kingsley Amis, *New Maps of Hell* (New York: Harcourt, Brace, 1960), p. 63.

[22] Thomas N. Scortia, "Science Fiction as the Imaginary Experiment," in *Science Fiction, Today and Tomorrow*, ed. Reginald Bretnor (Baltimore: Penguin Books, 1975), pp. 138–39.

[23] Ursula Le Guin, "Introduction" to *The Left Hand of Darkness* (New York: Ace Books, 1976).

structural correlative of Goya's paradox, something like the distorting and exaggerating processes in satire and also in dreams, a rational technique for conjuring up nightmares. It is because of extrapolation, which bends the complexity of the real to the one line of logic that it obsessively pursues, that science fiction stories often take on the monstrous and uncanny properties of dreams, even when they don't employ any of the internalizing conventions of Gothic. And when they do employ those conventions, the nightmarish or surrealistic qualities caused by extrapolation are strengthened. The irony is that many science fiction writers unconsciously play the role of Victor Frankenstein: the monsters that they create are their stories, their dreams of reason. They stand romanticism on its head by insisting that the main principle of their art derives from reason rather than from imagination. But instead of Zolaesque naturalism, or even a "realism of the future," what they have to show as the result of their supposedly rational technique is a crop of the most irrational, nightmarish, entertaining but perhaps also carcinogenic fantasies in literary history—a surrealism of the future rather than a realism of it.

But the nightmare of reason has expanded and turned outward in the evolution from Gothic to science fiction. Again, the scale of disaster is individual and inward in the earlier form, but social and often cosmic in the later one. This fact might suggest that science fiction makes more rational connections with the real world than does the Gothic romance. Isaac Asimov and the extrapolation people seem to think so. And it is also easy to show that the Gothic romance often has very little to do with objective reality. As D. H. Lawrence says, Poe "has no truck with Indians or Nature. He makes no bones about Red Brothers and Wigwams. He is absolutely concerned with the disintegration processes of his own psyche." [24] No doubt other romancers tried harder than Poe to connect with reality—certainly Hawthorne did. And there is a social dimension to disaster in the Spanish Inquisition and the riots in Matthew Gregory Lewis's *The Monk* and Charles Maturin's *Melmoth the Wanderer*. But what is perhaps more striking about these Gothic romances than their depiction of social violence is how little they have to do with actual politics. Even though Lewis wrote *The Monk* at the height of the Reign of Terror, finishing it in 1794, he seems to have seen no connection between Ambrosio and the Spanish Inquisition on the one hand, and Robespierre and the Committee of Public Safety on the other. Two years later Lewis entered Parliament, but more as a family ritual than because of any interest in affairs of state. As John Berryman says in his introduction to *The Monk*, Lewis "had no political ambition, he never addressed the House." [25] William Godwin put Gothic conventions to didactic and political use in *Caleb Williams*, and so did his daughter in *Frankenstein* and *The Last Man*. And there is a very direct and powerful social relevance in the treatment of the theological politics of the Scottish Kirk in James Hogg's *Confessions of a Justified Sinner*. But reflections of real events in many

[24] D. H. Lawrence, "Edgar Allan Poe," from *Studies in Classic American Literature*, reprinted in *The Portable D. H. Lawrence*, ed. Diana Trilling (New York: Viking Press, 1947), p. 671.

[25] John Berryman, "Introduction" to *The Monk* (New York: Grove Press, 1959), p. 22.

Gothic romances are oblique or nonexistent.

I do not believe, however, that the expansion and externalization of nightmare that have occurred in the history of science fiction have made for many more rational connections with real issues than in Gothic romances. In both forms, the conventions that express the imagination of disaster tend to enforce a separation from reality that only the best writers manage to overcome. Extrapolation takes us to other times and other worlds just as surely as do the internalizing, dream-vision conventions of Gothic.

In a very general way, of course, most Gothic romances can be interpreted, like *Frankenstein*, as responses to democratic revolution and to the threat of Promethean individualism. At their centers are usually hero-villain overreachers, like Victor Frankenstein or Melmoth or Ambrosio, doomed to failure but nevertheless challenging established institutions and received morality in ways that endow them with a diabolical tragic grandeur.[26] In science fiction, while the nightmare conventions of Gothic often reappear, the focus has shifted from the threat of Promethean individualism to the threat of the eradication of individualism by industrial technology and the institutions of mass society. The pattern in Gothic is to present the hero-villain as having supernatural powers: he is in league with the devil. The pattern in science fiction is to present people as dehumanized, having little or no power, sub-natural rather than super-natural, turned into machines or machine-tenders, while machines acquire power, take on personalities, and behave demonically. The diabolic hero of Gothic himself exhibits vampiric or necrophiliac traits. The mad scientists and technicians in science fiction often do so as well, though the necrophiliac tendency of the genre is more widely evident in the pattern of subordinating people to machinery, the organic to the inorganic, life to death.[27]

The conventions of both Gothic and science fiction of course reflect important features of the real world, and both can be employed (by the best writers, anyway) for purposes of conscious psychological exploration and social criticism. Much Romantic culture, even in pessimistic and often inferior forms such as Gothic fiction, reflects democratization through the theme of Promethean or Faustian individualism, while much modern culture, including science fiction, reflects the loss of individual freedom in mass, industrial society. Where the shift in emphasis occurred would be difficult to specify, though as good a turning point as any might be seen in another of Poe's stories, "The Man of the Crowd," a fable about the anonymity of city life that Walter Benjamin has interpreted as the quintessential detective story.[28]

I cannot deal fully here with social meanings in particular stories. I have tried to show only how the conventions and values of Gothic have carried over into

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[26] For more on Gothic conventions, see Robert D. Hume, "Gothic vs. Romantic: A Reevaluation of the Gothic Novel," *PMLA*, 85 (1969), pp. 282–90.

[27] For a similar argument, see the excellent essay by Scott Sanders, "Invisible Men and Women: The Disappearance of Character in Science Fiction," *Science Fiction Studies*, March, 1977, pp. 14–24.

[28] Walter Benjamin, *Charles Baudelaire: A Lyric Poet in the Era of High Capitalism* (London: New Left Books, 1973).

science fiction, and why both types of story can be described as apocalyptic nightmare fantasies. Both tend to have more to do with their writers' subjective, often unconscious responses to experience than with their more conscious ones. And both repel rational analysis rather than encourage it—they are both evocations of wonder of a sort that "blankets out criticism." This is not to deny the very great significance of Gothic romances and science fiction either as cultural symptoms or as forms of literary expression. Nor does literature have to be realistic or even directly cognitive to be valuable. Ursula Le Guin's defense of all fantasy writing in *The Language of the Night* makes much better critical sense than attempts to discover a rational potential in science fiction distinct from Gothic and other types of non-realistic literature.[29]

The best science fiction that I have read has been by writers who are aware that they are constructing fantasies and who exploit fantasy-romance conventions, sometimes for satiric purposes. This is true of Ursula Le Guin and Stanislaw Lem, and it is also true of a number of writers close to science fiction who produce what might be called philosophical fantasies—for example, Kafka's *Metamorphosis*, Borges' *Labyrinths*, and Italo Calvino's *Cosmicomics*. The funniest Gothic ghost story that I have read (not many of them are funny, of course, except by accident) is Calvino's *The Nonexistent Knight*, which happens also to be a weird sort of robot or mechanical man story. It features a suit of shining white armor, perfectly empty except for the Quixotic spirit of knighthood that inhabits it and that sends it clanking about the countryside in quest of honor and glory. To try to classify such a fantasy as either Gothic or science fiction would only diminish it, as would any argument that it must be inferior to realistic fiction because it is not realistic.

Cognitive rationality and realism are perhaps always the wrong things to expect from literature. Ray Bradbury's "Usher II" deals with the nightmarish results of realism taken to extremes. Like *Fahrenheit 451*, "Usher II" presents us with a dystopian society in which the imagination, and most forms of literature, have been declared illegal by the Society for the Prevention of Fantasy. As a revolutionary act, Bradbury's protagonist has an exact replica of Poe's haunted mansion constructed, stocks it with robot vampires and witches and a robot version of the killer ape from *Murders in the Rue Morgue*, and then invites the most important anti-fantasy Realists to a sort of Halloween party at it. During this shindig he sets the robots loose on the guests and bricks up the most repressive Realist in the wine cellar, whom he takes there on the pretext of looking for a cask of Amontillado. Toward the end, as the red death spreads through the rooms, the protagonist escapes by helicopter, looking back just in time to see the house cave in on itself, burying the remaining guests alive:

> *my brain reeled as I saw the mighty wall rushing asunder—there was a long tumultuous shouting sound like the voice of a thousand waters—and the deep*

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[29] Ursula Le Guin, *The Language of the Night: Essays on Fantasy and Science Fiction* (New York: G. P. Putnam's Sons, 1979).

and dark tarn at my feet closed sullenly and silently over the fragments of the House of Usher.

After an ending like that, who would side with the Realists against the Fantasy people? But at the same time it should be noted that Fantasy in all its shapes has at least as much to do with the place that Poe calls "dreamland" as with objective reality, and that any defence of its significance ought to start from that fact. The mode of argument that seeks to defend science fiction by claiming for it the properties of realism is just as illogical as the mode of argument that criticizes it because it isn't realistic. Insofar as reason is the assumed basis of realism, then science fiction—which like the Gothic romance involves an exploration of the limits of reason—must be understood as an anti-realism or surrealism. By definition, science fiction has less to do with the here and now than with that other, longed-for or dreaded future world that Poe describes as

> *a wild wierd clime that lieth, sublime*
> *Out of SPACE—out of TIME.*