

AMERICAN SCIENCE FICTION OF THE TWENTIETH CENTURY: METAPHORS FOR AMERICAN ATTITUDES TOWARD THE FUTURE

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There are few genres in literature that are so associated with a single country as science fiction is associated with the United States. While any historian of the growth and development of this genre must pay due attention to both H. G. Wells and Jules Verne, the fact remains that from the mid-nineteen-twenties to our own time American writers of science fiction have dominated the field. Yes, there have been many famous British and Continental writers, but for some reason these writers have only recently started to gain reputations not only in the United States but in their own countries as well. For over three decades, readers of science fiction, and not just those who were American, demanded the works of American writers or those writers who imitated American writers. Thus, to many people the term American science fiction is redundant; to them, science fiction is American.

Rather than discuss such a reaction as short-sighted and provincial, two very just charges, it can be rather valuable to explore the reasons behind this close association of the United States and science fiction. For these reasons can lead to an understanding of how a popular form of literature arises out of a particular society's view of itself and then changes as that view changes. The point to make here is that science fiction did respond to a current of belief in the United States before and during World War II, and since that time it has continued to develop as American beliefs have changed.

It would be far too simplistic to state that American domination of science fiction is the result of the availability of publishing opportunities in the United States that far outnumbered the opportunities in the rest of the world. While such a statement is, in fact, true, it says nothing about why there were so many more opportunities. What was it about this relatively new genre that made it so profitable for Americans to publish?

A partial answer to this question lies in an editorial written by Hugo Gernsbeck in *Amazing stories* for its first issue. Gernsbeck's *Amazing stories* is generally recognized as the first magazine devoted entirely to science fiction; in fact, by calling the stories in his magazine "scientifiction", Gernsbeck is also credited with inventing the term "science fiction", a term used later in *Science wonder stories*. In that first issue, dated April 5, 1926, Gernsbeck wrote:

By "scientifiction" I mean the Jules Verne, H. G. Wells, and Edgar Allan Poe type of story—a charming romance intermingled with scientific fact and prophetic vision. For many years stories of this nature were published in the sister magazines of *Amazing stories*—*Science and invention* and *Radio news*.

Not only do these amazing tales make tremendously interesting reading—they are also always instructive. They supply knowledge that we might not otherwise obtain—and they supply it in very palatable form.

Many great science fiction stories destined to be of an historical interest are still being written, and *Amazing stories* will be the medium through which such stories will come to you. Posterity will point to them as having blazed a new trail, not only in literature and fiction, but in progress as well.¹

Gernsbeck's words cannot be dismissed as those of a self-serving bit of propaganda written by a magazine owner in order to sell his product. Within this excerpt there are two points which serve as a focus for both the writers and readers of *Amazing stories*, and these two points will far outlive the magazine itself. The first is that the stories will supply not only entertainment but also knowledge. The second is that these stories will become new guideposts to human progress.

Just how seriously Gernsbeck took this first point can be seen in an editorial he wrote in the first issue of a second magazine of science fiction he published: "It is the policy of *Science wonder stories* to publish only such stories that have their basis in scientific laws as we know them, or in the logical deduction of new laws from what we know".² The result of such a dictum was that the early science fiction stories were often filled with lessons to the reader on various new scientific or technical discoveries. Take for example this passage written by John Campbell in a story entitled "The last evolution":

Hydrogen, an atom in space; but a single proton, but a single electron; each indestructible; each mutually destroying. Yet never do they collide. Never in all science, when even electrons bombarded atoms with the awful expelling force of the exploding atom behind them, never do they reach the proton, to touch and annihilate it. Yet—the proton is positive and attracts the electron's negative charge. A hydrogen atom—its electron far from the proton falls in, and from it there goes a flash of radiation, and the electron is nearer to the proton, in a new orbit. Another

¹ As quoted in James Gunn (1975:120—121).

² As quoted in Paul A. Carter (1977:11).

flash—it is nearer. Always falling nearer and only constant force will keep it from falling to that one state—then, for some reason no more does it drop. Blocked—held by some imponderable, yet impenetrable wall. What is that wall—why?

Electric force curves space. As the two come nearer, the forces become terrific: nearer they are; more terrific (Campbell 1976:14).

First published in *Amazing stories* in 1932, “The last evolution” is typical of the type of story considered ideal by most of the editors of science fiction magazines and demanded by most readers.

The citizens of the United States were in love with the new inventions that constantly appeared and were frequently asked to appreciate the vast changes taking place in their lives because of them. New inventions became a measure of national pride and a measure of international prestige. So important, in fact, was technology to national image for the American citizen that it became part of cold war strategy in the 1950s. For example, American high school students were taught to hold in complete contempt Russian claims to have invented any of the machines claimed by American inventors. These students were never aware of any reason for rejecting such claims or even told on what basis they were made. The telephone was American and no Russian plot would subvert this simple fact.

Is it any wonder, then, that a literature based on this American preoccupation with science and technology would find a large and loyal group of readers? Americans, rightly or wrongly, saw their nation as the center of new technological advancement. If it was true that many of the new scientific theories were being developed by European scientists, it was equally true that many of these new theories found their realization in the work of American engineers. Good old-fashioned American know-how made scientific dreams realities, and science fiction celebrated that know-how within its stories.

This celebration of pragmatic American ingenuity leads to the second point in Gernsbeck’s editorial: science fiction is blazing new trails for human progress. Progress has always been a key word in American culture. Implied within it are the twin concepts of expansion and advancement. When one considers the science fiction produced by American writers in the 1930s, 40s, and even 50s, one tends to see these works as optimistic about the future of the human race. Progress implies, to these writers, a healthy, growing human race. There are numerous short stories and novels from this period that see mankind as a vital race able to triumph over far more sophisticated and knowledgeable aliens because of this vitality. Frequently, the human race is portrayed in these works as an upstart race that sweeps all other races aside because of its energy and impatience to keep on the move.

Such a view of man can be seen in the American public’s interest in its own frontiers. It is no accident that the western was also a popular genre while science fiction was developing. The American concept of Manifest Destiny,

the right of white society to expand its borders from the Atlantic to the Pacific coast, is very much part of each citizen's education. Frontier America was a symbol of American vigor and growth and of American power. But science fiction went beyond the western because it promised expansion throughout the universe. The frontier was quickly becoming part of the past and, therefore, such stories could only dwell on past achievement. Science fiction gave the reader the future in which the achievements of the past would continue.

More important than the future, however, was the fact that this future took on a distinctly American flavor which was characterized by American technology. Even when a science fiction story predicted the end of the human race, ingenuity and technology found some way of giving optimism.

John Campbell, whose short story "The last evolution" has already been discussed, best typifies this American flavor. When Campbell became editor of *Astounding stories* in 1937, he was already a successful writer, but it is his career as editor of this magazine for which he is most famous. The period starting with Campbell's appointment as editor of *Astounding* and ending in 1950 is now called the "Golden Age" of science fiction, and John Campbell completely dominated that time. Thus, it is entirely fitting that one of his stories be used as an example of how science fiction dealt with human progress and the future.

Before becoming editor, Campbell had written a number of stories for *Astounding* under the pen name Don A. Stuart. One of these stories, published in 1934, has become a classic of the genre: "Twilight". The story begins in the American Far West on December 9, 1932. Jim Bendell, a native of that area, is telling several of his friends about a hitchhiker he had picked up a few days earlier who claimed to be a time traveler from the year 3059. This time traveler, Ares Sen Kenlin, had traveled seven million years into the future and had overshot his home time on the way back. It is Kenlin's view of the world of seven million years in the future that forms the basis of the story.

This future world is one of haunting sadness, for it is the twilight of the human race. In passages remarkably similar to H. G. Wells' *The time machine*, Kenlin gives the following reasons for the end of man:

And have I told you that they were lonely? Their loneliness was beyond hope. For, you see, as man strode toward maturity, he destroyed all forms of life that menaced him. Disease. Insects. Then the last of the insects; and finally the last of the man-eating animals.

The balance of nature was destroyed then, so they had to go on. It was like the machines. They started them—and now they can't stop. They started destroying life—and now it wouldn't stop. So they had to destroy weeds of all sorts, then many formerly harmless plants. Then the herbivora, too, the deer and the antelope and the rabbit and the horse. They were a menace, they attacked man's machine-tended crops. Man was still eating natural foods.

You can understand. The thing was beyond their control. In the end they killed off the denizens of the sea, also, in self-defense. Without the many creatures that had kept them in check, they were swarming beyond bounds. And the time had come when synthetic foods replaced natural. The air was purified of all life about two and a half million years after our day, all microscopic life (Campbell 1976a: 36—37).

Just as H. G. Wells' time traveler describes man's conquest of his environment, so too does Campbell. And in both cases the result is a Garden of Eden that cannot support continued human development. Both writers see the evolution of man tied to an environment that challenges his physical and intellectual powers. Remove the challenge, and that factor which assures human growth is also removed. Remove growth, and that factor which assures continuation of the species is also removed.

There is, however, one way in which "Twilight" differs significantly from *The time machine*. In *The time machine*, Wells wishes to comment on the disastrous results of one class living off the labor of a second class. In many ways, the novel is a warning to the contemporary Englishman that history will not allow the enslavement of a large segment of the population so that a smaller part may enjoy a rich and egocentric life. "Twilight", of course, has no such social message, but, more importantly, it is not even an admonitory tale. Campbell is not writing of future ecological disaster. He is, rather, concerned with what he sees as the ultimate consequences of man's need to meet all challenges. What happens when all needs are met and existence is no longer threatened? It is important that the reader not blame the machines for this world seven million years in the future. It is simply a logical result of what Campbell claims is man's basic character.

It is interesting that Kenlin is saddened by the coming end of the human race, but the feature that he is most upset about is not man's death:

And now this last dwindling group of men still in the system had no other life form to make its successor. Always before when one civilization toppled, on its ashes rose a new one. Now there was but one civilization, and all other races, even other species, were gone save in the plants. And man was too far along in his old age to bring intelligence and mobility from the plants (Campbell 1976a: 37—38).

What faces Kenlin is the loss of Manifest Destiny. That the human race will die is sad, but that there will be no continuation of human civilization is tragic. Like the Americans of the nineteenth century, Kenlin voices here a desire to see the stamp of mankind placed upon all time. If civilization cannot spread, then civilization must die. Thus, at the end of "Twilight", Campbell does find a way to preserve civilization even if the race must die:

I said they had machines that could really think? But that someone had stopped them a long time ago, and no one knew how to start them?

I found some records and deciphered them. I started one of the latest and best of them and started it on a great problem. It is only fitting it should be done. The machine can work on it, not for a thousand years, but for a million, if it must.

I started five of them actually, and connected them together as the records directed.

They are trying to make a machine with something that man had lost. It sounds rather comical. But stop to think before you laugh. And remember that Earth as I saw it from the ground level of Neva City just before Reo Lantal threw the switch.

Twilight—the sun has set. The desert out beyond, in its mystic, changing colors. The great, metal city rising straight-walled to the human city above, broken by spires and towers and great trees with scented blossoms. The silvery-rose glow in the paradise of gardens above.

And all the great city-structure throbbing and humming to the steady gentle beat of perfect deathless machines built more than three million years before—and never touched since that time by human hands. And they go on. The dead city. The men that have lived, and hoped, and built—and died to leave behind them those little men who can only wonder and look and long for a forgotten kind of companionship. They wander through the vast cities their ancestors built, knowing less of them than the machines themselves.

And the songs. Those tell the story best, I think. Little, hopeless, wondering men amid vast unknowing, blind machines that started three million years before—and just never knew how to stop. They are dead—and can't die and be still.

So I brought another machine to life, and set it to a task which, in time to come, it will perform.

I ordered it to make a machine which would have what man had lost. A curious machine (Campbell 1976a : 41–42).

Kenlin sets in motion that process which will develop the successor to the human race with that one quality which best defines it: curiosity. Thus, human civilization will remain for as long as the universe remains. Perhaps, in fact, the continuance of civilization demands this step. Man as a biological entity is too fragile, but man's machines can endure. Campbell has in "Twilight" produced one of the finest examples of the American dream of technology and progress. That the successor of man is his machines is sad for biological man but triumphant for the spirit of man. Man must have a future because what he has accomplished will endure.

The concept of Manifest Destiny in American science fiction cannot be overemphasized. Even when a story goes beyond "Twilight" and presents the utter end of human civilization, this end is judged in terms of the fitness of the race to carry on its holy mission of expansion. In June 1935 there appeared in *Astounding* "Alas, all thinking" by Harry Bates. A physicist named Harlan Frick travels to the future and finds a small group of humans who constitute the last of mankind. This future generation of man consists of grotesquely misshapen creatures with huge heads and spindly bodies. Each sits in his own cubicle completely isolated from the rest of the world thinking private thoughts that will never be communicated to others. So lost in their minds are these

creatures that food machines must feed them pellets of concentrated nutrients or they would die.

Frick is appalled at this future development in human evolution. Gone is any concept of romance, of adventure, and of common discovery. He refuses to accept these people as human and finally goes from one cubicle to another wringing each occupant's neck. And so dies the human race at the hands of a twentieth-century American. Call it American Puritanism or the Protestant work ethic, the fact remains that not many readers felt at the time the story was written or even today that Frick's actions were wrong. These men of the future lacked vitality and purpose and, therefore, they were not worthy of man's destiny. Better the entire race die than it endure such an ignominious future. Thus, science fiction not only dealt with what the future might be but also with how it should be. And the standards that were used to make such a judgment were the same criteria already identified in Campbell's "Twilight".

In the July 1926 issue of *Amazing stories*, Hugo Gernsbeck wrote concerning science fiction:

If only five hundred years ago (or little more than ten generations), which is not a long time as human progress goes, anyone had come along with a story wherein radio, telephone, steamships, airplanes, electricity, painless surgery, the phonograph, and a few other modern marvels were described, he would have been promptly flung into a dungeon ... There are few things written by our scientific fiction writers, frankly impossible today, that may not become a reality tomorrow.³

Gernsbeck was, of course, emphasizing here the prophetic character of the genre. Yet despite a continuing interest in science fiction as prophecy, prediction of future technology and history has always been secondary to the writers. James Gunn has expressed it best when he states in *The road to science fiction: from Gilgamesh to Wells*:

Science fiction was the artistic response to the human experience of change. Man began to look ahead to something different and perhaps something better; one way he looked was through a new kind of fiction. John Campbell once said (*Modern science fiction*, 1953): "Fiction is simply dreams written out. Science fiction consists of the hopes and dreams and fears (for some dreams are nightmares) of a technically based society" (Gunn 1977:4).

Thus, science fiction is not about man's future or the future of technology. It is, instead, about the present world of change. If the future is used in a story, it is there to tell the reader something about himself, his society, his race, his world. And science fiction in the United States during the 1930s, 40s, and 50s assured Americans that their ideals were sound ones and would persist into the distant future. It is this metaphoric function of science fiction, this translation of the American vision of technology and Manifest Destiny,

³ As quoted in Carter (1977:4).

that made it such a popular fiction for its time. Science fiction created worlds that tested the American ideal, and rarely was it found wanting. If the future of a particular story was bleak, it was because the people of that story usually failed to live up to the ideal.

There is one collection of short stories that is particularly suited for exemplifying what is meant by the metaphoric function of science fiction: *I, robot* by Isaac Asimov. First published as a collection in 1950, *I, robot* consists of a number of short stories published between 1940 and 1950. The first story, "Robbie", introduces the earliest model of robot and the stories that follow chronicle the development of the early model into complex "brains". In "Robbie", Asimov attempts to present robots in the most favorable light possible. To begin with, Asimov invents The Three Laws of Robotics, which are presented as sort of preface to the stories:

- 1—A robot may not injure a human being, or through inaction, allow a human being to come to harm.
- 2—A robot must obey the orders given it by human beings except where such orders would conflict with the First Law.
- 3—A robot must protect its own existence as long as such protection does not conflict with the First or Second Law (Asimov 1950: 8).

While these laws are written to control robot behavior, it is not difficult to see that they are also the exact basis for moral behavior as well. Asimov has reduced human morality to three basic codes and then has programmed his robots to follow them.

Having established the moral nature of his robots, Asimov then introduces Mrs. Weston. She is upset by the fact that Gloria, her daughter, is so much in the company of Robbie, a robot nursemaid:

The paper rustled to the floor and Weston turned a weary face toward his wife, "What is it, dear?"

"You know what it is, George. It's Gloria and that terrible machine."

"What terrible machine?"

"Now don't pretend that you don't know what I'm talking about. It's that robot Gloria calls Robbie. He doesn't leave her for a moment."

"Well, why should he? He's not supposed to..."

"You listen to *me*, George. I won't have my daughter entrusted to a machine—and I don't care how clever it is. It has no soul, and no one knows what it may be thinking. A child just isn't *made* to be guarded by a thing of metal."

Weston frowned, "When did you decide this? He's been with Gloria two years now and I haven't seen you worry till now."

"It was different at first. It was a novelty; it took a load off me, and—and it was a fashionable thing to do. But now I don't know. The neighbors—" (Asimov 1950: 16).

Thus, in the lead story Asimov makes the chief opponent against robots a shallow, fashion-conscious woman who first allowed Robbie into her house

because it took "a load off" her: the raising of her child. Now that the neighbors feel that robots are out of fashion, she has had second thoughts about Robbie. Asimov has, in effect, equated anti-robot feelings with shallowness. To be against robots is to be like Mrs. Weston, and no one would wish to claim such an affinity with her.

In the three stories that follow "Robbie", the robots become more and more complicated until finally they are given the power of independent thought. Throughout these stories the plot centers on the basic morality of the robots. Each conflict arises from the human characters' inability to deal with any creation that so completely follows moral imperatives.

The fifth of the nine stories is central not only by order but also by theme. Within this story, "Liar!", human characters allow harm to come to a robot. In "Liar!" the robot Herbie is accidentally given the ability to read minds. The scientists do not know why or how this ability came about and they cannot duplicate it in other robots. It is this ability to read minds that gets Herbie into trouble. He is able to read the mind of Susan Calvin and find out that she is in love with Dr. Lanning. Herbie also knows that Lanning is not in love with her. Yet, when Susan asks Herbie whether or not Lanning loves her, the robot answers the he does. According to the First Law, a robot cannot harm a human being, and Herbie knows that the truth would hurt Susan.

The plot is further complicated by the fact that both Dr. Lanning and another scientist named Bogert are arguing over the answer to a rather difficult problem confronting them. Herbie knows the right answer, but if he tells them he will be revealing their ignorance to them and that will cause harm to human beings as well.

Ultimately, of course, Susan Calvin finds out that Lanning does not love her, and Lanning and Bogert find out that Herbie knows the answer. This leads to a confrontation with Herbie in which Susan deliberately drives the robot insane:

Herbie was up against the wall, and here he dropped to his knees. "Stop!" he shrieked. "Close your mind! It is full of pain and frustration and hate! I tried to help! I told you what you wanted to hear. I had to!"

The [robot] psychologist paid no attention. "You [must tell them [the answer], but if you do you hurt, so you mustn't; but if you don't you hurt, so you must; but—"

And Herbie screamed!

It was like the whistling of a piccolo many times magnified—shrill and shriller till it keened with a terror of a lost soul and filled the room with a piercingness of itself.

And when it died into nothingness, Herbie collapsed into a huddled heap of motionless metal (Asimov 1950:99).

No robot is capable of doing what Susan Calvin has just done to Herbie. What is her reason for such an action? Herbie had to follow the First

Law and Susan cannot forgive him for it. It is at this point in *I, robot* that the machine becomes the moral superior of man himself. Humans are, after all, guided by their emotions; robots are guided only by The Three Laws.

In the three stories that come between "Liar"! and the final story, "The evitable conflict", the robots become even more complex and finally develop into a vast stationary "brain" that carries out all administrative functions. In "The evitable conflict" this brain has complete charge of the economic life of the planet. The story opens with a series of investigations into some minor problems that have caused missed deadlines, mechanical failures, and lack of full production. In each case a supervisor is held at fault and each is transferred to less demanding jobs. However, this obvious answer is not the true one, and it is left to Susan Calvin, now a thorough advocate of machine intelligences, to identify the real cause: the brain is systematically removing from positions of importance those people who are still superstitiously fighting against it. Rather than reacting in horror, however, she sees such action on the part of the brain as mankind's best hope for the future. Stephen Byerley, the World Co-ordinator and a robot, wants to stop the brain because it threatens human freedom. To this, Susan replies:

"Stephen, how can we know what the ultimate good of Humanity will entail? We haven't at our disposal the infinite factors that the Machine has at its! Perhaps, to give you a not unfamiliar example, our entire technical civilization has created more unhappiness and misery than it has removed. Perhaps an agrarian or pastoral civilization, with less culture and less people would be better. If so, the Machines must move in that direction, preferably without telling us, since in our ignorant prejudices we only know that what we are used to, is good—and we would then fight change...."

"But you are telling me, Susan, that the 'Society for Humanity' is right; and that Mankind *has* lost its own say in its future."

"It never had any, really. It was always at the mercy of economic and sociological forces it did not understand—at the whims of climate, and the fortunes of war. Now the Machines understand them; and no one can stop them, since the Machines will deal with them as they are dealing with the Society,—having, as they do, the greatest of weapons at their disposal, the absolute control of our economy."

"How horrible!"

"Perhaps how wonderful! Think, that for all time, all conflicts are finally evitable. Only the Machines, from now on, are inevitable!" (Asimov 1950:192)

Before the reader completely rejects Susan Calvin's happy vision of the future, it is important to remember that the Machines have been programmed with Asimov's version of moral law. They are not monsters, but creations that will allow man to remain man with all of his pride and prejudice. The only difference is that now, while man will remain something less than perfectly moral, the moral Machines will not allow this imperfection to destroy the race. Thus, man is free to achieve his greatest ideals because those human

elements that are less than ideal no longer threaten him. Here Manifest Destiny is completely intertwined with machine technology. Because of the machines, man can continue to seek his destiny.

What Asimov has achieved in *I, robot* is metaphor. He gives the reader the robots and The Three Laws of Robotics as symbols of the moral ideal. He measures twentieth-century man against the robots and finds man wanting. But, finally, Asimov accepts man for what he is, refuses to damn mankind for not being able to live in perfect conformance with the ideal, and credits the race with the ability to create through its technology those inventions that will make up for human shortcomings.

On August 6, 1945, the United States used the atomic bomb. That single event completely changed the way in which mankind viewed his future and his progress. While it would be downright foolish to link the effect this cataclysm had on the world with its effect on American science fiction, it would nonetheless be true to say that the genre has never fully recovered from it. Paul A. Carter's description of the American writers' reactions to the dropping of the bomb is very informative:

As a group, these authors "had been living very close to atomic power for a long time," Theodore Sturgeon testified in a story published not long after Hiroshima... "All of them were quite aware of the terrible potentialities of nuclear energy," said Sturgeon. "Practically all of them were scared silly of the whole idea." Their fear, however, prior to Hiroshima, was for humanity in general; for themselves, "except in a delicious drawing room sort of way," most of them were not afraid, "because they couldn't conceive of this Buck Rogers event happening to anything but posterity."

But it had, and it threw the science fictionists into a moral dilemma Hugo Gernsbeck had probably never anticipated (Carter 1977: 24-25).

Suddenly the issue of technology itself became a moral topic. And while Asimov continued to rest his faith in the Machines, even he, at times, wondered

For some time, science-fiction writers appeared to the world in general to be something more than a bunch of nuts; we were suddenly Cassandras whom the world ought to have believed. But I tell you, I would far rather have lived and died a nut in the eyes of all the world than to have been salvaged into respectability at the price of nuclear war hanging like a sword of Damocles over the world forever.⁴

Metaphor had become reality, and many a science fiction writer did not like this new state of affairs.

While stories of the Golden Age continued long after Hiroshima, and continue to be published today, new stories started to appear as well. These stories asked disturbing questions and focused not on the human race but on the individual. Manifest Destiny was replaced with individual history.

One of the earliest of these stories was Judith Merrill's "That only a mother"

⁴ As quoted in Carter (1977:25).

published in *Astounding* in June 1948. In this story the world is suffering from massive radiation poisoning. So massive is this poisoning, in fact, that the vast majority of children being born have grotesque deformities. Merrill emphasizes the grotesqueness of these infants by pointing out that in this world infanticide is rampant. Fathers are so shocked by their children's deformities that they end up killing them.

Merrill presents this future earth in terms of a single family. While the father is away because of his work, his wife gives birth. Her letters try to reassure her absent husband that all is well with the baby, but it quickly becomes obvious to the reader that the child is a mutant. The mother seems to protest too much about the complete normality of the child. Ten months after the birth of his daughter, the father finally returns to meet her. The baby is a prodigy in that she fully understands everything said to her and, even more remarkable, talks in coherent, adult sentences. Such impressive development is swept aside, however, when he discovers two things: first, the baby has no arms or legs; second, his wife's love for the baby has completely blinded her to the fact of this mutation. But the father sees the deformity all too well:

She didn't know. His hands, beyond control, ran up and down the soft-skinned baby body, the sinuous, limbless body. *Oh God, dear God*—his head shook and his muscles contracted, in a bitter spasm of hysteria. His fingers tightened on his child—*Oh God, she didn't know . . .* (Merrill 1970 : 287).

The world of "That only a mother" does not need an ideal of ever-expanding technology or of Manifest Destiny; it needs a mother's love. Mutations are now a way of life for that world and if fathers insist on killing off their children because they are different, then the human race has no future.

In the late 1940s a new metaphoric function was developing for science fiction. It did not replace the one of the Campbell era, but it did start to compete with it. James Gunn writes of science fiction:

James Joyce has defined the "epiphany" of a short story as the flash of recognition that shows the situation in a new light: "its soul, its whatness leaps to us from the vestment of its appearance". In the science-fiction story, the epiphany usually is revelation not of character but of the relationship of man to his environment, whether man-made or natural, or of man to other men or to other creatures or to his own creation (Gunn 1977 : 2).

Increasingly, however, science fiction after 1950 was concerned with character, with how individuals reacted to their world of change. And equally frequently, the characters of a science-fiction story reacted with doubt and utter confusion.

The end of the 1940s and the following two decades saw this new type of science fiction rise to seriously challenge the old. Ray Bradbury's "Mars is heaven" (1949), Fritz Leiber's "Coming attraction" (1950), Richard Matheson's "Born of man and woman" (1950), Kurt Vonnegut's *The player piano*

(1952), James Blish's *A case of conscience* (1958), Walter Miller's *A canticle for Leibowitz* (1960), Harlan Ellison's "I have no mouth and I must scream" (1967)—all of these works centered on the individual, and while each story makes a point about what is happening to mankind in the present age, such lessons are, more often than not, left to the reader to form from the revelation of character that is presented by the author.

In many ways the new metaphoric function of science fiction was bound to happen. As Americans went through the Korean war, a series of economic recessions, the explosions of racial conflicts, the Vietnam war, and major political disasters, their thoughts turned inward to the quality of their own lives in the present. Manifest Destiny no longer was adequate. Taxes and energy became the major issues because such things had a direct bearing on life here and now. Science fiction created worlds which symbolized the threats to individual life and to individual dreams. Science-fiction metaphor now turned to the frustrations of single people living in a world they did not create.

In 1959, "Flowers for Algernon" was published in *The magazine of fantasy and science fiction*. Its success was immediate and lasting. The author, Daniel Keyes, was able to present in that single story, in terms that provoked sympathy and understanding, many of the fears of the present American citizens. The central character, Charlie, has the intelligence of a moron. He has learned to look after himself and earns a living as a janitor. A group of scientists, interested in treating mental retardation by chemical means, offer Charlie the chance to "be smart" and Charlie, never fully understanding what they tell him, accepts the chance.

The experiments are a success and Charlie develops an intellect that can only be classed on the genius level. To the scientists he is simply another experimental case, however, and Charlie feels exceedingly lonely. He starts to take an interest in a mouse, Algernon, that was used for tests in developing the drug used on him. When the mouse suddenly dies, Charlie loses both a companion and any hope of permanently keeping his new mental powers.

From the death of Algernon to the end of the story, the reader is treated to a slow, detailed description through Charlie's own words of his return to the moronic level. While Charlie does not die, at the end of the story he is right back where he started. Charlie's final words form one of the most touching endings written for any literary genre:

I remember I did something but I dont remember what. So I gess its like I did it for all the dumb pepul like me.

Goodbye Miss Kinnian and Dr. Strauss and evreybody. And P. S. please tell Dr Nemur not to be such a grouch when pepul laff at him and he would have more frends. Its easy to make frends if you let pepul laff at you. Im going to have lots of frends where I go.

P.P.S. Please if you get a chance put some flowers on Algernon's grave in the backyard . . . (Keyes 1970 : 525).

"Flowers for Algernon" is not simply a story about a few insensitive scientists who fail to see the human tragedy they have created. It is about a man born into a world he did not create with a condition he did not choose. Having made peace with that world, however, he is taken from it and placed into an entirely new one. Having made peace with that new world, he is then returned to the old one. It is the pain and frustration of not being able to control one's destiny that is at the heart of this story. That is a theme that many, many Americans can respond to, and it is this theme that neither Hugo Gernsbeck nor John Campbell could foresee.

It would be wrong to claim that Golden Age science fiction is no longer being produced in the United States. It is interesting to note, however, the growing popularity of such English writers as John Brunner, J. G. Ballard, Michael Moorcock, and Brian Aldiss. While many of these men grew up with American science fiction, they also follow in the tradition of H. G. Wells, Olaf Stapledon, George Orwell, and Aldous Huxley. This tradition never lost sight of revelation through characterization. It might very well be that, with the diminished power of the American Dream, not only has science fiction in the United States joined the older tradition of European literature but the American public has itself come to accept its common bond with the rest of the world as well.

REFERENCES

- Asimov, I. 1950. *I, robot*. Greenwich, Conn.: Fawcett Publications.
- Campbell, J. W. 1976. "The last evolution". In Rey, L. D. (ed.). 1976. 7-23.
- Campbell, J. W. 1976a. "Twilight". In Rey, L. D. (ed.). 1976. 24-43.
- Carter, P. A. 1977. *The creation of tomorrow: fifty years of magazine science fiction*. New York: Columbia University Press.
- Gunn, J. 1975. *Alternate worlds: the illustrated history of science fiction*. Englewood Cliffs, N. J.: Prentice-Hall.
- Gunn, J. 1977. *The road to science fiction: from Gilgamesh to Wells*. New York: The New American Library.
- Keyes, D. 1970. "Flowers for Algernon". In Silverberg, R. (ed.). 1970. 500-525.
- Merril, J. 1970. "That only a mother". In Silverberg, R. (ed.). 1970. 279-287.
- Rey, L. D. (ed.). 1976. *The best of John W. Campbell*. Garden City, N. Y.: Nelson Doubleday.
- Silverberg, R. (ed.). 1970. *The science fiction hall of fame: the greatest science fiction stories of all times*. Garden City, N. Y.: Doubleday and Co.