

CHAPTER 28

C/SETI AS FICTION: ON JAMES GUNN'S *THE LISTENERS*

De Witt Douglas Kilgore

Astronomy compels the soul to look upwards and leads us from this world to another.
—PLATO, *The Republic*, 529¹

Over the past four decades the search for extraterrestrial intelligence (SETI) has taken a small but significant place in American culture. Walter Sullivan, Frank Drake, and David Grinspoon, among many others, have written popular accounts of the science. Motion pictures such as *Contact* (1997) and *Species* (1995) have visualized the field with the tools available to filmmakers. The SETI Institute's radio program *Are We Alone*, hosted by astronomer Seth Shostak, makes the science a part of the heavily mediated environment of popular entertainment. There is also the small, robust field of historical and critical scholarship. It is in fiction, however, that SETI has found its most effective expression for general audiences. This medium provides literary arguments for why the science matters in contemporary life. I argue that it is fiction about SETI that helps us model the societal implications of extraterrestrial contact.

Fiction writers such as James Gunn and writer-scientists such as Carl Sagan have produced a literary subgenre that I call the CETI (communication with extraterrestrial intelligence) novel.² These writers take the science seriously and share an interest in

1. Plato, *The Republic* (New York: Vintage Books, 1991), p. 274.

2. For the purpose of distinguishing it from the science (SETI), I use for the fiction the original acronym for the project: CETI or communication with extraterrestrial intelligence. John Billingham recalls that the change in nomenclature was inspired by the establishment of the science as a NASA project in the early 1970s. David W. Swift, *SETI Pioneers: Scientists Talk about Their Search for Extraterrestrial Intelligence* (Tucson, AZ: University of Arizona Press, 1990), pp. 258–259.

both representing the project and its possible social and political effects.³ They are also committed to dramatizing the early, founding goal of SETI—communication with extraterrestrial civilizations. This leads them to consider ideas that are always revisited in debate around the project. Could we communicate with an intelligent species that is not human? What effect would such an exchange have on us?

These questions create challenges of both form and content for the CETI novelist. How might these issues and the debates they inspire be presented to general readers, engaging the emotions as well as the intellect? One solution is the genre's focus on the future that a SETI contact could produce; the CETI novel always takes place in a recognizable present and that future is always just around the corner. It is the closeness of that fictional present to our world that makes CETI narratives credible, and it is a futurism that helps the writer emphasize the science's connection to contemporary life. It is through this link that the CETI novelist hopes to sustain the reader's interest in SETI as necessary to any future we might create.

The central premise of a CETI narrative is that the search for an artificial signal from another world is successful. What follows is a fruitful exchange of scientific and cultural ideas. Whatever arguments are used to sustain this presumption, it is liberal hope that inspires this hypothesis. Discovering the knowledge we need to make manageable the social and political problems of our world is the foundation of that hope. It forecasts a terrestrial future in which humanity survives its internal divisions and its Malthusian consumption of Earth's resources. In other words, communication with extraterrestrial others would prompt us to communicate with each other. We could then work together to make the world more livable and sustainable. Thus, human civilization would break out of the historical bind in which it finds itself.

Steven Dick argues that “perhaps the classic expression” of SETI in fiction is James Gunn's 1972 novel, *The Listeners*.⁴ This book is my test case for the futurist concerns I have outlined—my model for the CETI novel as a distinct literary genre. Although other works in fiction and nonfiction preceded it, Gunn's achievement is to create a narrative that speaks to prevailing social concerns while introducing the reader to this new science. Here SETI is not merely a convenient backdrop for the agony of middle-class lives; it is the *raison d'être* of those lives. This emotional as well as intellectual centrality helps clarify the feeling of social mission the writer finds in the science.

3. Writers such as Don DeLillo and Stanislaw Lem have been interested in the science. However, they engage it both as a demonstration of the limits of science and of our ability to communicate through language. This is very different from the ideology and spirit encoded in the CETI novel as a narrative form of scientific representation. Don DeLillo, *Ratner's Star* (New York: Vintage Books, 1989 [1976]) and Stanislaw Lem, *His Master's Voice* (Evanston, IL: Northwestern University Press, 1999 [1983]).

4. Steven J. Dick, *The Biological Universe: The Twentieth-Century Extraterrestrial Life Debate and the Limits of Science* (Cambridge, U.K.: Cambridge University Press, 1996), p. 260.

In the following paragraphs I will explore Gunn's solution to the problem of introducing a new science to nonspecialist audiences. As I present it here, Gunn follows two distinct but conjoined strategies: he creates a form that provides the historical and philosophical background against which to view SETI, and he tells a story in which difficult social debates are resolved by lessons learned from science. The novelist's goal is to strike a balance between the didactic demands of his subject and familiar fictional conventions. Thus, I argue, Gunn makes a fiction in which SETI is part of our ordinary culture—the herald of an extraordinary future.

ON FORM

Gunn's *The Listeners* may be viewed as an experimental novel within the context of genre practice during its composition. It was written serially, as a series of short stories for *Galaxy Magazine* and *The Magazine of Fantasy and Science Fiction*, from 1968 to 1972. Marketed and published as general fiction, not science fiction, in 1972, the novel has been considered a "fix-up," defined by Clute and Nicholls as "a book composed of previously written stories which have been cemented together."⁵ The cement, in this case, is what Gunn calls "computer runs," interchapters that provide a historical and philosophical overview of SETI and the future posited by the novel. The usual practice with fix-ups, such as Ray Bradbury's 1951 collection *The Illustrated Man*, is to provide fictive interchapters linking together stories that otherwise have no compositional relation to one another. Gunn's strategy is more like that used by John Steinbeck in his 1939 novel *The Grapes of Wrath*; it offers the reader a social and political context within which to understand the narrative portions of the work.

The Listeners presents SETI as a humanistic science, a research agenda that boldly addresses our social and philosophical concerns through the question of whether sentient life exists elsewhere. Gunn's formal strategy is to create a narrative in which science-based exposition and debate are entangled with conflicts around the politics of race, between religion and science, between a middle-class status quo and a utopian future, and around the private misunderstandings of husbands and wives, fathers and sons. In this narrative context, Gunn's computer runs present three lines of argument: history and futurist speculation, inspirational epigraphs from literature, and statements from SETI pioneers. These arguments create a dialectic that defines the science as a movement that can change the course of individual and collective lives.

Through historical reconstruction and speculation, Gunn gives us a select history of science. We learn that SETI was born when Cocconi and Morrison discussed the feasibility of sending interstellar messages during work on "gamma

5. John Clute and Peter Nicholls, *The Encyclopedia of Science Fiction* (London: Orbit, 1993), p. xxxiii.

ray production from the Crab Nebula.”⁶ The Big Bang and inflationary universe theories are presented, in free verse.⁷ The course of future progress in cryonics, genetics, psychiatry, and weather control is indicated. Advances in technology such as a milk-making machine (heralded as a part of recycling waste and not as a way to eliminate hunger), computer-generated art, and the first Mars landing are cited. We are given snippets foretelling the future of media technology from holovision to the responsive environment (“respen”) to a full-spectrum sensorium (“V-A-F-S”), a scenario that anticipates the computer-based concept of virtual reality. Lists of stars, galaxies, and great astronomers round out Gunn’s sketch of knowledge acquisition and engineering prowess. The novel’s Listening Project is presented as a significant development in this hymn of science and invention.

In mid-twentieth-century America, a common concern was that social and political progress did not keep pace with advances in science and technology. Gunn’s computer runs offer a future in which society and politics keep pace with technoscience. Wealth is more equitably distributed, Arabs and Israelis work together, the prison-industrial complex fades into irrelevance, the 4-day week and 13-week vacations become standard, and an increase of leisure means that the amateur is reconstituted as a respected and productive social position. Gunn anchors this speculation in a bulletin on the growth of national and global wealth:

The [United States Bureau of Economics] attributes the solution of many of the problems that troubled the world a half century ago to the dramatic growth in the Gross World Product through automation, fusion power, greater use of computers and cybernation, and new educational methods.⁸

Here the link between social and technological progress is completed by economic development. Technoscientific progress sponsors wealth creation, which in turn empowers and sustains the resolution of social and political problems. Given current conditions, this scenario may be optimistic, but is powerful nonetheless because of both the utopian desire it encodes and its resonance with familiar hopes in a culture resistant to socialist alternatives. It is the accumulation of wealth under an efficient, global capitalism guided by a social democratic liberalism that empowers and sustains Gunn’s vision of social and technological progress.⁹

6. James Gunn, *The Listeners* (Dallas, TX: BenBella Books, 2004 [1972]), pp. 26–27.

7. *Ibid.*, pp. 173–174.

8. *Ibid.*, p. 141.

9. David Potter’s landmark study, *People of Plenty*, states this position in a more formal context. Potter argues that a “culture of abundance” is the thing that explains American character and gives the nation’s people a unique place in history. The United States will survive if it can avoid the pitfalls of scarcity. David M. Potter, *People of Plenty: Economic Abundance and the American Character* (Chicago: University of Chicago Press, 1958).

The bottom line here is that the world is reformed, socially and politically. However, it is important to note that Gunn's future describes liberal reform within political and economic institutions that do not change. In the near term, the world does not become unrecognizable from a mid-twentieth-century capitalist perspective, as it does in Kim Stanley Robinson's post-Marxist *Mars Trilogy*.¹⁰ The hope is that the United States of the twentieth century will inherit any extraterrestrial knowledge, surviving its own problems and serving as a model for the rest of the world.

In Gunn's interchapters the mixture of history with futurist speculation deploys a historiographic vocabulary familiar in science fiction.¹¹ By the mid-1960s the gesture is arguably a cliché. Gunn's desire to teach, however, leads him to directly include the results of his research into the early history of SETI. The computer runs are also an archive of the scientific commentary that inspires the narrative. It is here that we are introduced to first generation of C/SETI thought. Extracts from the seminal paper by Giuseppe Cocconi and Philip Morrison, Cocconi's letter to Bernard Lovell, estimates of the likelihood of living planets and intelligent species by Sebastian Von Hoerner, and Carl Sagan's, Frank Drake's, and Ronald Bracewell's early statements on the kinds of searches possible and the time scales involved are imbricated with fictive explication and history. Gunn combines scientific propositions with belletristic rumination from speculative essays by Eiseley, Shapley, and Dyson. Here we have scientists functioning as writers—intellectuals who can speak authoritatively about why thinking about sentient extraterrestrials is important to our sense of self and destiny. Their words are carefully dated, allowing us to locate utterances from the late 1950s through the 1960s. Gunn's strategy here is to support and authorize his future history with direct reference to the thought of those scientists responsible for both creating SETI and promoting the science in print for nonspecialist audiences.

What Gunn has made is a model for integrating fiction and science writing. Coupled with the emotional resonances produced in the novel's fictional chapters, science (particularly new science) is made compelling or, at least, interesting for general audiences. The goal here is to gain cultural credibility for SETI, building a case that makes it look like more than science fiction.¹² In the computer runs, it is Gunn's references to literature that supply the cultural capital necessary for

10. Kim Stanley Robinson, *Red Mars* (New York: Spectra/Bantam Books, 1993), *Green Mars* (New York: Spectra/Bantam Books, 1994), *Blue Mars* (New York: Spectra/Bantam Books, 1997).

11. Isaac Asimov's *Foundation Trilogy* (1942–1950), A. E. van Vogt's *The Voyage of the Space Beagle* (1950), and Robert Heinlein's future history stories (1939–1941, 1945–1950) are paradigmatic in this regard.

12. For science, especially science that wrestles with pre-existing cultural tropes such as the idea of extraterrestrial life, science fiction is a problem as well as an invaluable resource. Sensitivity about the standing of science in relation to science fiction is indicated by Giuseppe Cocconi's reluctant admission to Bernard Lovell that the notion of life and intelligence on other planets might, "at first sight [look] like science fiction." He goes on to argue that it is not (Gunn, p. 28).

that credibility. British and American authors Walt Whitman, Alice Meynell, Gerard Manley Hopkins, and Edward Lear link the reader to the thread of fanciful or religious speculation that has always been a part of Western (English-language) literature. Within this tradition Gunn also takes care to include H. G. Wells, Murray Leinster, A. E. van Vogt, and Theodore Sturgeon—authors who have helped formulate the modern conception of extraterrestrial sentients and have had powerful influence on how to present narratives of human–alien contact.

For analytical purposes I have split apart these literary (and nonfictional) threads. Gunn’s strategy, however, is to weave them together. He juxtaposes religious texts (the Judeo-Christian Bible, the Hindu Rig Veda) with modern literature with history of science with science writing, speculative essays, futurist scenarios, and government reports. Differences and historical context are indicated by changes in typography and dated attribution. The effect is a cultural babble that mirrors the cacophony of radio voices depicted in his fiction. In this orchestration no particular utterance is given prestige or priority above another; each saying builds on and offers support to the next. As Gunn’s science heroes must decode the Message sent by the Capellans, so the reader is to decipher the cultural puzzle of the interchapters.

The book’s final chapter, “The Computer,” integrates fiction, nonfiction, and literary and science history. Having taught us how to read C/SETI as science and culture in the previous chapters and computer runs, Gunn hopes that we are ready to interpret the Message of the novel and to integrate it into our own sense of how the world does and will work. The effect of his stylistic formula is to indicate that there is more at stake here than either disinterested curiosity or personal salvation. Nothing less than the future of the human race is at issue. However melodramatic this might sound, Gunn’s effort provides insight into the mid-twentieth-century anxieties and hopes that informed the creation and reception of SETI science.

ON CETI AND RACE

During the composition of *The Listeners* in the late 1960s and early 1970s, a great deal of criticism was leveled at the U.S. space program, for example, cultural critic Lewis Mumford’s contemporaneous judgment that spaceflight dreams are “infantile fantasies.”¹³ But as I have noted elsewhere, “[T]he political voice that served as the iconic focus of liberal/left dissent from the space vision and its economics came from the nation’s black community.”¹⁴ The Southern Christian Leadership Conference, for example, organized a protest march during the Apollo 11 launch (on 16 July 1969) that questioned the expense and the societal importance of the

13. Stewart Brand, ed., *Space Colonies* (San Francisco: Waller Press/Penguin, 1977), p. 34.

14. De Witt Douglas Kilgore, *Astrofuturism* (Philadelphia: University of Pennsylvania Press, 2004), p. 198.

venture.¹⁵ Astrofuturists, such as science fiction writer Ben Bova, felt it necessary to directly confront African American criticism, offering the exploration of space as a solution to the racial conflicts of the time.¹⁶ Gerard O'Neill notes in his 1978 book, *The High Frontier*, that the ability of science to address contemporary social problems was also in question on university campuses.¹⁷ Working as a public relations officer at the University of Kansas at that time, James Gunn was well aware of the problem. Indeed, in his preface to the 2004 edition of the novel he tells us that it was his job "to explain student unrest to the various University publics."¹⁸

It is in *The Listeners* that Gunn makes his most compelling contribution to that social and political debate. In the chapter "Andrew White," the author offers a description of how the discovery of an extraterrestrial civilization might affect the United States. However, how race is seen (as a social and political problem) must be resolved before the future that follows unfolds. In this novel the foundation of political hope is SETI's potential for changing or eliminating race's historical standing as an ineradicable mark of human difference.

Gunn draws our attention to race by filtering the reader's view of C/SETI through the thoughts of Andrew White, the African American president of Gunn's near-future United States. This is a critical and perhaps bold move inspired by the racial tensions of the 1960s and early 1970s. Here Gunn conducts a literary thought experiment that highlights problems while setting the stage for the solution. The hope that social and political advance will move in company with progress in science is fundamental here. Political progress is signaled by the deliberations of an African American occupant of the Oval Office; scientific progress is represented by the Listening Project's success in discovering an extraterrestrial message. Gunn creates this character not to examine political racism in high office (as Irving Wallace did in his near-contemporary novel, *The Man* [1964]), but to raise at least three pertinent questions: What would it mean to speak for humanity to an extraterrestrial civilization? Who could authorize such a communication and to what end? And, is civilized communication truly possible between different races, cultures, civilizations

15. Courtney G. Brooks, James M. Grimwood, and Loyd S. Swenson, *Chariots for Apollo: A History of Manned Lunar Spacecraft*, NASA History Series, 1979, <http://history.nasa.gov/SP-4205/ch14-2.html#source2> (accessed 14 August 2006).

16. Ben Bova, *The High Road* (New York: Pocket Books, 1983).

17. Kilgore, pp. 157–59.

18. Gunn, p. xvii.

or generations?¹⁹ What binds these issues together in *The Listeners* is the kind of social future we hope for and how the past informs it.

Gunn's President White must decide whether the novel's CETI project may share news that a message has arrived from a planet orbiting the double star Capella and send a reply. This issue is complicated by an argument with his son over the meaning and relevance of race now and in the future. What is at stake is whether the president can accept the Capellan Message as a furtherance of the political evolution that he represents.

As he sets up White's view of C/SETI, Gunn is careful to establish the president's authority as holder of the nation's highest office. We first see White in the Oval Office and our attention is drawn to its size:

The office was big Across the broad blue, deep-piled carpet with the woven seal in the middle to the carved white door by which visitors entered was a good twenty yards—that was bigger than the entire flat in which he had been born²⁰

This scene setting makes the Oval Office Andrew White's natural environment, a move underscored by the reference to humble beginnings. White's log cabin story has him escaping from urban poverty, but otherwise cleaves to this familiar aspect of American political hope: that the small, the weak, and the disenfranchised can achieve greatness in this country. And, as befits a storybook president who is entrusted with national destiny, Gunn makes his chief executive larger than life:

He stretched his shoulders and felt the long, flat muscles rippling under the layer of fat too many chicken dinners had put there, and he knew he was a big man, an imposing president, six-feet-six from the soles of his feet to the top of his close-cropped hair, and the physical equal of any of them, of anyone who came through that door.²¹

Gunn's goal here is to write a president whose authority we do not question. His race is important to the narrative but is not represented as a problem that undermines his effectiveness or longevity in office.

President White's race also signals that he represents a future in which social change is possible. The writer's strategy of linking his decision-making to an

19. Andrew White, Gunn's African American president, is not a unique fictional invention; several other popular writers responded to the "race problem" of the 1960s by mounting fictional speculations on a black presidency. Irving Wallace's early 1960s best seller, *The Man*, predates Gunn's story by several years. A film based on book, starring James Earl Jones as the first African American president, was released in 1972. Gunn's short story, "Andrew White," was published that year in the January-February issue of *Galaxy Magazine*. Gunn has stated, however, that he has not read the Wallace book. He is, however, familiar with the movie (private conversation with author, 7 July 2007). The connection, therefore, has more to do with contemporary social thinking rather than a specific influence.

20. Gunn, p. 101.

21. Ibid.

historical and iconic president, Theodore Roosevelt, underscores this. Gunn has White remember Roosevelt's reputation for making up "his mind somewhere in the region of his hips."²² Whatever we remember about Roosevelt's racial beliefs connecting White to this popular historical figure, and by association to the relatives who followed him as president and first lady, indicates how we are to view White as an author of progressive social reform.²³ In this narrative he is authorized as a man, as a father, as president, and as the representative of an historically aggrieved population who can open the way for a radical change in human relations.

The dynamic interchange Gunn stages between SETI and the personal and political investments of his cast allow him to demonstrate how science might solve race as a social problem. For Andrew White, who was "wound up in the ghetto" and who used the White House to "right the ancient wrongs," race and racism are fundamental aspects of human character. As a career politician, he understands "that there were differences between men and these differences inevitably affected how they felt about each other, about themselves." These differences, coupled with the human capacity for, as the president argues elsewhere, "malice and greed . . . the persistent search for advantage" make him pessimistic about the state of the future he is helping to create.²⁴

On the other hand, the president's son, John White, is convinced that the past his father remembers "is irrelevant" to the world in which he lives. If his father argues that the battle for civil rights is not finished, John believes that it is. Impatient with his father's account of past troubles, John argues that "[B]eing human is being able to do something different." It is at this point that Gunn has his fictional president reflect, "*The boy was an alien, but somehow he had to communicate.*"²⁵ Here Gunn emphasizes the metaphorical link between speculation about extraterrestrials and the "aliens" we live with here on Earth. That connection illuminates SETI's potential for changing how we see contemporary social problems. In *The Listeners*, resolving this generational conflict over race is a matter for science, not politics.

In this novel there is no question that discovery of an extraterrestrial civilization will have tremendous impact on our world. Considering the prospect, President White comes to the conclusion that it is "bad news." He tells Robert MacDonald, the humanist and engineer who directs the Listening Project, that an alien message could sow "the dragon's teeth of dissension and strife which may well destroy this country." His concern is that public knowledge of the Capellan Message would disrupt the domestic tranquility necessary for reform: "We have solved many of the problems that threatened to tear this nation apart at the time the Project was started and trouble will keep us from solving the others. We need, calm, serenity . . .," not

22. *Ibid.*, p. 104.

23. For more on Theodore Roosevelt's complex understanding of race, see Thomas G. Dyer, *Theodore Roosevelt and the Idea of Race* (Baton Rouge, LA: Louisiana State University Press, 1980).

24. Gunn, pp. 110, 114, 126.

25. *Ibid.*, pp. 105, 110.

change that is “unmanageable.”²⁶ Director MacDonald’s answer to these concerns is that the act of communication, particularly scientific and cultural communication, is our guarantee that social progress would be fostered and not hindered should SETI achieve its aims. Gunn has his scientific humanist visionary list at least three arguments in favor of this position: (1) if the president allows scientists to release the Message and their interpretation of it, then public understanding will follow; (2) communication is a civilized act that precludes violent intent by sender or receiver; and (3) once the public learns the facts, it will realize that the benefits of communication outweigh the risks.²⁷ These arguments outline a science-based hope. It is a brief that embraces the changes that would follow the discovery of an advanced extraterrestrial civilization.

The Listeners is a book written in praise of science as an activity that fosters communication between people who differ by reason of border or birth. SETI is presented as an inquiry that ennobles the human species and guarantees its future. This is a minority opinion in a popular culture in which thrilling horror-from-the-stars stories function as an entertaining commonsense. *Species* (1995), for example, is a film that directly mocks SETI (with what purports to be footage of astronomers sending the 1974 Arecibo message) as the folly of naïve scientists. The message received by the film’s protagonists produces a dangerous white-black-Asian hybrid, a monstrous miscegenation that preys on “normal” humans. Communication with an extraterrestrial civilization is dangerous and sets up an interspecies conflict (rendered in visual terms as traditionally racial) that could lead to the extinction of terrestrial intelligence. This is “the boogeyman from the stars” cliché at which Gunn’s project director casts an indulgent smile.²⁸ If popular narratives insist that communication between different races is impossible, then narratives inspired by science (SETI science, at least) argues that communication is possible and necessary for our survival. In American cultural discourse this position allows SETI to stand out as a science that seeks new discoveries; it does so in part because it runs counter to popular narratives around race and the fears they express.

This takes us to the hope that Gunn engages through the thematics of race and communication: the progress of human civilization and its long-term survival. If human beings can talk to one another, we may also engage in conversations with beings from other worlds; if human civilization can mature, it could join what Ronald Bracewell calls the “galactic club.”²⁹ If we accept these propositions, then we find ourselves considering a “universal” future—an era in which we create an ethical reality that transcends what Edward Said calls “the easy certainties provided us

26. *Ibid.*, pp. 115, 107, 122, 132.

27. *Ibid.*, pp. 124, 125.

28. *Ibid.*, p. 125.

29. Ronald N. Bracewell, *The Galactic Club: Intelligent Life in Outer Space* (Stanford, CA: Stanford Alumni Association, 1974).

by our background, language, nationality, which so often shield us from the reality of others."³⁰ Thus, the narrative resolution of conflict between races and generations in *The Listeners* provides a social and political justification for SETI: that through this science we may discover the material grounds for a universal language, an episteme that does not assume incommunicability of experience across differences of culture and biology.

Gunn underscores this goal by having his president perceive a truth and give up his son. The truth comes to him graphically in the reply that MacDonald would like to send to the Capellans. It is a simple pictogram of dots and spaces, a message that contains some basic biological and astronomical information. President White laughs when he sees it:

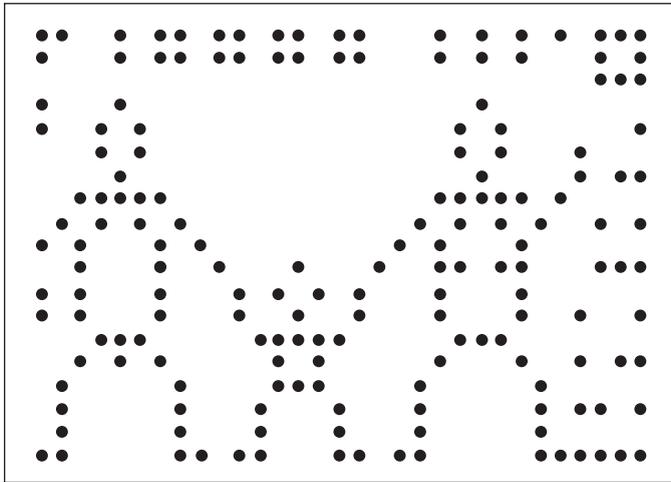


Figure 28.1—Listening Project Message (*James Gunn, The Listeners* [1972]).

“I’m sorry . . . I wasn’t laughing at the answer. I don’t begin to understand half of what’s here. But that’s obviously a father and a mother and a son—a child—and the Capellans would have no way of knowing whether they were white or black.”³¹

If the president’s fear is that any dialogue with the Capellans will only serve to exacerbate our parochialism, then MacDonald’s answer seems to set that aside. At this level of communication, human differences are trumped by the reproductive biology that sustains us. The biological insight that humanity is a single species shapes White’s decision to let the project go forward. From this point, the history foretold by *The Listeners* takes a hopeful turn.

30. Edward W. Said, *Representations of the Intellectual: The 1993 Reith Lectures* (New York: Vintage, 1996), p. xiv.

31. Gunn, p. 135.

Because Andrew White is an African American president, his decision is doubly authoritative in answering 1960s questions about science's relevance to social problems. What is at stake here is not only the acceptance of SETI by a politically active and critical African American community, but also whether the project is open to participation by its members. Gunn answers this last question by having John White, the president's son, become a contributing member of the Listening Project. After John makes an important breakthrough toward deciphering the Capellan Message, the president allows him to join the project. John eventually succeeds MacDonald as Listening Project director.³²

In the spare, economical world of Gunn's fiction, the symbolic import of this is obvious. It underscores the message that C/SETI is (or should be) the work of a scientific community that represents all of humanity. It is through this openness that Gunn makes his most direct plea for science as a social as well as an intellectual good. Gunn has MacDonald state, "The fraternity of science is closer than the fraternity of birthplace or of language."³³ By becoming part of this fraternity, John White represents the hope for the future that Gunn sees in the search for extraterrestrial intelligence.

It is possible to dismiss the position that Gunn articulates, in championing SETI as "nothing more . . . than salvation from the stars," following George Basalla's critique in *Civilized Life in the Universe* (2006).³⁴ What Basalla fears, perhaps, is that SETI, as an ongoing public discourse, amounts to a ceding of scientific and political ground to unreasoning popular culture. The literary experiment that Gunn conducts, however, allows us to mount a more subtle analysis. The novel's hopes for social and political progress notwithstanding, good news from the stars is not a panacea, a *deus ex machina* that resolves all the difficulties we face. Having received the Capellan Message, humanity is given neither final answers nor a perfect social order, but simple confirmation of a way forward. History continues, in a different register, with plenty for the human race to learn and accomplish:

The Project set up nearly one hundred fifty years before to listen for messages from the stars and the Message from Capella that it had received and deciphered had given Earth and its people ninety years of peace in which to explore the other aspects of humanity besides aggression. The problems that had seemed so difficult, virtually unsolvable, one hundred and fifty, even ninety, years before had seemed to solve themselves once the world relaxed.³⁵

32. *Ibid.*, pp. 136–138, 155–157.

33. *Ibid.*, p. 130.

34. George Basalla, *Civilized Life in the Universe: Scientists on Intelligence Extraterrestrials* (Oxford, U.K.: Oxford University Press, 2006), p. 121.

35. Gunn, pp. 177–178

The lesson drawn here presents two effects of the Capellan Message: it helps humanity take stock, improving its situation; and the answer to our reply will help spark a change, the “something different” for which John White argues.³⁶

The final chapter of the book, “The Computer,” clarifies what is new about this emerging difference. Throughout the novel, the Listening Project computer is used by astronomers as an instrument and archive. MacDonald tells White that “[V]irtually the entire written history and literature of mankind—in all his written languages—is stored in there.” It is a “research tool” that contains the sum of human cultural achievement in art and science: the universal knowledge necessary for a universal future. The machine represents the human race in the project of decoding any message we might receive. In the novel’s closing lines we are told that when a call from a second extraterrestrial civilization arrives, the computer is “at least half Capellan.”³⁷ In other hands, this would be prelude to xenophobic machine-breaking.³⁸ In the context of Gunn’s narrative, however, it represents change for the better. Gunn has MacDonald’s grandson, William, make the point:

We have received a legacy more valuable than the physical possession of another world, with all its natural treasures, and the world’s scientists and scholars and everyone else who wishes to explore it may spend their lifetimes studying it, interpreting it, and adding bits and pieces of it to our civilization, enriching us by a whole new world and everything it has.³⁹

We are presented with a new dispensation, one in which the impact of a wiser, more advanced extraterrestrial culture produces radical change here on Earth.

Thus, *The Listeners* is a novel that fuels our expectation that, given the right pressure, the human species can change for the better. Gunn’s universal computer heralds the postbiological universe that Steven Dick has theorized elsewhere.⁴⁰ Hope resides in the cultural and political evolution fostered by our technology. However,

36. *Ibid.*, pp. 110.

37. *Ibid.*, pp. 120, 192.

38. Indeed, Hoyle teases us with this possibility in an early novel, using SETI as a jumping-off point for a narrative of uncertainty about extraterrestrial motives. Fred Hoyle and John Elliott, *A is for Andromeda* (New York: Harper, 1962).

39. Gunn, pp. 191–192.

40. Steven J. Dick, “Cultural Evolution, the Postbiological Universe and SETI,” *International Journal of Astrobiology* 2/1 (2003): pp. 65–74. This is a common idea among intellectuals who have considered the possibility of extraterrestrial intelligence. Williams Sims Bainbridge notes that in the mid-1960s Roger MacGowan and Frederick I. Ordway “argued that civilizations quickly evolve out of the biological stage and become entirely mechanistic, artificial intelligence replacing the natural intelligence that originally created the machines.” William Sims Bainbridge, “Extraterrestrial Intelligence: Communication,” *The Encyclopedia of Language and Linguistics*, R. E. Asher, ed. (Oxford, U.K.: Pergamon, 1994), p. 1201.

discussion of artificial intelligence, Bracewell probes, and the like is beyond the brief of this narrative. More important is Gunn's presentation of a technoscientific trajectory in which the politics of race are rendered irrelevant, leading to a species-wide transformation that fulfills the promise of scientific humanist values.

The amelioration of race is prologue to the reconfiguration of women's roles as the new (post)human reality emerges. Heretofore, women are supernumerary to the creation of the future. Their principal function is to secure the succession of great men and their ideas. However, prior to the arrival of the Capellans' final message, William MacDonald tells a waiting world that while he has "no son . . . I do have a daughter who is now a member of the Project staff."⁴¹ Thus, the father-son succession that sustains the project directorship in the novel's history is broken. The future created by the novel's C/SETI project lays the groundwork for both racial and gender equality. On the eve of the women's movement, Gunn imagines that the institutions of science represented by SETI are the vanguard of progressive social and political change.

Whatever we make of these positions, it is important to note the power of the technoscientific speculation that authorizes them. Here scientific and technological invention are the vanguard of social and political change. This sentiment is driven by the hope that progressive, evolutionary trends in science and technology, history, and society will allow our civilization to transcend human frailty, poor judgment, and bad luck.

Gunn's contribution is to connect formal invention and his reading of race with the scientific and social debates current during SETI's first decade. Thus, *The Listeners* has the complexity and depth it needs to serve as a dress rehearsal for how America might react to the news that "we are not alone." With its interchapters containing quotations from SETI's pioneering generation, *The Listeners* is also a model for how the traffic between science, society, and literature moves at particular times in our history. This presentation of SETI's social mission makes the science credible within the social investments important to a general reading public. It also, as SETI League executive director Paul Shuch says in his introduction to the 2004 edition, "inspired a generation of SETI scientists to pursue the seemingly impossible."⁴² It is the desire for a future occupied by intellects other than our own that gives C/SETI narratives the intellectual, formal cohesion necessary to argue for the social relevance of its authorizing science. As presented here, this branch of astronomy is neither apolitical nor disinterested in the nature and course of human life. Its practitioners hope that by searching for and gaining more knowledge about the standing of life and intelligence in the cosmos, old-fashioned values such as tolerance, equity, peace, and freedom will be the anchoring virtues of any global destiny. It is a code of moral and intellectual conduct as well as a disciplined way of fixing our celestial knowledge.⁴³

41. Gunn, p. 183.

42. *Ibid.*, p. xi.

43. For more on science as a moral force against social oppression, see Neil de Grasse Tyson, *The Sky Is Not the Limit: Adventures of an Urban Astrophysicist* (New York: Doubleday, 2000).

At the end of the novel, humanity stands in relation to an extraterrestrial civilization in the way that the Renaissance was influenced by classical antiquity: intellectual and cultural beneficiaries of a long-dead civilization. What is achieved is not utopia but, perhaps, a better world. *The Listeners* certainly argues for this possibility. It has produced or reinforced a pattern of expectation that would lead some to embrace rather than fear communication with another intelligent species.

