ANTHROPOLOGY AND SCIENCE FICTION

by Leon E. Stover

Science fiction is a genre literature that caters to a number of specialized reader tastes in the world of popular culture. Anthropology occurs as subject matter and as a point of view. Science fiction is rather more international in its readership than in its authorship, which is confined chiefly to the United States and Britain. Harry Harrison (American) and Brian Aldiss (English) edit a yearly anthology of the best science fiction they can reprint or translate from the languages of all nationalities. Despite a conscientious search—in which they are helped by an international network of fannish readers—they find it difficult to locate publishable material from outside their own countries.

Kingsley Amis once said that “science fiction is written by Americans and Britons, and not by foreigners and women.” There is enough truth in this jest to save it from ugly prejudice. Ursula LeGuin is one of the few women writers in this field. Other than Americans and Britons, the most productive writers are Russians, but, as Asimov (1962:12–13) points out, they do not write sociological or anthropological science fiction. An exception is the émigré writer Zamiatin (1972 [1914]), whose We provided a model for anti-utopian novels such as Huxley’s Brave New World (1956 [1932]). After the Russians come the Japanese, whose career in this genre began in the 1950s with a translated edition of the American magazine Fantasy and Science Fiction. The first Japanese stories contributed to this edition had American settings. A similar history could be recounted for science-fiction publishing in several other countries. (For a review of science fiction outside the Anglo-American ambit, see Lundwall 1971:228–41.)

I have it from one of my publishers that 10% of all titles published in the United States in 1971 were science-fiction titles. This commercial success is making an impact on American universities. College teachers are discovering the truth of another of Amis’s sayings, that “any literature that students voluntarily read can’t be all bad.” When I began teaching the subject in 1965, my course was the second or third ever to be offered at the university level. Now there are well over 100 courses offered, and the number is growing (Williamson 1971).

Science fiction is an American trade name for one brand of a distinctly American product, genre fiction. Genre fiction began in the 1840s with the “dime novel,” itself reminiscent of England’s “penny dreadful.” Dime novels (which in fact cost from 5 to 25 cents) included Western stories, pirate stories, sea stories, stories about high life and low life in the city, bandit stories, and stories of exploration, adventure, and romance. They sold in the millions, and the publishing industry hired hundreds of hack writers who specialized in writing one genre or another. Around the turn of the century, the dime novel gave way to the pulp magazine (printed on rough woodpulp paper to make it eligible for second-class postage rates), which published adventure, detective, Western, and love stories. During the best days of the pulp magazines, in the ’20s and ’30s, the industry sold about 20 million copies a month. Among the 200-odd titles on the pulp market at its peak was Amazing Stories, issued in April 1926 by Hugo Gernsback, the father of science fiction as a publisher’s category. Amazing sold over 100,000 copies the first issue. Gernsback went on to introduce six other magazines, with smaller circulations, in the same field before he was imitated with stories Astounding, Startling, Astonishing, and Thrilling Wonder. By the 1950s, there were over 30 different magazines in this field. Only six survive today, the last of the pulp magazines of any category, and their circulation continues to drop. Magazine science fiction, however, has passed on its subject matter to the major hardcover publishers, who find it profitable to maintain special editors for a growing trade. The importance of science fiction is sufficient to attract to it the good writers the other genres never did. (For a full-length treatment of American science fiction, see Stover 1972.)

Genre fiction, by definition, is topical in its subject matter. In pulp Westerns, for example, the genre was defined by place and time: the area west of Missouri and east of the Rockies, from west Texas, Arizona, and New Mexico to the Canadian border, from 1865 to 1890. Science fiction, as defined by Gernsback, was a literature of prophecy in the realm of material progress. “Extravagant fiction today . . . cold fact tomorrow” was the slogan of Amazing Stories. Gernsback set the pace for his writers with his own novel Ralph 124C41+: A Romance of the Year 2660. Among the inventions forecast in this 1912 story are fluorescent lighting, automatic packaging machines, plastics, radar, jukeboxes, liquid fertilizer, tape recorders, stainless steel, television, microfilm, solar power, spun glass, synthetic fibers, and spaceships.

Behind these inventions was the research revolution (Silk 1960). The research revolution began quietly toward the end of the 19th century in the laboratories of Arthur D. Little, Eastman Kodak, B.F. Goodrich, General Electric, and E.L. du Pont de Nemours and Company. These laboratories in turn were modeled on those of the Kaiser Institutes, established by the German Emperor for the organized application of scientific research to engineering development. The importance of research and development came to public attention during World War II with the outcome of the Manhattan Project, which had enlisted and coordinated the talents of many different scientific specialties in the quest for the atomic bomb. Synthetic rubber, radar, and antibiotics came out of the same wartime demands.

The growth benefits of programmed innovation became apparent to American businessmen after the war. The many new civilian products that have resulted from research since that time have, of course, made others obsolete. Rapid technological innovation thus is balanced by an equally rapid technological obsolescence. From the economic point of view, industrialized science is the key to growth. The hidden social costs of growth were not visible to the early writers of science fiction, who were content to glamorize new-product design as the soul of 20th-century progress. The new writers, however, have turned science fiction into a forum where the disadvantages may be weighed against the benefits. Gernsback would be surprised to find the magazine he founded containing a story like The Sanitaroga Barrier (Herbert 1968), in which a community organizes against the “money-industrial complex” of the outside world and refuses to buy any of its goods.

Science fiction glamorized the research revolution for a small coterie of young readers before the general public was made aware of it by the explosion of the atomic bomb. Many of today’s research-and-development workers grew up with the science-fiction magazines, modeling their professional careers on those of the people they read about there. Before the advent of the research revolution, scientists were modestly paid professionals in the university, where most of them had finally come to roost after Civil
War times. Before that, going back to Colonial times, scientists had been wealthy amateurs like Benjamin Franklin, who financed their own experiments for the public good. Science fiction introduced the research scientist and the design engineer, cooperating as salaried team members in some industrial or governmental enterprise. The figure of the mad scientist, like Dr. Frankenstein, that appears in horror movies is garbled memory of the elegant amateur whose original civic-mindedness has been forgotten.

Science fiction did not, of course, begin in the pulp magazines—they merely named the genre and made it a publisher's category. Perhaps H. G. Wells was the first to shape the romance of scientific inquiry.¹ His first anthropological story, "The Grisly Folk" (Wells 1968 [1921]), is about Neanderthal Man and opens with the line “Can these bones live?” Writers are still trying to make them live, the latest being Golding (1962). Some others in between have been De Camp (1948 [1939]), Del Rey (1955 [1939]), Farmer (n.d. [1959]), and Klass (1970 [1954]). In fact, speculations about prehistoric man, fed by ongoing archaeological research, constitute a fairly large subgenre within science fiction. The first instance surely must be Verne’s The Village in the Treetops (1904 [1901]), followed closely by London’s Before Adam (1962 [1907]).

One of the most sophisticated is The Evolution Man (Lewis 1963 [1960]), a novelization of the first three chapters of Coon’s The Story of Man (1962). Credit for novelizing the entire history of man goes to Stewart (1946), who tells the story in the first person singular with more incisiveness than most introductory textbooks do in the third person plural. The most ambitious effort is Fisher’s Testament of Man series (1960–62 [1943–58]), a 12-volume "chronicle of mankind's long journey from cave to civilization." Stanley Kubrick and Arthur C. Clarke cover the same ground, and more, in one leap from apeman to superman in the film 2001: A Space Odyssey. (For a novelization of the screenplay, see Clarke 1968; for an anthropological review of the film, see Stover 1969.)

The influence of primatological studies can be seen in the Planet of the Apes film series. In the novel (Boulle 1964) on which it is based, Earthmen discover a planet on which several species of primates identical to our great apes are culture-bearing and sapiens is wild. There is a fundamental difficulty here that every anthropologist will recognize: the switching of behavior between hominids and pongids with complete indifference to the fact that anatomy and behavior evolve together. The difficulty is shifted elsewhere in the movie series, in which the planet of the apes is really Earth of the distant future, when men have degenerated and apes have advanced. This takes us back to Peacock’s Melincourt (1917), a novelization of Lord Monboddo’s idea that the orangutan, a wild man of nature, can learn human culture simply by coming in contact with men of art. Collier (n.d. [1931]) carried this idea forward in his satire on Wolfgang Köhler’s experiments with chimpanzees, His Monkey Wife. Ignoring the mixup of monkeys and apes here, the trouble is that infrahuman primates simply do not have long enough childhoods to learn cultural behavior, not even if we grant a mutation for higher intelligence as Del Rey (1964 [1943]) does for gorillas in "The Renegade." Despite 20th-century advances in primatology, the movies are still giving us the 18th-century conceptions of Lord Monboddo, who generously allowed the apes to stand as an uneducated population of humanity, man without his works. However, this equating of the pongids ("natural man") with sapiens ("man of art") serves a fine moral purpose. In Return to the Planet of the Apes, man is an evil species contrasted with the naturally good chimpanzees. The virtue of this conception (owed to Paul Dehn, the English novelist who wrote the script) is that man is viewed as a species and badness is no monopoly of any race, class, or nationality.

The most sophisticated and technically plausible work of anthropological science fiction, insofar as the relationship of culture and biology is concerned, must be The Left Hand of Darkness (LeGuin 1969), in which an alien life form, on another planet, is given a pattern of cultural behavior suitable to its extraterrestrial biology, Pohl (1966 [1961]), in "Day Million," looks ahead to the outcome of the fact that for our own species cultural evolution moves faster than biological evolution. Wyndham (Harris 1963 [1961]) has worked out a one-sex culture, given parthenogenesis, in "Consider Her Ways," and Sturgeon (1964 [1952]) asks in "Never Underestimate" what would happen if the estrous cycle were returned to women.

Anthropological science fiction enjoys the philosophical luxury of providing answers to the question "What is man?" while anthropology the science is still learning how to frame it. In You Shall Know Them, Boulter (Bruller 1953) defines the baseline of humanity in Homo sapiens as an extension of H. erectus, remnants of which are discovered in the interior of New Guinea. De Camp (1970 [1949]) suggests the same thing in "Throwback," but his Homines erecti appear on the scene not by way of discovering a hidden population but through back-breeding. (Incidentally, De Camp’s specimens are giants, on the grounds of Weidenreich’s now discredited theory that among the early pithecanthropines huge body went with huge jaws.) Perhaps the most persuasive answer to the question is Earth Abides (Stewart 1949). The novel reverses the story of Ishi, which Kroeber (1962) has recorded as the "biography of the last wild Indian in North America." Ishi, the last member of the Yahi Indians, stepped out of an isolated Stone Age existence into a world of trolley cars and electric lights in early 20th-century California. Ishi’s name in the Yahi language means "man." The hero of Stewart’s novel is surmounted Isherwood, "Ish" for short, which is Hebrew for "man." Ish survives a pandemic disease to see civilization collapse and his children and grandchildren return to the life of Stone Age hunters. Ish is the last of the civilized Americans, Ishi the last of the aboriginal Americans. The one fiction, the other biography, both have the same moral: man is man, be he civilized or tribal. Stewart shows us that a tribal hunting culture is just as valid and real to its members as civilization is to us.

Some anthropological science fiction is written by professional anthropologists. Olver’s Unearthly Neighbors (1960) highlights the methods of ethnographic fieldwork by imagining their application to a nonhuman race on another world. His “Blood’s a Rover” (1955 [1952]) spells out the problems of applied anthropology by sending a technical-assistance team to an underdeveloped planet. His “Rite of Passage” (1966 [1954]) is a lesson in the patterning of culture, how humans everywhere unconsciously work out a blueprint for living. Anthropological wisdom is applied to the conscious design of a new blueprint.
for American society in his "Mother of Necessity" (1972 [1955]).

Science fiction is defined not only by its content, but also by its method or point of view. For example, in Beyond This Horizon, Heinlein (1960) projects his engineering and sociological vision of the future by way of making these developments part of the story line. In addition to motivating believable characters, he must also dramatize an unfamiliar society based on a novel technology—genetic engineering—his very subject manner. Contemporary fiction, on the other hand, can afford to take the culture as given, a familiar setting in which to develop character and action.

The science-fiction technique of turning background into foreground is not, however, confined to stories of the future. The late John Campbell, editor of Astounding Science Fiction from 1937 to 1971, has said: "Science fiction can be about the future, the present, or the past." For example, The Riffian (Coon 1934) is anthropological in content, but it is also science fiction because it is about Riffian culture as well as set in it. The characters in this novel are vehicles for the explanation of their shared habits as members of a cultural community. In a less ambitious way, I have tried to teach some aspects of Japanese interpersonal relations in a story called "What We Have Here Is Too Much Communication" (Stover 1971). Historical novels may also be works of anthropological science fiction. In The Years of the City (Stewart 1955), the hero is the civilizational process: how a Greek city was founded, flowered, and finally decayed. This is science fiction, a novel about history, not a historical novel merely. Again, in Stonehenge (Harrison and Stover 1972), the tribal politics of the ancient Britons and the technology of stoneworking are used not as ornamentation but as key concepts in the reconstruction of a prehistoric culture.

Anthropological science fiction is part of a more general field that may be called social-science fiction (Sills 1968, 1969; for anthologies, see Stover and Harrison 1970, Oshe 1970, and McNelly and Stover 1972). Social-science fiction surely is just as much a response to the research revolution as any other field of science fiction. An illustration of the spirit of this subgenre is The Survivors (Godwin 1958). In this novel, 8,000 humans are stranded on a distant planet whose ecological conditions are different from those of Earth. Over a period of 250 years, they have successfully worked out a way of life, putting into practice the kind of constructive soci-

ogy Wells named "human adapto-

logy" (1938:ix). Society is the hero, and has researched for itself the most important product of all, its own exist-

ence and continuing evolution.

While the 19th-century utopian litera-

ture dwelt on ends, 2 modern social-

science fiction, dating from after the research revolution, is concerned with means. The difference between Bellamy's Equality (1897) and Skinner's Walden Two (1948) is the difference between the what of an ideal society and the how of achieving it. Cultural engineering is the theme also of Hein-

lein's children's book Citizen of the Gal-

axy (1972 [1957]), in which an anthropologist named Margaret Mader finds that star traders named "The People" have consciously designed their culture, including their kinship system, by way of adapting to conditions of life and work within their great starships. Another example is Harri-

son's Captive Universe (1969), in which the passengers of a starship are pro-

grammed for a culture conservative enough to last unchanged until the ship reaches its destination generations later. The culture chosen is the Aztec, complete with full-scale ecological set-

ting right out of the Valley of Mexico.

The fact that planning human events is not easy is brought out in Brummer's Squares of the City (1965), which de-

scribes the conflict between the long-

range developmental goals of a South American state and the short-range needs of the urban poor. The head of state and the leader of the opposi-

tion agree to structure the conflict in line with a chess game. But the issues at stake are equally pressing and legiti-

mate on both sides, the players cheat, and the game is returned to Square One, to uncontrolled reality.

Nonetheless, this last group of stories is symptomatic of a growing readiness to apply the technical means of the research revolution to environ-

mental design and social engineering. Science-fiction writers are beginning to do the things that Wells advocated as the proper activity of sociologists. Sociology, he wrote (1914:205, emphasis mine)

must be neither art simply, nor science in the narrow meaning of the word, but knowledge rendered imaginative, and with an element of personality; that is to say, in the highest sense of the term, literature. . . . I think, in fact, that the creation of

Utopias—and their exhaustive criticism—is the proper and distinctive method of soci-

ology.

Science fiction has indeed brought to the public a self-critical self-con-

sciousness about culture that used to be confined to social scientists, includ-

ing anthropologists.

I hope this article will prompt readers of CURRENT ANTHROPOLOGY to look into their own native literatures for evidence of this kind of popular writing—and perhaps give it a helping hand.

References Cited


COLLIER, JOHN N.D. (1931). His monkey wife: or, Married to a chimp. Garden City: Dolphin.


---. 1950 (1945). "Throwback," in Ape-


DEL REY, LESTER. 1955 (1939). "Day is done."


books.


FISHER, VARDIS. 1960–62 (1943–58). The tes-

tament of man. 12 vols. New York: Pyra-

mid.


HEINLEIN, ROBERT A. 1960. Beyond this hori-

zon. New York: Signet Books. (First published, under the pseudonym Anson MacDonald, in 1942.)


URGENT ANTHROPOLOGY

Cinema, Science, and Culture Renewal

by Alan Lomax

New York, N.Y., U.S.A. 1 xi 72

On the occasion of the IXth International Congress of Anthropological and Ethnological Sciences, I address my colleagues in every corner of the globe with a call to action in the field of ethnographic film. Formulation, adoption, and support of a program of global film work can not only affect the development of anthropology in the most positive ways, but also vastly benefit the human race.

One of the greatest opportunities and most urgent tasks of this century is to film the full range of human culture while we can. With the new portable sound equipment, the job would require no more than a generation of concerted international effort. Many good ethnographic films have been made, but the extant footage, important as it is, represents the whole of human culture in only a fragmentary way and was shot and edited according to such a variety of standards that much of it is virtually useless as scientific data. Moreover, because film is expensive to preserve, many old movies recording the habits of people now extinct have been lost, destroyed, or damaged, and this process continues unabated.

The uncontacted peoples of the world have acquired a definite value for the global entertainment industry, and there is a rush to film them for television. Many of these films are simply trash. Most are seriously flawed as scientific data and as honest documents, because their makers do not know where to look, do not understand what they are seeing, or see other cultures as acts in a freak show. This footage, made at such expense to our society and to the aborigines, is often culled for the most sentimental and dramatic scenes, and the slashed-up remainder is destroyed or filed in such disorder that it can never be used by anyone. The situation could be ameliorated if our profession took the lead in planning and in action. Indeed, the creation and archiving of a large corpus of substantial and honest ethnographic film is a major professional responsibility. Only anthropologists can fully appreciate the value of such film and the cultures it depicts. In the final analysis, only if anthropologists do the filming or collaborate in a professional and pragmatic way with the media specialists will the job of filming man's culture be properly and systematically done.

There is little time left. The overwhelming success of the urban-industrial system in controlling and exploiting the biosphere has temporarily blinded the majority of mankind to other values. The entertainment industry, operating a one-way communication system, now threatens to obliterate national cultures as it has long shamed into silence neighborhood, peasant, and primitive cultures. The planet is littered with dead and dying communities, and cultural pollution begins to appear as great a threat to man's future as is industry's damage to his earthly environment. Unless we take concerted action now, what remains of human cultural variety will vanish. We must be concerned not only as scientists, but also as aficionados of humanity, for the potential loss is not only to science. Much of the human race stands to lose its continuity, its dignity, and its very ancestors. Meanwhile, the principal creation of the human species—the sum total of the symbolic, expressive, and adaptive systems of culture—is disappearing. The