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[E5_AD_A6_E8_8B_B1_E8_c82_227626.htm](https://www.100test.com/kao_ti2020/227/2021_2022__E5_A4_A7_E5_AD_A6_E8_8B_B1_E8_c82_227626.htm) TextScience fiction is definitely not pure science, but neither is it pure fiction. This literary genre, argues science fiction writer Ben Bova, stands as a bridge between science and fiction, between reason and emotion.

Moreover, science fiction is not mere entertainment, but has a more important role to play. Believe it or not, it can help us to understand the ways in which our world may change and assist us in shaping the future in the manner that we wish.

THE ROLE OF SCIENCE FICTION

Ben Bova

The year 1972 was marked by publication of a controversial book, *The Limits to Growth*. This study of the world's future, done by a team of MIT scientists with the aid of computer "models" of the future of our society, forecast a planet wide disaster unless humankind sharply limits its population growth and consumption of natural resources. Most people were caught by surprise when the book came out. Many refused to believe that disaster is possible, probable, inevitable -- if we don't change our mode of running Spaceship Earth. But science fiction people were neither surprised nor outraged. The study was really old news to them. They'd been making their own "models" of tomorrow and testing them all their lives. For what the scientists attempted with their computer model is very much like the thing that science fiction writers and readers have been doing for decades. Instead of using a computer to "model" a future world society, science fiction

writers have used their human imaginations. This gives the writers some enormous advantages. One of the advantages is flexibility. Science fiction writers are not in the business of predicting the future. They do something much more important. They try to show the many possible future that lie open to us. For there is not simply a future, a time to come that's inevitable. Our future is built, bit by bit, minute by minute, by the actions of human beings. One vital role of science fiction is to show what kinds of future might result from certain kinds of human actions. To communicate the ideas, the fears and hopes, the shape and feel of all the infinite possible futures, science fiction writers lean heavily on another of their advantages: the art of fiction. For while a scientist's job has largely ended when he's reduced his data to tabular or graph form, the work of a science fiction writer is just beginning. His task is to convey the human story: the scientific basis for the possible future of his story is merely the background. Perhaps "merely" is too limiting a word. Much of science fiction consists of precious little except the background, the basic idea, the gimmick. But the best of science fiction, the stories that make a lasting impact on generations of readers, are stories about people. The people may be nonhuman. They may be robots or other types of machines. But they will be people, in the sense that human readers can feel for them, share their joys and sorrows, their dangers and their ultimate successes. The art of fiction has not changed much since prehistoric times. The formula for telling a powerful story has remained the same: create a strong character, a person of great strengths, capable of deep emotions and

decisive action. Give him a weakness. Set him in conflict with another powerful character -- or perhaps with nature. Let his exterior conflict be the mirror of the protagonist's own interior conflict, the clash of his desires, his own strength against his own weakness. And there you have a story. Whether it's Abraham offering his only son to God, or Paris bringing ruin to Troy over a woman, or Hamlet and Claudius playing their deadly game, Faust seeking the world's knowledge and power -- the stories that stand out in the minds of the reader are those whose characters are unforgettable. To show other worlds, to describe possible future societies and the problems lurking ahead, is not enough. The writer of science fiction must show how these worlds and these futures affect human beings. And something much more important: he must show how human beings can and do literally create these future worlds. For our future is largely in our own hands. It doesn't come blindly rolling out of the heavens. It is the joint product of the actions of billions of human beings. This is a point that's easily forgotten in the rush of headlines and the hectic badgering of everyday life. But it's a point that science fiction makes constantly: the future belongs to us -- whatever it is. We make it, our actions shape tomorrow. We have the brains and guts to build paradise (or at least try). Tragedy is when we fail, and the greatest crime of all is when we fail even to try. Thus science fiction stands as a bridge between science and art, between the engineers of technology and the poets of humanity. Never has such a bridge been more desperately needed. Writing in the British journal *New Scientist*, the famed poet and historian Robert Graves said in 1972, "Technology is

now warring openly against the crafts, and science covertly against poetry."What Graves is expressing is the fear that many people have: technology has already allowed machines to replace human muscle power. now it seems that machines such as electronic computers might replace human brainpower. And he goes even further, criticizing science on the grounds that truly human endeavours such as poetry have a power that scientists cant recognize. Apparently Graves sees scientists as a sober, plodding phalanx of soulless thinking machines, never making a step that hasnt been carefully thought out in advance. But as a historian, Graves should be aware that James Clerk Maxwells brilliant insight about electromagnetism -- the guess that visible light is only one small slice of the spectrum of electromagnetic energy, a guess that forms the basis for electronics technology -- was an intuitive leap into the unknown. Maxwell had precious little evidence to back up his guess. The evidence came later. The list of wild jumps of intuition made by these supposedly stolid, humorless scientists is long indeed. Scientists are human beings! They are just as human, intuitive, and emotional as anyone else. But most people dont realize this. They dont know scientists, any more than they know much about science. Today most people still tend to hold scientists in awe. After all, scientists have brought us nuclear weapons, modern medicines, space flight, and underarm deodorants. Yet at the same time, we see scientists derided as fuzzy-brained eggheads or as coldly ruthless, emotionless makers of monsters. Scientists are minority group, and like most minorities theyre largely hidden from the publics sight, tucked away in ghettos

-- laboratories, campuses, field sites out in the desert or on Pacific atolls. Before the public can understand and appreciate what science can and cannot do, the people must get to see and understand the scientists themselves. Get to know their work, their aims, their dreams, and their fears. Science fiction can help to explain what science and scientists are all about to the non-scientists. It is no accident that several hundred universities and public schools are now offering science fiction courses and discovering that these classes are a meeting ground for the scientist-engineers and the humanists. Science and fiction. Reason and emotion. The essence of the scientific attitude is that the human mind can succeed in understanding the universe. By taking thought, men can move mountains -- and have. In this sense, science is an utterly humanistic pursuit, the glorification of human intellect over the puzzling, chaotic, and often frightening darkness of ignorance. Much of science fiction celebrates this spirit. Very few science fiction stories picture humanity as a passive species, allowing the tidal forces of nature to flow unperturbed. The heroes of science fiction stories -- the gods of the new mythology -- struggle manfully against the darkness, whether its geological doom for the whole planet or the evil of grasping politicians. They may not always win. But they always try. Perhaps, however, the most important aspect of science fiction's role in the modern world is best summed up in a single word: change. After all, science fiction is the literature of change. Each and every story preaches from the same gospel: tomorrow will be different from today, violently different perhaps. Science fiction very

clearly shows that changes -- whether good or bad -- are an inherent part of the universe. Resistance to change is an archaic, and nowadays dangerous, habit of thought. The world will change. It is changing constantly. Humanity's most fruitful course of action is to determine how to shape these changes, how to influence them and produce an environment where the changes that occur are those we want. Perhaps this is the ultimate role of science fiction: to act as an interpreter of science to humanity. This is a two-edged weapon, of course. It is necessary to warn as well as evangelize. Science can kill as well as create. technology can deaden the human spirit or life it to the farthest corners of our imaginations. Only knowledgeable people can wisely decide how to use science and technology for humankind's benefit. In the end, this is the ultimate role of all art: to show ourselves to ourselves, to help us to understand our own humanity.

New Words
genre. a particular type of art, writing, music, etc., which has certain characteristics that all examples of this type share (文艺作品的) 体裁 , 样式 ; 类型
controversial. causing much argument or disagreement
forecast vt. say what will happen ahead of time.
planetwide. extending all over the planet
humanity. human being in general.
probable. likely to happen or be true
inevitable. which can not be avoided.
certain to happen
mode. a way of behaving, living, operating, etc.
spaceship. a vehicle used for traveling in outer space.
spacecraft
flexible. easily adapted to fit various conditions
tabular. arranged in the form of a table
gimmick. an ingenious or novel mechanical device 别致的玩意儿 ; 新奇的

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