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SCIENTIFIC AND CULTURAL ORGANIZATIONTHE ROLE OF SCIENCE FICTION IN
THE POPULARIZATION OF SCIENCE:
PAST AND FUTURE TRENDS

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By

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There has always been a demand for popular books which present the various sciences in a way which makes them easily intelligible to the layman. This is particularly true, perhaps, of astronomy; it is impossible to overlook the beauty of a starlit night, and even those who are in no way scientifically inclined feel that they should learn something about the celestial bodies.

On the other hand, there are a great many people who find it impossible to concentrate sufficiently to read even a simple scientific book. This is due sometimes to lack of intelligence, but more often to sheer mental laziness and disinclination to struggle with any facts which are not self-evident. Such an attitude is regrettable, and if it could be overcome much good would result. In particular, a greater spread of scientific knowledge would lead to the automatic rejection of false sciences such as astrology and what I have termed "Flying Saucery". These pseudo-sciences flourish only because so many people are totally ignorant of true facts.

By far the best way to spread correct information is by the use of fiction, but it is unfortunately true to say that so far, at least, this is not being done. To emphasize this, it is necessary to say something about the two main classes of science fiction, and to elaborate slightly. In this report I shall concentrate mainly upon publications that have appeared in Great Britain and the United States of America, since it is only upon works in English that I consider I can speak with authority; but it is extremely probable that the situation in other European countries is fundamentally similar.

The first class includes fiction in which the "science" is either absent or erroneous. It covers almost all comic strips and magazines with highly coloured and sensational covers, but it also includes a great number of actual books, some of which are reasonably well written.

The second class consists of works with an accurate scientific background. Until recently, such books were rare, but nowadays they are becoming more common.

Some subdivisions must be made in Class (1). One of the great figures in British literature during the present century has been H.G. Wells. In his

early career, Wells wrote a number of "scientific fantasies", among which may be mentioned "The Time Machine", "The War of the Worlds" and "The First Men in the Moon". The scientific background of these was not sound; time travel as Wells pictured it is beyond the bounds of possibility, while the gravity shielding substance "Cavorite", which Wells used as his material for space travel, is as much of a scientific absurdity as his bloodthirsty, tentacled "Martians". Wells, who had considerable scientific ability, was well aware of this. He was a storyteller first and a scientist afterwards. It would however be quite wrong to dismiss his work as being typical of my Class (1). A few writers with exceptional literary ability can be separated from their countless imitators. Wells was one of these, and we can also name a few others, of whom Olaf Stapledon is a good example in British fiction.

On the other hand most of the comic strips and sensational science fiction publications are not only inaccurate in their facts, but are unpleasant. It is this unpleasant trend which has done so much to discredit all science fiction in the eyes of the thinking public. When "Martians" are described, for instance, they are invariably hostile, grotesque creatures of repulsive appearance and habits, who must either destroy Earthmen or be destroyed by them. This custom can be traced largely to Wells' "War of the Worlds", at least so far as Britain is concerned - but this reflects no discredit upon Wells himself, since even he could not be expected to foresee the course of developments.

This unpleasant trend must be fought with all possible energy. But for it, there would be no real harm in Class (1) fiction, as its lack of authenticity would be immediately apparent; as things are, such publications are doing incalculable damage, and later in this paper I shall tentatively suggest a remedy.

Probably the earliest still read writer of Class (2) science fiction, which aims at accuracy, was the great Frenchman Jules Verne. It is perfectly true to say that many of Verne's ideas have been proved to be wrong. The space gun described in his "From the Earth to the Moon" is absolutely unworkable, both because of air resistance and because any occupants of the hollow projectile would be destroyed by the violent acceleration to escape velocity; but when he wrote his story, Verne was not aware of this. The mathematical details of his "Columbiad" space gun are well worked out, and so far as they go are perfectly sound, so that Verne was keeping strictly to the facts as they were known in his day. Doubtless many of our present "authentic" science fiction novels will prove to be just as wide of the mark when we do eventually conquer space in fact as well as in fancy.

It was not until recent times that the development of astronomical theory and the first true liquid fuel rockets led to the appearance of science fiction stories which aimed at describing interplanetary voyages without making them absurd. In Britain, the leading writer of this new science fiction has been Arthur C. Clarke. Clarke, formerly Chairman of the British Interplanetary Society, is most careful never to deviate from facts, and two of his books in particular are relevant to my present theme: "Prelude to Space" and "The Sands of Mars". Both have had a wide reading public, and as they present an excellent picture of the interplanetary project they have doubtless done much to spread correct information - more, perhaps, than most popular books which are purely scientific.

But books of this type are still few and far between, and are swamped numerically by the publications describing grotesque creatures which have become known by the graphic term "Bug-eyed Monsters". The ordinary layman, lacking any real knowledge, cannot be expected to differentiate between a novel which is scientifically sound and one which is not. I feel that the present conference can adopt a policy which will nevertheless enable such differentiation to be made.

At this point a few words should be said about reviews and about books for juveniles. Stories for young people present rather special problems. Children must have excitement, and it is not easy to strike the correct note between this and scientific accuracy. On the other hand it is only too easy to obtain cheap "thrills" by the use of false science and unpleasant monsters, and this must at all costs be avoided, though the amount of science in a juvenile book must naturally be less than with adult material. I would here like to cite an experience of my own. In my early days as a writer of juvenile science fiction, I admit without reserve that I was not sufficiently careful to make my facts correct. Latterly I have appreciated the faults in such a procedure, and have adhered strictly to proper science. It is significant that the distribution of these later juveniles has been far wider.

Care must be taken when reading reviews. Those in the sensational magazines must be disregarded. Unfortunately, such magazines have now taken to reviewing not only fiction but also popular scientific books; and while these reviews are generally bad enough to be amusing, they are occasionally good enough to be misleading. The best example I can cite was that of a magazine which reviewed a book by the British Astronomer Royal and also a flying saucer volume, the famous "Flying Saucer from Mars" in which Mr. Cedric Allingham describes his "authentic" meeting with a man from Mars who landed in Scotland in a flying saucer. The former book was harshly criticized; the latter praised. Further comment is superfluous.

At the other end of the scale, literary magazines of high critical standard still retain their instinctive distrust of all science fiction. This is understandable, but is regrettable inasmuch as their reviewers are often unconsciously unfair. I have not had any personal experience of this treatment, and so can speak without prejudice, but I have seen many examples of it. However, the tendency is receding. Only a few years ago it would have been unthinkable for a serious critical periodical to review a science fiction book at all.

So far I have dealt almost entirely with interplanetary stories, since these come within my own particular province, but the remarks I have made apply with equal force to all other branches of science fiction. Death rays, mutants and such things can be classed with the "Bug-eyed Monsters" so often placed upon other worlds.

The "horror comics" which have been so much under discussion in recent years are often classed as actual science fiction, and do much to augment the feeling against all scientific literature that is not purely factual. The comics are aimed ostensibly at the juvenile public, but are in fact widely read by adults also. Such comics are repulsive to a degree, and action should be taken against them if possible.

To sum up the problem as it faces us today: Science fiction could well provide a means of propagating sound and rational scientific ideas among those who seldom or never read a purely factual book. Since these are the persons who are in the greatest need of instruction, the opportunity is obvious. Yet so far it has not been utilized, owing to the large numbers of erroneous and unpleasant publications which masquerade under the heading of true science fiction.

The suggestion which follows is in some respects revolutionary, but has, I feel, some advantage. In brief, it is to set up a "selection board" in each country represented at this conference, headed by a chairman appointed by the appropriate Science Writers' Association. This selection board would be invited to pass each published book as "approved by the Science Writers' Association" of the country concerned. Since only scientifically correct books would in general be approved, the public would be presented with a clear means of determining the standard of books available for perusal.

I must at once stress that I am not suggesting any form of compulsory censorship. Censorship in any form is repugnant, and does not enter into this discussion. It would be entirely at the discretion of the author and publisher whether to submit a particular book for approval or whether not to do so. In practice, publishers of a high standard would take advantage of the facility, while writers of lower grade books would not; but the submission would in any case be optional. Official approval would naturally enhance the sales of a science fiction book, but lack of official approval would not automatically condemn it, though it would show that the book concerned should be read with due caution.

The selection of books would naturally be elastic. A book with minor scientific inaccuracies could well be passed provided that it were not misleading or unpleasant. A few outstanding or highly speculative works could also be approved without the usual regard for complete accuracy. This latter problem would not often arise, as important fictional books with a scientific background, such as some of those written by Olaf Stapledon and C.S. Lewis, are not true "science fiction" at all; but provision should be made.

While the advantages of some such scheme are many, the disadvantages would seem to be few. The selection would not, for instance, involve an inordinate amount of work. Authors and publishers of low standard fiction would not even worry to submit it for approval, which at once disposes of something like 80% of the books and magazines that have appeared during the last few years. Probably only about one hundred books would be submitted per year in any one country, and with a selection board of perhaps a dozen members this does not amount to an impossibly heavy burden.

There are many points to be considered, and this is not the place to enter into any detail, but while such a scheme avoids any suggestion of censorship it does at least enable the non-scientific reader to determine which books are accurate and which are not.

The problem of low standard science fiction must at all events be faced. Scientific literature has a great future, but so long as it is confused with inaccuracy and unpleasantness it will not be given a fair chance. The educational advantages of science fiction are many, but fiction must be used in the right way.