

This is not a very useful figure, because many of those communities will be immense distances away. But to come nearer—within fifteen light-years of us there are seven 'suitable' stars; within fifty light-years there are a hundred 'suitable' stars. That is, there is a small probability that some advanced communities are within hailing distance.

There is another conclusion to be drawn, however. The lifetime of a technological community is probably so much longer than the time we have had modern technology, that nearly all the galactic communities are far more advanced than we are. They may already be in a 'galactic' club, busy communicating; and they may maintain a small sub-department who are beaming messages at other likely stars in the hope that they may discover some novice community, just on the threshold of interstellar communication, whom they can send their kindergarten messages to, and gradually educate to their standards. It is a humbling thought.

What all this means in practice is that we might find that any other community could pay very little attention to us. They may have thousands of likely stars to send signals to: as they would not have vast numbers of transmitters, we might receive signals only one day in a hundred years (and they might have been doing this for thousands of years, of course, without result).

This situation is perhaps rather pessimistic, because in fact a much better way for any community to explore is not to send signals, but to send unmanned space-ships, or 'probes'. These would be loaded with computers and recorded material, ready to give us information about them and to record the information we send them. A superior community might be able to spray thousands of such probes into the galaxy with pre-programmed instructions to listen for any radio waves, and 'home' on any planet sending them out.

What would such a probe do? It would circle a planet, picking up radio waves. How would it make itself known? This raises another basic problem: how you get people to perceive the unexpected, and not to dismiss it just as interference.

One suggestion which has been made is that the probe would send back a replica of any message it received. This is good technology, because the senders of the signal would probably also be listening on this frequency. There is in fact a case of some long-delayed echoes in a radio transmission investigation about thirty years ago which have never been explained. It is entertaining to speculate that they might have been picked up by an exploring probe, which has relayed the information back to its planet many light-years distant; a further message may be even now on its way to us. (The delay is because, as pointed out earlier, no signal can travel faster than light: so that if a planet is twenty light-years away, it would be forty years before a response to the first signal was heard.)

Conclusion

It is worth closing with the question—assuming that the sort of exploring probe I have discussed may come to us one day, should we learn to listen or learn to send? There is already a listening station in the U.S.A. which has searched—without result so far—for intelligible radio waves from some nearby stars.

Listening is exciting work: it has an appeal. Sending information is not so appealing: you can do it for a long time with nothing to show for it. But it seems to me that it might be far more important. It is unlikely that a probe will yield up its stored information unless we interrogate it properly; and we should surely, besides giving information about ourselves, want to ask questions of the advanced communities—such as how to conquer cancer (for it is worth noting that the interchange of information in this way is an entirely benign activity). I think we should spend time and energy on studying how to send, and what to send—to be ready for the opportunity when it comes. For although the probability of success in communicating with alien communities is very small indeed, the probability of success if we do nothing about it is precisely zero.

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[N.B. The July Optional books are described in the special supplement.]

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THE SPECIAL SUPPLEMENT ENCLOSED IN THIS COPY OF *SF NEWS* IS A CATALOGUE OF ALL THE OPTIONAL BOOKS WHICH WILL APPEAR IN READERS UNION FROM JULY TO DECEMBER. HAVING DETAILS OF THESE BOOKS WELL IN ADVANCE WILL ENABLE YOU TO ORDER THE ONES YOU WANT IN GOOD TIME, AND IT REALLY IS IMPORTANT NOT TO DELAY OVER ORDERING. IT IS A HELP TO US AND IT AVOIDS DISAPPOINTMENT FOR YOU.

NEXT MONTH'S CHOICE COUNTERFEIT WORLD

by Daniel F. Galouye (author of *Dark Universe*, already published in SFBC)

AS THE population of Earth increases, so the difficulties of government multiply too. The answer has been found in the 'public opinion poll', which will register human reaction to any proposed change, and is the method relied upon by industry, the arts and government itself. Gaining the necessary information requires a vast number of 'samplers', and consequently a large percentage of the population is concerned with the polls: it is illegal for anyone to refuse to answer a questionnaire, and the pollsters can demand co-operation at any time of the day or night. In order to reduce this nuisance, scientists have evolved a 'total environment simulator'—a vast electronic brain system than can faithfully reproduce in miniature a human community with all its fears, hopes, desires and eccentricities. The egos created by the machine will not know that they are merely electronic impulses: to themselves they will seem alive and real. And when the machine is completed and fully operational, no more polls will be necessary: apply stimuli to the environment simulator and in order to find out how the simulated human beings react send an observer from the 'real' world who will become for the moment the 'person in the machine'.

As the simulator nears completion, a strange series of mishaps makes it seem that someone, or something, is working to prevent the machine from being put into use. One of the scientists is electrocuted; a security officer disappears; one of the inventors suffers from mysterious black-outs; the organization of opinion pollsters, seeing that their future is threatened, starts to take industrial action. There is a struggle, too, between the scientists who wish the machine to be used for the benefit of mankind and the financier sponsoring its development, who sees in it a means to world power.

The last 'accident' is the most startling, for one of the simulated 'minds' takes over the body of the 'real' observer and blurts out the truth that the machine 'people' know themselves to be only electric impulses. Is the 'real' world itself only another simulated world? Have all the accidents and sabotage been planned by masters who do not want their puppets to make more puppets of their own? If this is so, then the real world can literally be switched off at any moment. . . .

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A Reminder

Cat's Cradle, this month's CF Choice, is, of course, available to members of SFBC: remember to order your copy as soon as possible.

And a Continuation

THIS *SF News* contains another paper in the series 'Fiction + Fact = Possibility': *Problems of Communication with Alien Intelligent Beings*, by Dr D. M. A. Mercer. There is a fourth paper still to come.