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ABSTRACT

Communications satellites could be the subject of bitter and potentially dangerous international controversy. They threaten to upset the comfortable monopoly of internal national communications systems which have enrolled national governments to screen intrusions of unwanted information or ideas. The United Nations Working Committee on Direct Broadcast from Outer Space is already drafting resolutions designed to control programing distributed by satellite. There are fears that the United States will dominate both information flow and cultural patterns as satellites begin bombarding the earth with news, propaganda, situation comedies, and advertisements. The fears are probably groundless for many valid reasons, but the battle lines are already beginning to form and there is a serious danger that regulations ultimately damaging to the free flow of information may be written into international codes or that satellite communications may become a new cause of dangerous friction. (Author/RB)

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"Communications Satellites: A New
Channel for International Communications,
A New Source of International Tension"

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The development of international satellite communications offers a curious paradox.

The communications satellite is on the one hand a dramatic tool for moving information across oceans and into remote areas of the world where earth-bound communications have never been either technologically or financially feasible. It is a vehicle with enormous potential for creating better international understanding.

At the same time, the communications satellite can be the subject of bitter and potentially dangerous international controversy. Satellites call for new international arrangements and understandings. They threaten to upset the comfortable monopoly of internal national communications systems which have enabled national governments to screen intrusions of unwanted information or ideas except, notably, by short wave radio.

Up to now the international scene has been relatively tranquil. There has been controversy. The lengthy negotiations which led to the final shaping of Intelsat left some bruised feelings. But a treaty was written and Intelsat is apparently functioning smoothly.

The World Administrative Radio Conference in 1971 could have generated serious tension. But as in the Intelsat negotiations, compromises regarding frequencies were agreed upon and agreements written.

The satellite era has only begun, however. The satellites functioning now were designed to span geographical distances. Government agencies can maintain control because satellite power is low, earth stations costly, and the system can't function except through existing land lines and microwave facilities. Thus there are as yet no problems with frequency overlaps, orbital spacing or importation of unwanted information or ideas. The Intelsat system is a common carrier which can function only as a supplement to currently operating facilities. Its relationship to earth-bound communications is roughly parallel to the relationship of A.T.&T.'s long lines system to the local and regional telephone companies in the United States.

Controversy, however, will inevitably arise as satellites grow more powerful, occupy more orbital space and transmit their messages through inexpensive ground stations thus potentially causing relaxation of the grip of the established national carriers.

Various United Nations committees and Unesco are already drafting resolutions designed to control programming distributed by satellite. The ITU is aware that serious "parking space" problems can arise over South America and the Indian Ocean as more distribution satellites are launched.

There are beginning to be fears that the United States will dominate both information flow and cultural patterns as American satellites presumably begin bombarding the earth with news, propaganda, situation comedies and, worst of all, advertisements.

Many of these fears are groundless for valid reasons. But the battlelines are already beginning to form and there is a serious danger that regulations ultimately damaging to the free flow of information may

be written into international codes or that satellite communications may become a new case of dangerous friction.

The causes of friction, some of them genuine and some more theoretical, can be divided into two groups. The first is technical. The second relates to content.

Spectrum management or, perhaps put more simply, allocation and regulation of broadcast frequencies, is the most obvious of the technological problems. A communications satellite is in effect a small broadcasting station located in geostationary orbit 22,300 miles above the equator. It must operate within an assigned portion of the spectrum so as not to interfere with other satellite communications or with earth-bound facilities. Without some kind of management of the available spectrum we can expect a recurrence of the chaotic conditions that existed in the United States prior to the writing of the Federal Radio Act of 1927 when frequency overlaps frequently created a cacophony of sounds that drastically interfered with reception.

The parking of satellites in assigned positions in geostationary orbit creates an additional set of problems. It has apparently not been fully determined as yet how much physical separation is required between satellites. One set of data suggests five degrees, another at least a hundred miles. The indisputable fact, however, is that space is finite and that indiscriminate parking of satellites would be just as damaging to reception as unregulated use of the spectrum.

The third area which may potentially create tension is that of possible spill-over. The shape of the satellite signal as it reaches earth can be

controlled by the configuration of the antenna through which the signal is transmitted. It is possible, for example, to broadcast a beam which is circular, square or rectangular but not one which is shaped to conform to the geographical pattern of any given country or geographical area. The Telesat system now being used in Canada, for example, spills over sufficiently into United States territory that RCA communications has been able to lease facilities to link the 48 contiguous states of the United States mainland with Alaska. There is no cause for controversy so long as a satellite communications system is used in a common carrier role, but sensitivities could be aroused in the event the satellite communications system permitted the spill-over of television programs. Canada has long been irritated by the widespread importation of American television programs which are picked off the air through tall receiving towers and relayed to Canadian viewers through cable facilities. Some U.S. broadcasters are beginning to protest the importation of Canadian programs in similar fashion in border areas, particularly in the state of Washington.

It is easy to visualize how a little discontent today could mushroom into a major quarrel tomorrow if Canadian satellites should make Canadian television available to U.S. cable systems in major population centers well below the border and American satellites perform a similar service for Canadian cable operators.

The content area, however, is more sensitive, more subject to violent reaction and more likely to arouse national passion. Except for short-wave broadcasting, national governments have fairly well succeeded

in establishing control over their own internal communications systems. Most of the countries of the world operate their communications facilities through government owned post, telegraph and telephone agencies which usually operate as direct arms of government responsible frequently to a ministry of communications.

Elsewhere, where private industry has a hand in communications, regulatory bodies such as the Federal Communications Commission in the United States maintain a reasonable degree of supervision.

The satellite, however, is no respecter of international boundaries. Even under the tightest controls, signals can leak across international borders as a result of spill-overs. At worst, signals could be beamed by one country into another without the permission of the receiving country or countries.

Since the principal of "state sovereignty" in communications regulations has been widely accepted and jealously guarded, the communications satellite is regarded suspiciously as a potential intruder, as a potential lever which could ultimately be used to loosen the hold of the national government and break down the carefully controlled and regulated systems. It is this possibility that is quickly making an international controversial issue out of the future of satellite communications.

The question of copyright will also have to be grappled with before satellite systems have progressed too far. The copyright conventions now prevailing are too antiquated to cope with the problems which will ultimately be thrust upon them by sophisticated satellite communications. But so far, copyright is more a theoretical issue than a real one. It hovers in the background but is kept off center stage by the explosive elements

involved in the controversy over content.

These are all questions for the future. Some may come to a head quickly. Others will surface only some time well into the future. But they've already become subjects of international dispute in the General Assembly of the United Nations, in the U.N. committee on Peaceful Uses of Outer Space, in the U.N. Working Group on Direct Broadcasts from Outer Space, at Unesco, and in various universities, institutions and research-oriented organizations which are engaged in trying to smooth the way into the future and seek solutions before decisions must be made on an ad hoc basis.

The world has been able to progress as far as it has into the space communication age because it has been able to find solutions to the relatively minor problems connected with the existing Intelsat, Orbita and Telesat systems.

The Intelsat system, in which more than 80 countries are now members, was designed for the purpose of setting up a communications network that would enable vastly increased message capacity over oceans and undeveloped land areas where earth-bound communications do not exist. Messages originate in national communications systems, are relayed to a satellite through earth stations usually owned by the national systems, relayed back to earth stations and are then channelled into the communications facilities of the receiving country or countries.

The Intelsat vehicles are expensive, running between six and ten million dollars each, and the earth stations are likewise costly to construct and operate. Prices have been reduced somewhat but the original outlay for an earth station ran in the vicinity of two and a half million dollars.

Because the Intelsat vehicles operate only as transmission links between ground systems, national governments have complete control of the traffic. Because there are only a limited number of vehicles required to carry the traffic and because the signals, as they leave the ground and return again, are relatively weak there is little interference with earth-bound facilities. Because the system is designed to carry signals across oceans, the functioning satellites are positioned largely over areas which would not be desirable for local communications purposes. Therefore, so far there has been no parking space problems.

The Soviet Union's Orbita system functions on an entirely different basis. Rather than being geostationary the Orbita satellites cross the Soviet Union in an eccentric pattern.

They descend to a perigee within a few hundred miles of earth as they pass over the Soviet Union and then are flung out far into space before they return to the preset path from Warsaw to Vladivostock. Because of this orbital configuration and the limited Soviet internal purposes for which the Orbita has been established there are no spectrum management problems, no question of finding parking space and no spill-over.

More potential spawning beds of international dispute will arise as national distribution systems are put into operation. The first of these to function was the Telesat system in Canada. The second was the Western Union company's Westar facility for the United States. We can now expect in the relatively near future a Japanese communications satellite to serve Japan and some of the other nations of the eastern Asian perimeter and some time later distribution satellite facilities to serve Europe.

The International Telecommunications Union has taken steps to avoid arguments over frequency allocations and parking space. It has laid down the requisite that any country wishing to launch a satellite into geostationary orbit for national or regional distribution purposes must make application to the ITU. It must indicate the position it desires, the frequency it expects to use and the purpose for which the satellite is being launched. Any nation which wishes to protest may do so but in entering its protest it must submit plans for a satellite of its own. In addition to describing the vehicle and its purposes and objectives, it must promise to have its satellite functioning within a five-year period. This would seem to forestall any disputes for the time being.

There are only two areas over the equator where there is likely to be any real contest for parking space.* One is across the waist of South America where Americans, Canadians, Central Americans and South Americans might conceivably require such a profusion of birds that parking space would be at a premium.

There is already some evidence that such a traffic jam might occur earlier than we think. Western Union has recently asked that one of its two Westar birds be moved to a position over the equator at 119° longitude which will enable it to serve the West Coast and Alaska. If this permission should be granted by the Federal Communications Commission it would bring Westar into conflict with plans already announced by the consortium involving American Telephone and Telegraph, General Telephone and Electronics and Comsat and with the RCA program.

* Parking space over the equator is essential because only directly above the equator can geostationary orbit be achieved. Intelsat's international interests do not conflict with national objectives because the Intelsat goals are largely aimed at spanning oceans rather than land masses. Thus Intelsat has pre-empted positions over the mid-Atlantic and the mid-Pacific. Only its Indian ocean position is likely to collide with the aspirations of national governments for stationing of distribution satellites to cover South Asia and the asiatic areas of the Soviet Union.

The United States has long argued for a "first come, first served" policy and the ITU patterns seem designed to cater to this American desire. It is conceivable, however, that between the United States and Canada space available for Central and South Americans may be at a premium by the time those countries have perfected plans, obtained the required funding and constructed satellites and earth stations to permit their systems to function.

Most of the symptoms of growing international tension are surfacing in anticipation of the eventual launching of much more powerful satellites which will beam signals to much less costly earth stations. There are at least three modes by which this may be accomplished. The first involves using high-powered satellites to communicate to community antennas. The second would call for broadcasting directly to augmented receivers in the home and the third, probably some considerable distance into the future, would permit broadcasting directly to conventional receiving sets.

The American Satellite Technology Demonstration, utilizing an ATS6 satellite furnished by the National Aeronautics and Space Administration for Health-Education Telecommunications experiments, will soon begin beaming educational programs into community receivers in eight American states including West Virginia, the Rocky Mountain area and Alaska. This satellite is the most powerful yet constructed. The signal strength is sufficient so that it can be picked up by an antenna costing only a few hundred dollars and fed into an augmented receiver which is being built in the United States for approximately \$3,700. The antenna configuration is sufficiently sophisticated that signals can either be confined to a pattern a thousand miles from north to south and three

hundred miles east to west, or broken off into more scattered segments transmitting to West Virginia on the one hand and Alaska on the other.

The ATS6 is the vehicle which, after one year of experimentation with American health and education problems, will be moved to a point over the Indian ocean where it will be used to beam educational programs into India.

The experiment will inevitably increase interest in the use of the satellite for internal national communications and heighten suspicions that some country might eventually use facilities of this type for propaganda or cultural aggrandizement purposes. The ATS6 will demonstrate that it will take only one more short step until there can be direct broadcasts into the home. Still greater power will be required to make the direct to home broadcast feasible and there will have to be considerable experimentation with home antennas to reduce them in physical size and cost to make them both physically and economically viable. The technology, however, is available. A crash program could probably make direct broadcast to the home a practical reality by sometime in the decade of the 1980's. It is this possibility that has led to a growing concern around the world. There is increasing uneasiness regarding the impact of satellite signals if they are permitted to cross international borders and intrude themselves into competition with internal communications systems.

Many governments are theoretically dedicated to the free flow of information, but all too frequently this "dedication" is nothing more than lip service. The mere thought of a television signal coming down out of space and reaching into homes without first passing through the

control of government agencies strikes terror into the hearts of leaders of strong nations. Anything that can't be controlled in this view is per se "bad."

The United Nations and Unesco have been considering a set of resolutions that in effect would give each signatory nation a right to determine what might be permitted to enter its borders via satellite. The resolutions are couched in the peculiarly bland and remote language of international diplomacy in such a way that they seem to be re-affirming faith in the freedom of communications while actually raising government censorship to the status of international law.

The title of the Unesco resolution reads, "Draft declaration of guiding principles on the use of satellite broadcasting for the free flow of information, the spread of education and greater cultural exchange."

It includes in one of its articles the statement "The benefits of satellite broadcasting should be available to all countries without discrimination and regardless of their degree of development." So far so good. To this point there is nothing to complain about. But then the resolution takes a tortuous twist. It suggests that satellite broadcasting "requires that every effort be made to ensure the factual accuracy of the information reaching the public" and adds "News broadcasts shall identify the body which assumes responsibility for the news program as a whole, attributing where appropriate particular news items to their source."

Ensuring accuracy, identifying the source and identifying the body which assumes responsibility for the program all sounds quite innocuous

but who is going to assume the role of editor? Who is going to determine accuracy or inaccuracy, a very hazardous decision at best? Someone is going to have to take the responsibility of making subjective decisions and those subjective decisions are the beginnings of international censorship.

Similar treatment, according to the resolution, should be given to education and advertising. Finally, there is the statement: "In the preparation of programs for direct broadcasting to other countries account shall be taken of differences in the national laws for countries of reception." That is a rather blunt statement that no signal can enter a country unless it is expressly approved by the country of reception. In other words, even though we are developing a communications facility that can leap over international borders the harricades are to be raised higher in order to impede the flow.

The basis for adopting a rigid position of control is to be found in the provisions of rule 428A in Article 7 of ITU's Radio Regulations. This article includes the sentence, "In devising the characteristics of a space station in the Broadcasting Satellite service, all technical means available shall be used to reduce, to the maximum extent practicable, the radiation over the territory of other countries unless an agreement has been previously reached with such countries." It should be noted that this paragraph does not deal with program content directly. It is much more precisely aimed at spill-over. In so far as the thrust of spill-over is technological, rather than content-oriented, it only by implication relates to content.

The phrase "to the maximum extent practicable" could relate to power, antenna configuration or even to cost factors in the event a given country or agency does not have the financial resources to balance its power ratios and antenna configurations in such a way as to avoid some spill-over. The use of the phrase "all technical means available" also tends to soften the effect somewhat, in that if technical facilities are not available then presumably broadcasts across international borders could go on until they were to be so.

Strict enforcement of the rule would need some technically equipped court of highest resort to adjudicate complicated technological disputes which could frequently lap over into the content area since it is likely that most complaints would arise out of resistance to the content being broadcast rather than to the simple existence of the signals. Rule 428A, however, has been used as the starting point for consideration of a set of rules and regulations which would extend far beyond the limits of technology and into the area of program content.

The major points of contention in meetings of various international bodies discussing direct broadcast from satellites, including the U.N. Working Committee on Direct Broadcasts from Outer Space, have centered around five specific items. The first is prior consent. The second is spill-overs. The third relates to rules regarding content. The fourth relates to the right of participation in program planning and decision making of programs which are to cross international borders. The fifth calls attention to the right and duty of consultation regarding programs broadcast across international borders via satellite.

At the U.N. Working Group sessions in Geneva in March 1974 most delegates emphasized that no country should undertake satellite broadcasting to another country without the prior consent of the latter. As InterMedia, Vol. 2, No. 1, 1974, the quarterly publication of the International Broadcast Institute described it in an article by Edward W. Ploman, IBI's executive director, "the major reason given for this attitude includes the opinion that the principle of prior consent is consistent with a recognized rights of states to regulate their communication systems and to decide in the light of social, political, economical, cultural and other considerations the type of broadcasting service they require."

Ploman adds that "in this view this principle has already been adopted into the body of international law through Article 7 428A of the Radio Regulations."

This point of view, of course, overlooks the historical fact that short-wave broadcasting has been employed for propaganda purposes by all of the major nations of the world and many of the minor ones. The British Broadcasting Company's Overseas Service, Western Germany's Deutsche Welle, the international services of ORTF in France, NHK in Japan and those of the Soviet Union and the Republic of China, not to overlook the Voice of America, have long been pumping high-powered short-wave signals across international borders. There is no evidence that they have been particularly cautious about requesting advance permission of the countries into which they broadcast before opening their transmitters.

Aside from the historical fact, however, that with regard to short-

wave radio the principle of prior consent has never been adhered to, the application of the set of principles described by Mr. Ploman would only strengthen the resistance of the countries with government operated communications systems to the importation of information and ideas from the outside and give them the mechanism for the screening of such information and ideas to cater to their own narrow local interests, patterns and even prejudices.

It would build the theory of "state sovereignty" to new heights of power and influence. Most importantly, however, it would inhibit the enormous new capability of satellite communications to tear down the barriers to free flow of information. It would restrict the flow of the raw material for enhanced international understanding as opposed to the growth of chauvenism.

Not all nations have been hard-liners on this topic, even though the United States was the only nation that in the U.N. in the winter of 1973 voted negatively on a resolution which would have established "prior consent" as a guiding principle.

Some recognition was accorded to the possibility that direct broadcasts from satellites will open up a miraculous new instrument for international communication. Whether these expressions were genuine or mere lip service remains a question. It is obvious though that the impositions of controls would sharply restrict capabilities of the direct broadcast satellite and inhibit the full realization of its power to communicate.

It would also support an entirely new theory of international censorship, censorship at the source as opposed to censorship at the point of reception. Not even the countries with the most stifling censorship have ever been able to move to prevent the movement of news and information

through international communications channels. They have only been able to go so far as to set up barricades at their own borders, choking off the flow as it arrives there.

Adoption of the rule of "prior consent" would change that pattern. It would permit the censor to range far outside the borders of his own country, snapping off the channels before they flow upward to the communications satellite rather than as they arrive in his own home territory.

Ploman, in his same article in InterMedia quoting countries which do not support the theory of "prior consent" points out that those nations believe the right of "prior consent" would also grant receiving nations the power to veto, which would be inconsistent with provisions in the Universal Declaration of Human Rights.

Admittedly, there are differences. When direct broadcasting into the home from satellites becomes feasible national governmental authorities will become powerless to restrict a signal once it has been transmitted. They can only do so by invading homes and rooting out receivers capable of accepting the signal. The nations favoring stifling this capability at its source argue that their right "to regulate their own communications systems" is fully recognized and because it is they have the right "to decide in the light of their own social, political, economic, cultural and other considerations the type of broadcasting they require and receive."

The position of the Soviet Union, as might be expected, favors extreme measures for control. Its desire to exercise the right of "prior consent" it says is based on "the illegality of certain broadcasts." It

cites war propaganda, the publicizing of militarism, fomenting national and racial hatreds and interference in internal affairs as "illegal" and thus subject to censorship at their source. During the debate on the question at the United Nations in the winter of 1973 Soviet foreign minister Andrei Gromyko went so far as to ask U.N. member states to agree that any nation on its own initiative may destroy satellites to keep broadcasts from coming directly into the homes of their people.

The fear which stimulates this over-reaction is largely groundless. It is a phobia arising out of frustration that controls over information flow may be weakened by satellite communications. It assumes that "national sovereignty" applies to communications.

The basis for assuming that worries are groundless is mostly economic but technology is also involved. It is unlikely that direct broadcast from satellites will become nearly as wide spread in the foreseeable future as many experts predict. It is also evident that propaganda broadcasting from satellites will be too costly and too cumbersome to be worth the price. If controls are necessary they can be imposed through management of the frequency spectrum.

While the technology to achieve a direct broadcasting capability will certainly be available within the next decade, financial conditions, except in certain limited geographical areas, are almost certain to impede progress. There is no apparent factor in the highly developed sections of the world, such as North America and Western Europe, that would furnish direct broadcasts from satellites a viable economic base from which to function. We already have an elaborate grid of earth-bound communications which function effectively and economically. They will

soon be supplemented for the United States by distribution satellites which will vastly increase the channels of communications across the country on an inter-city basis and to Alaska and Hawaii. Europe will eventually have a system serving the same purpose.

The question is where the direct broadcast satellite would fit into the scheme. What additional services would it supply? What could be accomplished that is not now being accomplished efficiently and economically? Where would be the opening wedge that would enable direct broadcast satellites to show some promise of justifying the enormous cost that would go into them? The current Satellite Technology Demonstration being carried out with the use of the ATS6 satellite is being funded with government money. Its objective is limited to educational purposes. When it moves to India it will again be funded by government money. And again its functions will be limited to broadcasting educational programming. It even operates on frequencies which are assigned specifically for educational purposes. Its service to the United States will be limited to one year, to India two years. There is a real question as to whether funding for soft-ware will be available to continue the experiment.

It is conceivable, of course, that governments will fund direct broadcast satellites for governmental purposes. Education appears one of the most likely uses but there are other governmental services that could be communicated by direct broadcast satellite including health information, agricultural data, business and financial news and reports on the activities of government itself. If this is done internally and the program is relatively tightly restricted within the national boundaries of any given country there would be no international controversy.

Many peoples of the world apparently, however, are fearful that

American cultural domination which has been largely achieved through the distribution of American made entertainment television programs to local television services in almost every country of the world will be extended to direct broadcasts from satellites. Fears are expressed both regarding the cultural flood emanating from production centers in the United States and support of such programs by American advertisers. The prospect of American advertisements being beamed directly into homes outside the United States seems to stimulate almost irrational reactions.

The fact is that entertainment programs can much more economically be delivered by jet airplanes and since there is no conceivable reason for instantaneous release the present system should continue to work efficiently into the future. American advertisers are far too sophisticated to saturate the world with their advertising messages. They place too much premium on adapting commercials to the specific interests of the areas into which they are broadcasting to waste signals in indiscriminate distribution. It seems most unlikely that American advertising agencies trained in market research and cost-per-thousand analysis would indiscriminately try to blanket large sections of the world with direct broadcast from satellite.

There is one more constraint operating to restrict simultaneous, world-wide distribution of commercials by direct broadcast satellite, one which would even be more effective. In order to achieve sufficient power to reach home receivers it would be necessary to narrow the antenna beam thus increasing the power of the signal as it reaches earth. Narrowing the antenna beam would restrict the geographical area to be covered by the signal. Thus there is no fear that one single broadcast could cover broad

areas of the earth with one single homogenized program backed up by typical hard-sell American advertising messages. But costs would also rise dramatically thus diminishing any theoretical advantage held by the direct broadcast satellite. Who would own the satellite? Who would lease its facilities to what advertisers? And at what rates?

Direct broadcast from satellites undoubtedly will play a significant role in such geographical areas as Brasil, Indonesia and India where there are not now adequate earth-bound facilities and where the cost of creating such facilities would be prohibitive. But in those areas where earth-bound facilities already exist in profusion and where they will eventually be backed up by distribution satellites the future of the direct broadcast satellite as a purveyor of news, entertainment, advertising or even propaganda seems a far fetched dream.

It is conceivable that countries which are sufficiently interested in international propaganda to invest the enormous sums of money required might wish to make use of direct broadcast from satellites for propaganda but in this case it would seem that the advantage to be derived would hardly be sufficient to justify the cost and the effort. When, for example, will there be available a sufficient number of specialized antennas and receivers to make the effort worth while?

The logical conclusion is that the anticipated evils accruing from direct broadcasts from satellites are to be found more in the regulations which may be drawn up to control them rather than in the actual abuses which might result from such broadcasting.

The fears that there will soon be massive propaganda campaigns carried on by use of extremely high powered satellites are largely groundless

but there is a danger that these fears may be used to develop mass hysteria which will lead to the creation of a new and more virulent type of censorship, censorship no longer confined within the borders of any single country but one that is applied internationally.

We now have the facilities for a new era in international communications. The technology is rapidly becoming available for a new age in which a world brotherhood of man is literally possible.

This is a goal which can't be realized by slamming down the gates which would block the flow of information.

There are two ways to prevent an information blackout: One is to inveigh against local censorship in those countries which practice it; the other is to open the channels of international communications, remove the debris which inhibits free flow, clear out the slit, blast out the heavy obstructions and permit the channels to flow freely.

No system is perfect. Some selfish users will probably take advantage of a free international communications system, but surely the advantage to be gained from a free market place of ideas would far outweigh the very minor disadvantages which might accrue. Surely the world will be in a better position if we don't extend the control of ideas to the sky above us and into outer space. Surely, we can only profit from knowing each other better though in the process of disseminating the truth we expose a few blemishes, admit a few indiscretions and permit some unscrupulous nations to take liberties with an international communications system.

This is the first opportunity that the world has had to fight the battle for free information on a full world-wide scale. It is a major test of our will to be free. It is to be hoped that international leaders will see the futility of retiring to tight little cocoons, pretending that no

outside world exists and that they can control whatever ideas cross their borders. "Prior consent" and "national sovereignty in communications" can only thwart the capability of new communications systems to soften or eliminate international tensions.

The danger is that satellite communications may become in themselves a continuing source of international tension and that new international restrictions on the free flow of information may be written in the fear that communications monopolies will be broken. The alternative is more attractive; a satellite service which expands rather than contracts the range of human knowledge and understanding.