Competition and Cooperation in Satellite Communication: The Soviet Union

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November 1984

This paper was presented to a conference entitled: Tracing New Orbits: Competition and Cooperation in Satellite Development.

I propose to deal with this theme under the five following headings: (1) the Interkosmos program; (2) collaboration between the Soviet Union and France; (3) Indian-Soviet cooperation; (4) maritime satellite communication; (5) the Intersputnik system, to which I shall devote most of my attention. The first four concern point-to-point communication, especially but not exclusively within scientific circles; the last involves mass communication as a major component. In my conclusions I shall interpret the complex interaction between cooperation and competition involved in all these instances.

The Interkosmos Program

According to Krasnaya Zvezda[1], the first decision to pursue research into a space-flight with cosmonauts was taken in the USSR in 1946. This is perfectly plausible, given Stalin's well-known predilection for prestige aviation projects (Bailes 1978: ch.14). We do not yet know much of the intervening stages, but in April 1965 Premier Kosygin formally proposed to other heads of socialist states that they jointly collaborate on scientific research into a variety of space topics. The proposal issued eventually in a major meeting in Wrocław in 1970 at which the title 'Interkosmos' was formally adopted. The project took international legal shape on March 25th, 1977, and now

involves as members Bulgaria, Cuba, Czechoslovakia, East Germany, Hungary, Mongolia, Poland, Roumania, the USSR and Vietnam (National Paper USSR, 1981: 105; Vereshchetin 1977: Part I, ch.2). Thus seven European countries are involved, and three Third World countries.

Interkosmos has undertaken a variety of scientific research projects of major proportions: space exploration, remote sensing, biology and medicine, and meteorology (National Paper USSR 1981: 106-7). Satellites have also been launched within the program by nations other than the USSR, such as the Czech Magion satellite and the Bulgaria 1300 satellite.[2] Cuba can now access the scientific data-bases of the CIIST (International Center of Scientific and Technical Information of the Comecon Countries) via an Intersputnik satellite, and was involved in the collection of oceanographic data through Interkosmos-21, along with East Germany and Mongolia.[3]

The most spectacular aspect of the Interkosmos program has been its space flights with bi-national crews. To date there have been bi-national flights involving a German (DDR), a Czech, a Pole, a Bulgarian, a Hungarian, a Roumanian, a Cuban, a Mongolian, a Vietnamese and an Indian.[4] Additionally, the Cuban, Lt.-Col.Arnaldo Tamayo Mendez, was black.

(The second, as well as the first woman in space, was a Soviet citizen, as was the first woman to accomplish a

walk - not the version of history embraced by all U.S. media, it might be noted. An all-woman Soviet space crew has been forecast by Soviet sources for the fairly near future.[5] The hundredth person in space, Viktor Savinykh, was a Soviet citizen. As of 1980, the USSR had had twice the number of human space-flight-hours of the USA.[6] These last-named aspects of the space program are more Soviet than collaborative, but they add up to an important total picture of venture in space exploration, and in communication about, as well as via, space. Out of the specific Inter-kosmos program had emerged by late 1981 no less than 500 public joint scientific papers (National Report USSR 1981: 107; Chipman (ed), 1982: 582).

Soviet-French Cooperation

Joint scientific space projects between France and the Soviet Union began from 1966 (National Report USSR 1981: 109). 1984 marked their 21st bilateral conference, which meets alternate occasions in each country. The most visible form of their cooperation was their joint space flight in 1982, but this was only one aspect of their collaboration. In 1979, France spent 27.62 million francs on space cooperation with the USSR, and in 1980, 32.33 millions; by contrast, it spent in those years 24.6 and

38.355 millions on collaboration with the U.S.A.[7] Despite this relative shift between 1979 and 1980, the figures indicate comparability.

The research projects involved have been various.[8] They have included the VENERA experiments (exploration of the atmosphere and surface of Venus), INTERBOL and Arcad 3 (magnetosphere experiments, especially the costly Arctic Auroral Density study), ASTRON (astrophysics in the ultra-violet domain), SIGMA (experiments with X-rays and gamma-rays in space), and COMET (meteor-dust collection). In the rest of the present decade, other projected joint experiments are a satellite for the lunar polar orbit, a solar study, further work on Venus, and the AELITA study of the distance and movement speed of galaxies. In 1985 a satellite will be launched - with U.S. involvement as well - containing white rats and rhesus monkeys. And in 1986 there will be two franco-soviet satellites observing Halley's comet - in competition/collaboration with the European Space Agency, Japan and NASA. The franco-soviet study will utilize as a key element a spectrometer developed jointly by France, the USSR, Hungary and Bulgaria. On the French side these experiments are co-ordinated by the Centre Nationale des Études Spatiales, on the Soviet side by the Academy of Sciences.

Soviet-Indian Collaboration

India is the other most favored non-bloc nation for Soviet space collaboration. A series of satellites have been launched or planned (in all five to date). They have been made in India, and launched from the USSR. They have contained Soviet and Indian scientific instruments. The work involved has included studies of the upper atmosphere, research in gamma astronomy, monitoring of satellites, and remote sensing. As already noted, in April 1984 there was a joint Soviet-Indian space flight. One of the experiments involved a bio-medical study of yoga practiced in weightless conditions. Another collaborative remote sensing satellite, IRS-1, is planned for the near future, to survey land and ocean of the sub-continent (National Report USSR, 1981: 108-9).[9]

Although it anticipates a later section of this paper, we should note here that when a U.S. communications satellite for India's use failed in 1983, the USSR gave India free access for nearly a year to one of its own Intersputnik satellites, through which to broadcast Indian television programs, until a new satellite could be successfully launched to do the job.[10]

Maritime Satellite Collaboration

Joint activity in this field has taken two forms: involvement with Inmarsat, and participation in the COSPAS-SARSAT project. The Soviet Union is the second most active member of Inmarsat, the 40-nation maritime navigation satellite agency set up in 1979 with its headquarters in London. After the U.S.A, whose stake is 23%, comes the USSR with 14%. The first Soviet ground-station for Inmarsat was completed in Odessa in 1983. In July the same year it was reported that the USSR was offering for sale to Inmarsat a modified Proton rocket for the third (Marecs) satellite launch, at a quite competitive price - approximately $24 millions, as opposed to $28 and $30 millions respectively for its U.S. and French competitors. As a further carrot, it was offering a second launch if the first should fail, at half price.[11]

COSPAS-SARSAT [12] is a satellite system designed for maritime and other distress situations and rescue operations (though occasionally Inmarsat has been deployed for these as well). The nations and agencies involved are Morflot (the Soviet merchant marine ministry), the Centre Nationale des Études Spatiales, the Canadian Department of Communications, and NASA. Norway has also been involved in some aspects of the project. Salvage operations have been enabled as well. By the end of July 1984, two hundred lives had been saved.

The Intersputnik System

Insofar as attention has been given to mass communication by satellite, the organization most discussed by far has been Intelsat (Pelton et al., 1983), broadcasting to nearly 170 countries, and with 108 members. Yet the Intersputnik system, with current links to Algeria, Bulgaria, Cuba, Czechoslovakia, East Germany, Hungary, Iraq, Poland, Afghanistan, Laos, Mongolia, Viethem, and the USSR itself, and impending links with Syria, Nicaragua, South Yemen and Kampuchea, is certainly worthy of attention.[13] Point-to-point communications are an important feature of the Intersputnik system, but are presently not discussed in western or eastern sources that I have been able to discover. Here, therefore, I shall focus on television, with occasional references to radio.

The origins of the Intersputnik system lie in the Khrushchev era. In January 1959 the Technical Council of the USSR Ministry of Communications placed in the Seven Year Plan some basic proposals for a cosmic retransmitter of TV programs in color (Galloway 1973: 123). In June 1961 the President of the Soviet Academy of Sciences publicly noted that high priority was being allocated to space communication within Soviet policy-making, and it was clear from his statement that television was being prioritized over point-to-point communications (ibid.). In April 1965, Premier

Kosygin included in the same invitation as the Interkosmos proposal, that socialist states collaborate on 'long-distance radio communications and television' (ibid.). Intersputnik, then, represented one facet of the total Soviet space program, and there exists a permanent liaison committee between Interkosmos and Intersputnik.

The first draft of Intersputnik's constitution emerged in 1968 (a year in which Intelsat was already broadcasting to sixty-three nations). A formal public announcement of the intention to set up Intersputnik was made at the UN Conference on Outer Space in Vienna in August 1969. The finished constitution was signed in Moscow by the then-participating states on November 15th 1971, and came into force on July 12th 1972. It was planned to develop its operation in three stages: firstly, experimental use, utilizing Soviet satellites free of charge; secondly, offering leases on satellite communication channels; finally, a full commercial operation. By the beginning of 1977 there were ground-stations in the USSR itself, at Vladimir and Dubna, and in the DDR, Poland, Czechoslovakia, Mongolia and Cuba. There are reports in some quarters that as well as the countries formally announced as coming on line above, the nations of North Korea, Libya, Angola, Mozambique, the Malagasy Republic, Sri Lanka and some (unspecified) South American countries will be joining the system (Pirard 1982). Another Soviet report cites only Libya (Romantsov & Chalupsky 1982), while the cover of the

Intersputnik Brochure (Intersputnik nd.) indicates Libya, Sao Tome e Principe and Ethiopia, over and above the countries officially designated as part of the system. Furthermore, relations between Intersputnik and PANAFTEL (Pan-African Telecommunications Network) are being expanded and consolidated (Chipman, ed. 1982: 586). Not all the countries indicated are full members of Intersputnik, however: in 1984 these comprized the six eastern European nations in Comecon, plus Afghanistan, Cuba, Laos, Mongolia, North Korea, Vietnam and South Yemen. Together with the USSR itself, this amounted to 14 nations.[14]

The satellites used are part of the Statsionar ('stationary') network. Intersputnik uses three Gorizont ('horizon') geosynchronous satellites at 14 degrees west longitude, 53 degrees east, and 140 degrees east (Long, 1984: 12). The only major inhabited part of the earth's surface which is not covered by them is central and western North America. Their ranges overlap at a number of points. There are plans to expand the system's technical capacity, which currently enables four to eight hours of television transmission daily,[15] another index of continuing expansion.

What information is available on its formal organizational structure, its pricing policy, its programming and its availability? Its formal structure is laid down in the Intersputnik constitution. Intersputnik owns the equipment in space; the member countries ('recognized operating agents')

own the ground-stations (Article 4 of the constitution). Its ultimate authority consists of a Board (Article 12), composed of one member, with one vote, from each of the states signatory. (Intersputnik is only open to states, unlike Intelsat, which is open to non-state subscribers to join.) This Board meets once a year at least, generally in Moscow. The chair is rotated among the members in alphabetical order. The Board elects the Director-General and deputy, and must approve the structure, operation, and financial activities, of the Directorate. It also sets all tariffs. Unanimity is sought, but a two-thirds vote is binding. A member stating objections in writing is not bound by a decision taken.

The permanent directorate is concerned with all administrative implementation of Board decisions. Article 13 explicitly makes provision for a multi-national staffing of the directorate. However, there is one source which claims that the current directorate staff numbers only about ten technicians, after the Director-General and the deputy (Pirard 1982). If this is the case, it underlines the fact that programming decisions are not made by Intersputnik itself (see below).

Intersputnik's pricing policy is probably a very important component of its continuing extension. Its costs are very competitive (compare the USSR's offer on its Proton rocket to Inmarsat), and this is of the greatest importance to many

Third World economies, for which the costs of mounting a television service are extremely high. Third World countries have frequently protested high telecommunications tariffs of all kinds: witness the 1980 conference of Asian news organizations in New Delhi, which complained that satellite TV and news tariffs were actually higher for Pacific countries than for Europe.[16] The comparison of Intersputnik's rates with Intelsat's demonstrates the overwhelming cost advantage of the former:

TABLE I [17]

Comparative costs, Intelsat & Intersputnik 1981 (in gold francs)

Ground-station vision-channel	Intelsat	Intersputnik
1st 10 minutes	2500	990
Each following minute	78	28.2

With tariff-differences of this kind, even Intelsat's heavily stressed twelve price reductions (Pelton et al., 1983: fig.17) from 1975 to 1981 seem to be rather beside the point.

Intersputnik's second cost advantage lies in the fact that Soviet communication satellites have very large transponders, which means the ground-stations are much cheaper than Intelsat's to construct (Bykov 1981). The third factor, obviously, is that the USSR bears all the initial outlay of manufacturing, sending into orbit and maintaining

the satellites used. These economic factors must be weighed as seriously as the political ones when explaining the relatively rapid development of Intersputnik over recent years.

Discovering the nature of programming and the sources of decision-making over programming has proved impossible at the time of writing, at least with any degree of precision. The same is true as concerns the criteria and mechanisms of programme selection in the countries involved. The only regular TV program monitored in the U.S.A. at the time of writing is the nightly news and current affairs Vremya (time). Apart from this, only one source exists to give a 'typical GORIZONT programming day' (Lang & Keating 1983: 162), by implication from Cuba:

TABLE 2

13.00	UPITN news feeds transmitted in English
13.30	INTERSPUTNIK news feeds from participating nations
14.00	Panorama feed in Spanish from Czechoslovakia to Cuba
15.00	Hungarian entertainment programs from Budapest
16.00	0167 test pattern
17.00	Evening news from Moscow: Programma 1
18.00	East European entertainment programming: sporting events, dancing, music or movies
19.00	Entertainment programming from East Germany and others
21.00	Reverts to test pattern, or use by Cuba for news items, cartoons, or Western entertainment or movies

Intersputnik is also responsible nowadays for about 40% of the TV transmissions by Intervidyeniye (Intervision), the eastern European television exchange system managed by the Organization of International Radio and Television in Prague (Romantsov 1981). According to G.Yushkyuvichyus, deputy chair of the USSR State Committee for Television and Radio Broadcasting. Intersputnik has offered Intervidyeniye 'a qualitatively new stage of development' (Chausov 1982). However, what these statements mean in practice is hard to specify, and the precise relationship between Intersputnik and Intervidyeniye remains to be charted.

From a variety of sources indicated below, the general categories of news, politics, culture and sport seem to be the staples of programming provision via Intersputnik. The account by Chausov (1982), for example, describes the process of TV news exchange in the system thus:

> [TV news centers are switched into the network] 'offering their video news for the attention of the participants in the exchange. The working language of intercourse by the space voice communications lines is Russian, and Vremya's duty editor, sitting at the studio desk, can communicate efficiently with his colleague (sic) in the socialist countries.'

Another source indicates that the average duration of news items is about a minute, and that over 90% are in color. About five percent of items are from 'liberated Vietnam, Angola, Kambodia (sic), Ethiopia, Mozambique, Afghanistan and other countries'. The same source also notes that Cuba receives Intervidyeniye news via Intersputnik, so it may be

presumed that other Intersputnik members outside eastern Europe also do so (Keune 1981: 87-90).

As regards the category 'politics', this appears to refer to Party congresses and political visits. For example the 26th Soviet Party Congress in 1979 was widely broadcast through Intersputnik (Romantsov 1981: 40-41). So were, for example, the 1981 celebrations in Mongolia of the Mongolian People's Republic and its fifteenth Party Congress[18], and the sixth Non-Aligned Nations conference in Havana in 1979.[19] Under the heading of political events might also be included such items as the televising of the award of Vietnam's Gold Star to Brezhnev, Kosygin and Suslov in 1980[20], and in general, visits by top dignitaries from Soviet bloc countries.

Culture in the sense of Hochkultur tends probably to focus mostly on music. One of the obvious problems of programming is not merely cultural difference, which may be hard sometimes to translate, but also the language problem itself. It is unclear how this is solved, although one Cuban source makes it plain that the Caribe Intersputnik ground-station has the technology for removing the sound-track from a videotape (Gonzalez del Pino 1979: 38-43), which obviously would enable dubbing. In principle, the heavy stress on folk-loristic dancing and similar entertainment in eastern European provision is predictably visible on Intersputnik cultural items.

Sport, finally, is a most important element in programming, perhaps not least through being rather more telegenic than Party Congresses. Soccer football, ice hockey, even chess, are standard fare. The need for translation is also obviated. In particular, the 1980 Moscow Olympics were the occasion for a major planned expansion of Soviet TV, both nationally and internationally (Lebovskiy 1979: 2).While they were being played, there were 460 transmissions for a total of 820 hours to over thirty countries, many via Intersputnik (Gafurov 1982: 45-48). Enormous efforts were made in Afghanistan, Cuba and Vietnam to ensure the ground-stations came on line in time to receive the transmissions.[21]

Lastly in this description of the Intersputnik system, we should note its availability outside the nations which are members and/or users of its facilities. Clearly, any appropriately constructed dish aerial can receive it, as the Harriman Institute at Columbia University has demonstrated for eastern North America in 1984. At present, there is no regular reception by any major broadcasting agency. Indeed, the activities of some private agencies in western European countries in organizing public viewings of Intersputnik programs have led to minor storms in local teacups. In the Netherlands in 1982, the Ministry of Culture, Recreation and Social Welfare telephoned Amstelveen Cable TV network half an hour

before a publicly advertized showing from a Gorizont satellite, and warned it that it should not proceed, as its action would be illegal. No action was taken against the network in the event. In Iceland in the same year, the People's Alliance (ie the Moscow-line Communist Party) celebrated the successful transmission of Intersputnik programs in an experimental showing by a private company, and were roundly taken to task for it by a conservative Icelandic newspaper, which sourly remarked on the oft-expressed hostility of the People's Alliance to having TV beamed in from the U.S.A. over military satellites.[22] However, these experimental receptions are, for the time being, just that; no agency seems to be undertaking to relay Intersputnik television traffic on a regular basis.

Pending further research into the Intersputnik system by the author, this outline of its structure and operation is about as comprehensive a one as can be collated. We must now move to a consideration of the possible interpretations of these various forms of satellite communication cooperation and competition which have been described above.

Interpretation and Conclusions

In any discussion of satellite competition and cooperation, it is clear that the entire communications and political context must be taken into account. No interpretation that

restricts itself simply to satellites themselves can be coherent. What we have described above is set within a context of rivalry between the superpowers, which expresses itself in communication terms in Moscow's World Service, the Voice of America, Radio Martí, Radio Free Europe, Deutsche Welle, the OIRT in Prague, and a series of other agencies. It also, as we shall see, expresses itself in public relations communication of prestige projects for the admiration of the other nations on earth.

Secondly, 'cooperation' and 'competition' are not mutually exclusive spheres. A cooperative endeavor, like Interkosmos, also communicates a positive image of scientific organization and development within the Soviet bloc. The USSR's involvement with the COSPAS-SARSAT project and with Inmarsat is both a cooperative policy, and a policy which indicates in principle that peace and progress are as much if not more on the Soviet agenda as the U.S. agenda.

The politics of the first Franco-Soviet space flight indicated that this complex interrelation is much in the minds of politicians and politically engaged scientists. As we saw, Franco-Soviet cooperation in space dates back to the middle years of De Gaulle's presidency, hardly marked by an excessive enthusiasm for Communism or the Soviet Union, but dictated by a determination to pursue national independence. By the time the first joint space flight was in orbit, however, the

complexion of the French government had changed, with the 1981 shift to a Socialist Party administration. As a result of the anguished squawks from across the Atlantic about the inclusion of four Communist Party ministers in the government, the internal opposition to those appointments was amplified considerably, with the result that at the time of the flight the Committee of French Physicists declared the flight 'a mediocre prestige activity' and queried whether robotic flights were not a more rational policy to implement. No one above the rank of the French Moscow ambassador was present for the launch or the landing; the Centre Nationale des Études Spatiales was forced to say that future joint flights were not on their agenda (which was untrue) and to remind Moscow publicly that this was a scientific and not a prestige project; and upon the successful conclusion of the flight, President Mitterrand's congratulatory message included a very prominent reference to the Helsinki principles. There was even some question as to whether the astronauts would be honored by French decorations, through in the event they received the Légion d'Honneur as well as the Order of Lenin and Hero of the Soviet Union decorations. And a year later, it was announced officially that human space flights were of great scientific value, and that there would be a French astronaut in a future NASA launch.[23]

In the days of Charles de Gaulle, it is unlikely this

rather inconsequential business would have been manifest. Given an administration sandwiched between its own conservative opposition and the Reagan administration, the communicative public relations aspects of the occasion were inevitably thrown into sharp relief.

There are further dimensions of Soviet collaborative space activity which require consideration in this context of interpreting cooperation and competition. Its involvement with India, as the largest Non-Aligned nation, is of considerable importance. Donating free access to Indian television while a U.S.-built satellite was not functioning, was clearly useful to the Indian Ministry of Communications, but at the same time had a clear value in the competition between the U.S.A. and the Soviet Union for legitimacy in the Third World in general, and in India in particular. The remote sensing undertaken jointly between the two nations is a project whose findings may be of considerable utility to Soviet planners in developing further their already well-entrenched involvement with the Indian economy (Horn 1982). Similarly, there is a series of joint scientific space projects undertaken between Sweden and the USSR (National Report USSR: 110-111). However, what are we to make of a Soviet article (Ilyin 1983: 21-23) about remote sensing which mostly refers to Siberia in the text, but in the first three Figures displays a map of Scandinavia? Given the

strategic significance of Norway within NATO, the semi-dependent status of Finland vis-a-vis the USSR, and the repeated experiences of Sweden with Soviet submarines in the 1980s, such maps may be indicative of more than merely cooperation.

The tariff-rates and structure of Intersputnik are another case in point. It is cooperative to offer lower rates to Third World nations, and yet dependence on Intersputnik's global communication links could lead to a more competitive position for the USSR in relation to its rival. The fact that Intelsat is so much bigger than Intersputnik, and that some nations like Cuba and Algeria have access to both systems, should not blind us to this dimension. As regards its structure, there has been controversy from the outset concerning its implications. The Soviet view emphasizes that

> 'on the basis of the principles of respect for the sovereignty and independence of states, equality of rights, noninterference into internal affairs, as well as mutual help and benefit, Intersputnik should help in strengthening and developing the all-round economic, scientific-technical, cultural and other relations among its members.' (Vereshchetin 1977)

West German and U.S. views however have queried whether the constitutional multi-nationality of the Board and the Directorate actually amount to very much in practice (Von Kries 1973: 12-20; Doyle 1969, cited in Vereshchetin 1977). Von Kries, for example, argued that

> 'As actually only the Soviet Union will be in a position to make satellites and rockets available, there thus arises the organization's lasting dependence on the material space policy of its ruling member.' (op.cit.)

Vereshchetin (op.cit.) has attacked this view simply by citing the Director-General's statutory obligation to the multi-national Board in the Intersputnik constitution, which has no more to commend it as an argument than the aprioristic claims of Von Kries and Doyle. Only further research will be able to shed any real light on this problem, but in general the history of multi-national organizations is not one that inspires optimism concerning the lack of dominance of an already dominant nation within their counsels. In terms of current debates over direct broadcast satellites and national independence (Webster 1984), these questions are of profound importance.

Given these varying aspects of the cooperation-competition problem, there is still one of major importance which has not been addressed and to which I shall devote the remainder of this paper. It is the question of the capacity of Soviet television to compete with western television in the rest of the world. It is practically regarded as a platitude that Soviet bloc television is extremely dull, a view rather confirmed by Brezhnev's public attack on it in 1978; and furthermore, the comparison of Intersputnik with Intelsat seems inevitably destined to favor the latter, given its size, its fivefold

superiority in numbers of satellites, its enormous number of national subscribers. If we look at the exchange ratios between Eurovision and Intervidyeniye in 1981, we find that out of 6410 items on offer by Eurovision, Intervidyeniye took 5440. In reverse, Eurovision took just 415 out of 5395 offered by Intervidyeniye (Chausov 1982). Yushkyuvichyus, already cited in Chausov's article above, claims that this is political prejudice, but the automatic assumption in the West would be that the Intervidyeniye items were just much less telegenic.

Of course, the Soviet Union has its own attack on the quality of western television:

> 'What sort of broadcasts await you? An objective chronicle of international events, or misinformation enriched with open slander of real socialism? A stage concert given by real masters of culture, or a miserable film containing a dozen murders and propagandizing the cult of violence? A soccer match between popular teams, or the lurid adventures of some western movie star?' (Terekhov 1983)

Aspects of this critique are not unfamiliar in the West, but the fact remains that however culturally impoverished, the television programs do create and sustain an audience. Can Soviet television do the same? Can Intersputnik's offerings be attractive on the open market?

In order to answer the question at all, we first have to qualify what is meant by the term 'open market'. We have already seen that Intersputnik's rates are highly competitive,

which straightaway determines the de facto possibilities of access to certain kinds of television programming. Also, when we speak of competition on the open market, we must recall that the numerically smaller affluent markets of the West and Japan are not the only markets in existence. Popular as Dallas may be around the world (except in Japan!), its popularity is not necessarily an index of what Third World nations will be in a position to acquire from western television as a whole.

There are five areas in which the specifically cultural competitiveness of Soviet bloc international TV needs to be judged. One is the entree to modernity. Another is the role of Soviet Middle Asia as a model for the Third World. A third is sport on television. A fourth is the presentation of space flights themselves. The fifth is the question of everyday TV fare.

The very fact of Intersputnik's existence, is influential in itself. For many small nations of the Third World, the relatively cheaply provided technology, bringing them into contact with a series of other nations in and out of the Third World, represents a much-needed entree to the neural links of the contemporary world system (and let us not forget the point-to-point communication aspects of the system as well as its television aspects). For those nations already tied to the Soviet bloc, Intersputnik represents an even more

tangible gain, given that both hardware and software may be donated as part of the Soviet aid program. Witness the Laotian Minister of Propaganda, Information and Culture:

> 'It is certain that the Soviet assistance in building the relay station will be regarded as a contribution to the socialist transformation and construction in Laos... In addition, it is regarded as a strengthening of the solidarity and friendship between Laos and the Soviet Union.' 24

Thus the practical and the symbolic utilities of the physical provision of Intersputnik are an important part of its 'message'.

For Soviet policy-makers themselves, the role of Soviet Middle Asia as a model for Third World development is a tirelessly repeated theme, not least in the realm of the development of communications infrastructure. It is not known how widely effective this view is within influential circles in the Third World, but it would be a gross mistake to dismiss it as useless propaganda.

For example, in September 1979 a major conference took place in Tashkent, capital of Soviet Uzbekistan, sponsored by the Soviet UNESCO Commission and the Soviet Journalists' Federation, to respond - according to Soviet sources -

> 'to the desire expressed by many developing countries to get a better idea of the Soviet Union's experience in building up and developing a socialist system of mass information media.' (Lendvai 1981: 196)

Prominent at the meeting was the late Sharaf Rashidov,

alternate member of the CPSU Central Committee and First Secretary of the Uzbekistan Communist Party's central committee, flanked by eleven other members of the Uzbek central committee to give emphasis to the involvement of Uzbek leaders in the theme of the conference. Rashidov stressed the damaging character of 'imperialist domination of the spiritual life of the peoples of Asia, Africa and Latin America', and urged the importance of 'national sovereignty in the sphere of information'. The implication hung in the air that these issues were long solved in Uzbekistan, and that Uzbek experience could be usefully exported in this realm.

In 1983, Tashkent was once again the site of a major international gathering of this kind, this time the fourth intergovernmental council session of the International Program for the Development of Communication (set up by UNESCO to promote New World Information Order policies). Sharaf Rashidov once again opened the meeting. Grants were announced to a series of Third World nations for training purposes in journalism and television, and for hardware acquisition. The deputy foreign minister, Stukalin, spoke of the way the USSR's 'new easy communication tariffs' were saving developing countries 'many millions of dollars' and urged 'other powers with highly developed communication systems to do the same' - a clear reference to the U.S.A.

and to Intelsat. It was also at this gathering that a new program for training fifty journalists a year from the Third World in the Soviet Union was announced, together with a major publications program for scientific and engineering textbooks for Third World communications systems. The development of a series of television specialists trained in the Soviet Union may be a contribution toward future receptivity to Soviet communication models, or it may be much more mixed in its effects. The intention was made abundantly clear by the head of the Soviet delegation, Krasikov, who insisted

> 'It is of course by no mere chance that this current fourth session is being held in Tashkent. The developing countries want to acquaint themselves with our Soviet experience in resolving the problems which they face today. During the years of Soviet power, Uzbekistan has achieved huge success in creating its mass media and in creating communications means, and our guests want to acquaint themselves with these achievements.' [25]

Perhaps the single largest omission in consideration of Soviet television communication is sport. As noted already, the Moscow Olympics were a major galvanizing event for the expansion of TV facilities overseas (as well as internally). Reports from Cuba, Afghanistan and Vietnam indicated feverish activity to try to get Intersputnik facilities on line in time for the Games. From Cuba:

> 'Precisely because we have that earth-station, our people recently were able fully to enjoy the marvelous spectacle

> of the Moscow-80 Olympics, the first held in a socialist country... It was necessary to invest many hours over a long period of time to make this possible... technicians worked an average of 17 hours a day during the 15 days of the event... to insure that our people saw a spectacle that was exceptional for its beauty, color and organization.'

From Afghanistan:

> 'Our people have long wanted to one day watch the Olympic Games like other countries... Fortunately this desire has materialized with the friendly, sincere cooperation of our great friend and neighbor to the North.'

From Vietnam, Hanoi Radio noted that in the last weeks before the Games, the Soviet technicians and their Vietnamese assistants had worked two shifts a day to complete the ground-station, which had originally been scheduled for 1982.[26] Sports coverage in the USSR is very popular - in a forthcoming publication I have analyzed further the interaction between domestic and foreign Soviet communications (Downing 1985) - and the mass appeal of sports coverage is a classic area of neglect by most academic analysts of communications, not least in the USSR. Thus the appeal of Soviet TV must be taken to include this aspect as an important strand in the total picture.

Soviet space coverage on television is also important. Not only are there many more space flights, but the involvement already noted of cosmonauts from other countries was a factor making Soviet bloc television of memorable interest

to the various countries involved. Lt.-Col.Arnaldo Tamayo Mendez, for example, was not only the first Latin American in space, but also the first black person in space. As a child he had worked as a shoe-shine boy, and selling vegetables on the street. And he had been born in Guantanamo! The Vietnamese space pilot was credited with having shot down a B-52 during the Christmas 1972 bombing of Hanoi and Haiphong (though this was vigorously contested by U.S. sources). The date of that flight was picked to coincide with the 90th anniversary of Ho Chi Minh's birth, the 50th anniversary of the Communist Party of Vietnam, and the 35th of Vietnam's declaration of independence. Bertelan Farkas, the Hungarian astronaut, not only conducted a series of scientific experiments involving an anti-viral and anti-cancer protein, but also took up with him a series of Hungarian national dishes (Hungarian cuisine is second only to French in Europe). As already noted, Rakesh Sharma, the Indian cosmonaut, did experiments on yoga under weightless conditions. In other words, there were many aspects of these flights which made them of intense interest, especially to the nations involved. As Granma put it in 1980:

> 'From one end of the island to the other, the Cuban people have had the opportunity of sharing the emotions and tensions resulting from the launching of Soyuz-38, the entrance by Lt.-Col.Arnaldo Tamayo and Col.Yuri Romenko into the orbital station and the performance of a number of important experiments in space, through the clear pictures on television.'27

The sensation of excitement, of belonging to the future, of being associated with a major world power with immense scientific prestige and engineering skill, should not be underestimated. Certainly for Intelsat, amongst its own prestige achievements are listed its coverage of the moonwalk and of the Olympics (Pelton et al 1983: 31). Can Intersputnik be so far behind?

Of course the acid test is whether the USSR can produce anything of the generalized appeal of Dallas. Elegant productions of Chekhov and other earlier masterpieces are well within its scope, but more popular entertainment is another matter. There are signs that the Soviet Union may be moving to discover some new formulas, beyond the World War II theme which is hardly likely to have the same appeal outside the country. In 1984, an enormously popular serial called Tass Is Authorized To State, involving a good deal of adventure and action in a drama centered around the attempt to defend a new African republic from the depredations of the C.I.A., represented one such potential formula (Washington Post, 8/7/84). There is no reason why such formulas should not be developed within the basic boundaries of official ideology, and if they come to be popular on Soviet TV the chances are they may have a much wider appeal elsewhere.

Until then, the competitiveness of Soviet bloc television via Intersputnik is likely to be restricted to sport and to

space spectaculars, including perhaps the first all-woman space crew. Certainly the public events of the West, like coronations and royal weddings, have more fascination than state visits by Soviet bloc dignitaries. Feudalism appears to be more telegenic than socialism... But it would be unwise to assume that Soviet TV, internally or externally, is incapable of becoming competitive in the quite near future.

Thus, reviewing the spectrum of Soviet space activities presented in this paper, we may deduce that the Soviets are not quite the laggards in the competition for world public opinion in this realm that they are often thought to be. Cooperation is so intensely sought after by thinking people in this heavily militarized age that an agency or nation offering it may often benefit greatly.

FOOTNOTES

(1) 1/24/80, cited in Air & Cosmos (Paris) 803 (3/8/80), p. 35.

(2) Rudé Právo (11/16/78), p.1; Joint Publications Research Service microfiche # 72645 0007 (henceforth just the number will be quoted). Air & Cosmos - henceforth A&C - 819 (6/28/80), p.44.

(3) P.Langereux, 'Intercosmos 21: premier satellite russe de collecte de données', A&C 877 (10/17/81), pp.46-47; A&C 948 (4/2/83), p.47.

(4) P.Langereux, 'Dimitru Prunariu, premier cosmonaute roumain' A&C 861 (5/23/81), p.47; also P.Langereux, 'Pham Tuân, premier cosmonaute vietnamien', A&C 822 (8/23/80), pp.44-46; S.Berg, 'La mission de Soyouz-39', A&C 854 (4/4/81), pp.40,48; A&C 945 (3/12/83), p.37.

(5) A&C 1013 (9/8/84), p.63.

(6) P.Langereux, 'Vol spatial record de 185 jours de Popov et Rioumine', A&C 831 (10/25/80), pp.59-63.

(7) A&C 805 (3/22/80), p.42.

(8) Ibid., p.43; P.Langereux, 'Projet franco-soviétique de satellite d'astronomie SIGMA', A&C 970 (10/8/83), pp.41-42.

(9) A&C 997 (7/14/84), p.35.

(10) A&C 948 (4/2/83), p.47; Sovetskaya Rossiya 3/12/83, p.1 (Foreign Broadcast Information Service Daily Reports, Soviet Union, 3/15/83, D2).

(11) A&C 796 (1/19/80), p.35; 939 (1/29/83), p.35; 961 (7/2/83), pp.40,44.

(12) A&C 887 (12/26/81), p.25; P.Langereux, 'Demonstration des Sarsat-Cospas de recherche et sauvetage', A&C 941 (2/12/83), p.41; and 998 (7/21/84), p.27.

(13) Committee on the Peaceful Uses of Outer Space, United Nations, Document A/AC.105/335/Add.2 (4/17/84), p.16.

(14) Ibid.

(15) Romantsov & Chalupsky (1982).

(16) Karachi Morning News, 12/22/80, p.3 (77266 0005).

(17) Keune (1983), pp.74-80.

(18) Romantsov (1981); Montsame Radio, Ulaan-Baator, 5/4/81 (78123 0030).

(19) Bohemia, 11/2/79, pp.66-67 (74865 0024).

(20) Hanoi Radio, 7/14/80 (76119 0020).

(21) ANIS (Kabul), 4/23/80, p.3 (75777 0091); Granma, 8/9/80, p.2 (76423 0028); Hanoi Radio, 7/16/80 (76119 0001).

(22) De Volkskrant, 6/26/82, p.7 (81763 0002); Morgenbladid, 11/6/82, p.13 (82546 0043).

(23) A&C 904 (4/24/82), p.51; P.Langereux, 'Vol "sans cérémonie" pour le premier spationaute français', A&C 905 (4/30/82). p.46; 916 (7/17/82), p.61; P.Langereux, 'La France s'engage dans les vols spatiaux humains', A&C 962 (7/9/83), pp.30-31.

(24) Moscow Radio, 2/9/82 (80243 0001).

(25) Tass, 9/4/83 (FBIS 9/11/83).

(26) Vide n.21.

(27) Vide n.4.

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