

nature

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'Nation shall speak peace unto nation'... at -30 dB

How should television develop in the next ten or twenty years? On the technical side, it goes without saying that most people would like to see every economically feasible development explored: cable television, satellite broadcasts, use of the receiver for access to news, data and computers, new types of television screen and so on. But on the question of programming there would be a variety of answers, as the recent Annan Committee has found in trying to formulate recommendations on Britain's fourth channel. Some want more of the same, some want educational programmes, some argue that more inevitably means worse. There is little doubt, however, that most (and this is not likely to be just a British view) would like more choice if there were some guarantee that this did not mean dilution of resources. One fascinating way in which this could have been achieved by enabling viewers to tune into other countries' programmes is likely to be suppressed before the general public is even aware of the possibilities.

At present, of course, television reception in the hundreds of MHz range is restricted by line of sight. The technology for transmission in the 11.7 to 12.5 GHz band from geostationary satellites is advancing rapidly, however, and there is talk in some countries of satellite broadcasting within fifteen to twenty years. At the same time, pressure is growing, but not in every country, for the allocation of frequencies in the same band to terrestrial services. An internationally agreed decision in 1971 gave priority to satellite broadcasting in choice of channels and this has meant a global gathering at Geneva earlier this year to allocate channels long before the precise needs can be foreseen. And since land-based services will develop well ahead of satellite broadcasting, the latter, now allotted its channels, will find itself in a straitjacket. The 20 MHz bands can certainly be used for radio as well as television, but a large screen digital receiver, which some describe as the television of the future, might well need greater bandwidth. It is not the technological straitjacket, however, which is most disturbing—it is the political constraint that programmes are not to cross frontiers.

As envisaged at present, each broadcasting nation would have its own satellite which would be at liberty to transmit on up to five channels, at 80 MHz spacings. The beams from satellite antennas would have a minimum width of 0.6° (which would more than cover Ireland) and could be elliptical (a beam $1.8^\circ \times 0.7^\circ$ would cover the UK). Every country in Europe, including Luxembourg, the Vatican, Andorra, Monaco, Liechtenstein and San Marino, has been solemnly awarded its five channels; in the case of the

smaller countries (in which there is arguably not quite enough talent to provide five simultaneous programmes and equally arguably adequate line-of-sight to surface transmitters), if they chose to launch a satellite the smallest beam possible would provide neighbouring countries with ample, if accidental exposure. On the other hand countries that wish to use one or more channels for deliberate broadcasting beyond their frontiers with broader-than-necessary beams have to obtain prior agreement from countries they wish to serve. The Scandinavian countries have been able to come to such an agreement, and the Vatican, Tunisia and Saudi Arabia (to serve Islamic countries) have also been allocated 'superbeams'. But other requests were turned down. Ireland wished to cover the UK for the sake of the large Irish population, but the UK claimed they had not had enough notice. And none of the major countries at the meeting seem to have made any public noises about broadcasting general television programmes over a wide area; indeed it is fairly widely known that the Eastern Europeans and France would refuse permission for such an invasion of their domestic life.

The objections are fairly obvious.

- Television could deliver some pretty slick propaganda; indeed it could, but the public on the whole switches propaganda off, and in any case an international channel might sensibly be compiled only of material which is also being shown domestically.
- There are technical problems of channel assignment and of having to direct an antenna at more than one satellite; hardly crippling problems in a technological age.
- The whole thing would only appeal to a tiny minority; well you wouldn't have to buy a multidirectional aerial if you didn't want to, and who is sure that foreign sport, music, entertainment and documentaries would not catch on? Twenty years ago Indian food and Spanish holidays were only for a tiny minority.
- We can already see foreign programmes; yes what 'the authorities' decide to accept on our behalf.

Too many conflicts in the past and too many prejudices in the present are based on the caricatures that most nations have of fellow-nations—caricatures largely fed by editorial control of the media. Here would have been a marvellous opportunity to ensure that at least the next generation could learn a lot more about the world as a whole—and maybe be stimulated to learn more foreign languages. But it has been thrown away. The next round of frequency discussions is probably ten or fifteen years in the future and will be too late. □