



TECHNOLOGY & VIDEO

## Freedom to see

### Some speculations on the future of television

by James Sanderson

Seeing is believing. At least it used to be, in the days before television. Now, as just about anyone will verify, images of fact and fiction are difficult to distinguish when they are distorted by the blue-green tint of electron rays.

To learn about the world, man naturally strives for knowledge through his experiences and senses. Like the mirror, the lens, the telescope, and the microscope, television is an extension of our most cherished and trusted sense – the faculty of sight.

Yet in its present form, television continues to be regarded with suspicion. Paradoxically, it is adored for its capabilities, and reviled for its contents. This is largely and simply because it does not show us the truth. Imagine that mankind had been presented with a brand new pair of powerful binoculars, and then been cautioned: "Ah, but do not look here, or there, or even too closely at yourselves." Television as it is now organized and administered, carries with it conditions of limited sight which its viewers will not accept for very many more years.

The reasons for this are becoming clearer as the medium's technology develops. With it, we have seen and gained knowledge of a tremendously expanded world. Not a true world, to be sure, but expanded, nevertheless. After all, is it not preferable to see a larger and more complex world in caricature, than not to see it at all? Too, everyone hopes television's resolution will ultimately become finer, its images clearer, and, most important, more truthful. And so they shall.

The actual mechanics of television technology are known only to a very few. Hence the extension of a viewer's sight is subject to many things, oddly disparate: marketing structures, network decisions, technical limitations, even the whims of actors and storytellers. Because of their very complexity, television images are an expensive luxury. They must be generated, transmitted, and administered, all at considerable cost. The public is indeed paying these costs now, but indirectly. It seems un-

likely that in its current form, the medium's administration and sources of control will change. But it's easy to see that television's technological form is changing, more rapidly now than ever before. It is, after all, an extremely young medium. Public pressure to use it to see more of the world, to see more of people as they really are will increasingly govern its future.

Consider some recent innovations: increases in the wholesale origination of images – private, community, and cable networks; refinements in the technology of transmission – cable capacities, satellite channels, and fibre optics; the proliferation of private image recording devices – video cassettes and cameras; and the miniaturization of almost all system components.

#### A matter of record

These developments are no longer subjects of speculation among executives in the film and television business. They are changes that have already become a matter of record. Witness the growth of associated companies: Warner Video, CIC, Rank, H.B.O., Disney Video, and 20th Century Fox's wholly owned subsidiary, Magnetic Video. Columbia's cassette marketing catalogue alone offers 3,000 feature titles, and over 10,000 television programs. Assessments of the public's acceptance of the new hardware are more difficult to infer, but there is no doubt about the general direction. Cassette recorders in the United Kingdom, for example, are generally estimated at 7% to 10% of all television owners, with a predicted annual growth rate as high as 20-25% this year. Should these trends continue, alongside comparable growth in hardware research and development, a tremendous explosion in the public use and control of television seems imminent. New technology points directly toward a freer, user-to-user communications system which is far more extraordinary than the two or three thousand pay and cable TV channels being planned and predicted for the late 1980's.

A simple model of a user-to-user system is one in which the public has maximum access to all aspects of origination and transmission and pays for

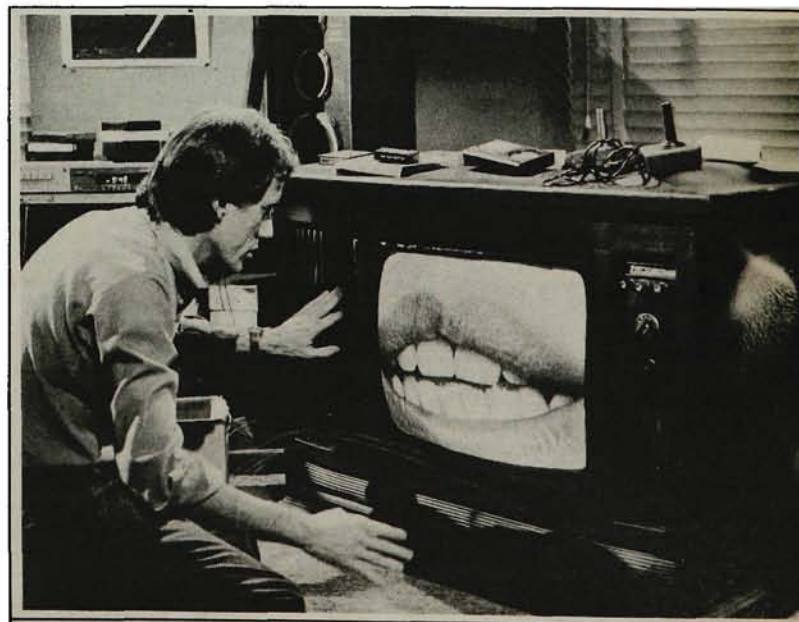
them directly, as we do now for telephone service.

The concept of the video telephone is by no means new. As early as the 1930's, an experimental coaxial system was built by the German Post office between Leipzig, Berlin, Hamburg, and Nürnberg. By 1965, other similar networks had been tried in Italy, Japan, and the Soviet Union. Between 1965 and 1970, Atlantic Telephone and Telegraph established a corporate 'Picturephone' system between subscriber offices in New York, Chicago, and Pittsburgh. Yet all of these attempts suffered from a common plague – inadequate technology. The current Bell version of the Picturephone (the Model II), is a 13 x 14 centimetre screen, displaying 250 lines per picture at 30 frames per second with interlaced scanning. To send, its camera focus settings are limited to two: one or three feet from the lens. It requires a transmission bandwidth demand equal to some 300 long-distance phone calls. As a public communications system, it is limited, little-known, and most impor-

tant, prohibitively expensive at \$150-\$200/hour. Still, communications technology has, in related areas, come a long way since this system was introduced. The innovations most likely to improve its cost-effectiveness would seem to be in the realms of computerized data encoding, (where audio, visual and operating data are converted into digital pulses), and the increased capabilities of fibre optical cables. A wide range of other technological developments will have an impact, such as the effect of expanded payloads on satellite capacities, but suffice it to say that communications possibilities have greatly changed in the last five years. And the idea of the video telephone has been with us long enough for its refinement to have already begun. Just suppose it should become available at a commonly affordable price. The public at large will demand it immediately, so strong is man's love of his extended sight.

Consider a device that would enable

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• The voracious hunger of the image as shown in David Cronenberg's *Videodrome*

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# Globalreach

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entire five-year period, government expenditures through the fund should amount to \$336 million.

As you can see, we are not taking a protectionist approach to our domestic program production industry. Indeed, we regard protectionism as weakening. Instead, we have taken a positive approach which will permit us to foster, nurture and support our program production industry as it matures and goes out as an equal into the world.

The categories of programming which would be eligible for assistance are those in which the Canadian broadcasting industry does not provide a significant amount of Canadian programming - the drama, variety and children's programming categories. We anticipate that, with this significant injection of additional funding, Canadians will soon be able to receive a solid core of attractive Canadian programming in every program category and in both official languages.

Given the skill and creative ingenuity our production industry has sown in making programs on very slender resources, we are confident that, with this assistance, it will be able to win a significant share of the Canadian viewing audience. We also believe that Canadian programming will win a rising share of the rapidly growing foreign market for television programming. Proof of the international saleability of Canadian programs is provided by the recent success of Canadian feature films in the U.S. market, where box office receipts jumped from \$46 million in 1980-81 to a record \$200 million in 1981-82.

## The new international environment

These, then, are the three major elements of our broadcasting strategy for Canada - expanding the viewing choice of Canadians, freeing up satellite dishes and strengthening the Canadian broadcast and program production industries. In the new environment, we believe that greater choice and greater competitive capacity will be, not only our best strategies, but the only strategies which will enable us to maintain a vital Canadian culture and a viable broadcasting economy. In our view, they represent the last, best chance for an identifiably Canadian broadcasting system - a system that is both distinctively Canadian and open to the world.

Most countries around the world will, if they have not begun already, soon be undertaking an exercise similar to ours. But we will all be making a mistake if we focus only on the domestic aspects of the new broadcasting environment. That environment is global in scope; and, as the new technologies shrink the world, every aspect of a national strategy will have important international implications.

In short, relationships between states may well become as significant in the new environment as any domestic adaptation of local broadcasting systems to the reality of satellite television. Fortunately, there are many precedents for



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such international co-operation in the communications area. For example, that international resource, the radio frequency spectrum, like the air we breathe, does not recognize or respect national boundaries. The sophisticated international forum provided by the ITU, and the various world and regional administrative radio conferences, have shown that countries with very disparate interests can work out pragmatic and mutually acceptable compromises in the communications area. In addition, officials from the government of Canada are in almost daily contact with the FCC to discuss spectrum issues.

In the age of satellite television, the need for international co-operation on communications issues will be even greater. In an era when satellite signals overleap not just national boundaries but entire continents, the stakes will include national cultural identities and the viability of national broadcasting systems.

Our broadcasting strategy for Canada calls for the negotiation of reciprocal arrangements with many countries, and especially the United States. Already Canadian government officials have discussed the strategy with members of the U.S. government, and we expect those discussions to continue in the coming months.

You will have noticed in our policies for cable and earth station licensing that we are very concerned to ensure that the rights of the originators of satellite signals - foreign or domestic - are protected. We also expect that, when Canada agrees to carry a foreign satellite

programming service, the country where that service originated will reciprocate with a similar arrangement for our own Canadian programming services. We are also eager to enter into co-production arrangements with foreign production companies, not just in America, but in France, Japan, West Germany, Britain and other countries around the world. Again, the key to such arrangements will be a genuine commitment to reciprocity.

In closing, I should like to remind you that Canada and the United States have long been recognized as having the longest undefended border in the world. A Canadian writer once commented that the reason the border was undefended was quite simple: it was essentially undefendable. I prefer the more obvious explanation - that our countries have a long and proud history of mutual trust, shared perceptions and a willingness to co-operate.

However, we should not forget that, in the new broadcasting environment, our common boundary, as well as the frontiers of every country in the world, have become undefendable. Only a shared recognition of our common vulnerability, a mutual respect for the distinctiveness of our paths to cultural development, and a strong commitment to reciprocity, will carry us through the next few years. I am confident that we will succeed. ●

## Freedom to see

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anyone, anywhere to transmit any image he or she wished, either to a specific receiver, or to the public at large. Probably a refined version of the common video camera, a 'personal transceiver' would contain added transmission facilities and a telephone adapter or specified satellite frequency. It could be left on with a static image (a visual 'dial tone'), or simply turned off. Ideally, it

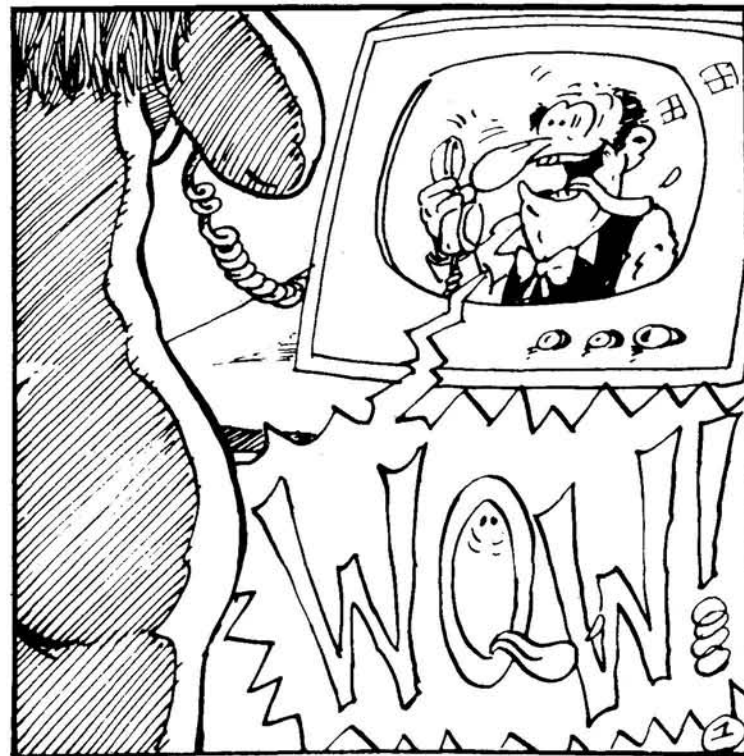
would include a small monitor and a readout to register the number of viewers tuning in. Should transceivers of this, or a similar nature be manufactured and distributed widely, a number of startling changes in the basic uses of television will occur.

### Freedom to see

First and foremost, there will be great and widespread excitement with a new-found, almost unlimited (at least, much less limited), freedom to 'see'. To grasp this idea more firmly, imagine a TV guide resembling the white pages of the telephone directory; a visual service paid for *directly* by those who use it. A clue to the size such a system might quickly reach is also provided by the telephone system. There are well over 150 million telephone numbers in service in North America in 1983! Given such a wide choice of channels, or personal frequencies, it seems likely that user classifications will appear; for example, 'Personal', 'Government', 'Information', and 'Network'.

Still, at this stage, these refinements are arbitrary and less important than the public's knowledge and acceptance of user-to-user TV. Today, it is abundantly clear that television is overcontrolled by a relative few. Our desire for more direct and truthful knowledge will soon change this unacceptable imbalance. Contemplated philosophically, future increases in our powers of sight are not necessarily frightening or Orwellian. Viewers will just be able to see more of the world as it really is, rather than how other men feel it is, or should be.

With user-to-user access, real joy, sorrow, birth, death, murder, true love, and romance will be readily available to those who wish to 'wander' through the personal broadcasts and test patterns of Toronto, St. Louis, Montreal, Medicine Hat, or New York. It is an unsettling idea to be sure - technological developments that expose more of the reality of the earth and its inhabitants always are. But look forward to it, for one day, not far in the future, the strange miracle of Zworykin's ray will enable us to experience a visual freedom that no other people in history have ever known. ●



## Dishing it out

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makers that it's time to rethink their new broadcasting strategy. "I don't believe the Canadian government will sit idly by and let U.S. DBS operators sell programming in Canada," says Northstar's Jarman.

In the final quarter of the twentieth century, the survivalists of the struggling, fragmented Canadian film business are about to see their business turn into a "industry." It will happen because silver screens and movie houses are being replaced at an ever-increasing clip by new hardware - the TV set in the living room, and by a flood of new distribution systems.

The so-called "video revolution" will not of course stop here, but the brand-new ability to get a film to an audience through so many new outlets should be cause enough for optimism about the future of cinema - whatever its form - in Canada. ●