The Imperial Image:
Notes on technology as ideology

by Michael Dorland

"Technology is the metaphysics of the 20th century." - Ernst Jünger

"No mention is made of the fact that the basis on which technology acquires power over society is the power of those whose economic hold over society is greatest. A technological rationale is the rationale of domination itself. It is the coercive nature of society alienated from itself. Automobiles, bombs and movies keep the whole thing together until their leveling element shows its strength in the very wrong which it furthered. It has made the technology of the culture industry no more than the achievement of standardization..."

- Max Horkheimer & T.W. Adorno

The pièce de résistance in the exhibits room at the recent (Nov. 27-Dec. 2) Convergence forum on the new video/film technology in Montreal was the Sony/NHK-developed High Definition Television System (HDTV). Before this array of prototype cameras, VTRs, switchers and display devices, crowds of curious onlookers gathered in awed silence, gaping at the imperial image of the future front-projected onto a curved screen. If the more venturesome on-lookers were subsequently eager to ask the Man from Sony such sensible consumer-questions as "How much does it cost?", "Where can I get one?" and "When will it be available?", the fact that this is a system still-in-development - and so such questions as yet do not have answers, other than at present the HDTV costs in the vicinity of $1 million - offered a unique perspective on the entire development process of imaging systems, and the cultural implications.

On one level, the HDTV appears simply like a more technically advanced type of television, employing 1125 scanning lines instead of the current North American broadcast standard of 525 lines. But such a definition is misleading. Writing in "The SMPTE Journal," February 1984, Richard Green and Dwight Morse III offer a definition of HDTV that is far more suggestive.

"HDTV is a new medium. It is not exactly television or film. It is much better than conventional television and as 120th Century Fox TV producer Glen Larson says, 'it is, for the first time, a quality alternative to 35mm film.' The entertainment impact and feeling of realism which results from large, sharp, wide-screen pictures accompanied by high-quality sound is a new experience. The challenge today for those in the technical and production communities is to bring to the public this new innovative technology."

The key elements in this definition are worth repeating:

- better than conventional TV
- a first-time quality alternative to 35mm film
- that offers a new experience in terms of entertainment impact and greater realism
- and which it is the task of the technical and production communities to bring to the public.

What makes these statements so revealing is that they uncover the inner workings of an ideological complex: they state a defining set of beliefs about the relationships between media and experience, between technology and entertainment, and ultimately between types of human communities (producers and consumers), all of which can be described as varieties of content. For what such an ideological complex does not state, and what precisely makes it ideological, is its own formal assumption; namely, the underlying determinant of corporate organization whose evolution can be grasped in one compelling word: standardization.

To quote Charles Darwin's grim technological credo, as the Convergence program did in its single yet telling literary reference: "Technology evolves, language adapts."

And so what was most interesting about the HDTV was less the thing itself than the mammoth corporate battle going on behind-the-scenes over the production and distribution standards that have to be agreed upon before HDTV can be produced, marketed, and only then, within those parameters, used. At issue in this global battle between the Eastern empire of the image and the Western, largely American, equivalent is the development of universal or worldwide production standards, particularly in studio production, that would permit increased international exchange of programs and commonality of production equipment; that is, ever greater standardization.

Developed 12 years ago by NHK (the public-sector Japan Broadcasting Corp.) the HDTV system now closely involves such Japanese corporate giants as Sony, Matsushita (Panasonic) and Ikegami, and some observers fear that these conglomerates will within the next year attempt to impose their own production standards without waiting to come to agreement with their U.S. manufacturing rivals. NHK director of programming Mikio Suzuki politely steered away from this question when it was raised towards the end of the conference.

Once the standard is agreed upon by the manufacturers involved, says Sony's Jacques Proulx, suggesting that this was
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nobody's business but the manufacturers themselves, "production and marketing of HDTV will happen very slowly, if at all."

The nature of media - not to use a more apt metaphysical word like essence but rather a more apt metaphysical word like formation was deceptively simple: the new form took the old as its content. "If the history of modern media can be thoroughly confused, then Maxwell's equation, 'the absorption of film by black and white and TV, Addicott noted, for example, that black-and-white TV's aspect ratio of 4:3 was opted for, solely 'because films were going to be shown.'"

Conceptually the development process from one medium to the next passed through standardization, a similar conforming process recurs internally. Addicott noted it "normalization" or the more or less arbitrary creation of systemic subsets that are infinitesimally quantifiable or fragmentable according to a dominant ideology. For instance, the colour on a colour television is not a property of anything shown: it is a conformist construct that transcends the limitations of mainstream TV programming. But, at the panel on Video Music: Where Do We Go From Here?, on the morning of day two, Warner Bros. Records vice-president/video Jo Bergman traced a brief history of the music video since the corporately "dangerous and undesirable but popular" rock 'n roll explosion of the mid-60s to today's prevalence of "the music video style in advertising, movies, and TV series." Observing that "the rock video has plundered the history of movies and commercials," Bergman noted the rise of rock-video consumerism, largely through the vehicle of MTV whose recent buy-out of Ted Turner's music video channel and upcoming launch of a second channel she foreseen Bergman also noted that the close correlation between commercialism and TV. And how it was subsequently conformed with mainstream TV as an episodic of St. Elsewhere. She also showed the Randy Newman video for "I Love LA" and how it was recut and recast to become an advert for the Los Angeles TV station KABC. (It would turn up in a third version as a 1984 Clive-winning commercial in the apparel category for Nike.) Bergman's conclusion: "Anything can be made to sell anything.""

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The high definition television image: technology as the ultimate invasion of the body-snatchers

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Animation and the computer

It is becoming more and more evident that film is being overtaken by video. The products are developing so fast that you'll even have trouble these days buying Super 8 film cameras in some photo stores in Montreal which used to specialize in supplying this equipment.

It seems that supply and demand has created a market centering on home video units, and this demand is pushing some film equipment into extinction.

The overall process was examined in detail at Convergence, the recent international conference on film and video held in Montreal, featuring 85 guest-speakers from all over the world, and especially from the States. There were sessions on production techniques in electronic cinema-teography, computer-assisted editing, music-video, and computer-generated imagery, to name only a few categories.

The section on animation and computer-generated imagery showed a wide range of possibilities. I saw a series of very short videos created by individual students at an animation workshop at UCLA which were rather rough because they were made on Apple or Atari computers that had been donated to the school. But then the "big guys" from Los Angeles showed their stuff. If you work with expensive Cray computers like they do, it's incredible what you can do with the images. They give the computer a three-dimension description of a scene, and then program the computer, specifying the motion required. The computer can do the in-between drawings.

They can do texture-mapping which adds any texture you want to an object or bump-mapping to give the appearance of detail and depth. Ray-tracing simulates the reflection of light rays, and they can attenuate the contrast to create a fog effect.

A cartoon-type character can even be given motion blur to make it seem more real as it runs out of frame.

John Lasseter was there from Lucasfilm, a company created by George Lucas of Star Wars. "The Empire Strikes Back and Return of the Jedi fame."

Lasseter, who previously worked with Walt Disney Studios, showed scenes with computer-generated cartoon characters. He showed the step-by-step process of making these figures come to life, including how the computer adds shadows and motion blur to give the drawing more spirit.

Yet it quickly became clear that if you wanted to do any type of sophisticated computer animated computer animation, you'd need at least $125,000.

One of the more exciting presentations, from a technical point-of-view, was the Edidroid, a creation by Lucasfilms to facilitate the arduous process of editing films.

The layout of the machine looks like something out of 2001: A Space Odyssey. The console is a type of wrap-around, large desk featuring three screens. On the left is a preview screen, then a main screen in the middle, and on the right is a screen to log information, complete with key pad to punch in data.

The Edidroid doesn't wear down the film as you edit. All the film information is transferred to video discs. The editor can locate any frame within 30 minutes of material in less than two seconds.

Several versions of a sequence can be made and then saved on the disc, giving the editor time to think about which version he prefers. He can also preview such effects as dissolves. Although the discs can't be re-used like tape, they are said to make good wall-plaques or serving trays after they have fulfilled their original purpose.

For Mary Lucier, who showed two tapes Ohio to Giverny: Memories of Life at an Artist's Garden which contrasted natural and technological environments, the question was: "Is there any way the technology can relate to the artist's work?" Since the mid-'70s she found she had moved from destructive attempts "burning out video tubes" at pushing the technology to "image production," its limits to mediations on "the two levels of technological environment--where it had brought us to, and where it was going." She said she was finding a profound affinity in her videowork with the problems of late 19th-century American painting particularly as it came to terms with the new industrial-technological context.

That new environment, particularly in the condition of the nature of the human as an extension of the machine, was the subject of Bill Viola's The Anathem, a despairing celebration of the image as the invasion of the body-sentinels. An impassioned denunciation of technological alienation, Viola came down firmly on the side of the artistic project, reaffirming a vital commitment to art despite the growing number of "detached and disenfranchised artist," despite the stifling cultural bureaucracies, despite collective blockage of the imagination.

For Dan Reyes, who showed four stunning excerpts from tapes entitled Archangel, Sabatha, Sabatha and several seconds from a shortened untitled work-in-progress, his video work is an exploration of possibility and "a vision of the sacred." But perhaps what gives Reyes' work such extraordinary eloquence is his sense, as he put it, "of living in which the common defines the final age." And even so seeking for the Rilkean "hand that holds us up falling."
the composition of the panel "a little disturbing. I find it disturbing that there's only one Canadian and only one woman." Murray pointed to different Canadian traditions in video art, particularly in the work of women video artists and community-based use of video. Implicit in Murray's criticism was a political critique of the American artists' discourse, but as the lone Canadian on the panel he was perhaps too civil to actually make it explicit.

Finally New Yorker Mitchell Kriegman showed a humorous tape titled "My Neighborhood" that wasn't particularly funny, and described himself as "kind of a connoisseur of technology: I like the different technologies for their limitations, and what I do with them is tell a story that is human and anti-technological."

1984 is a one-minute commercial for Apple Computers directed by filmmaker Ridley Scott (Alen, Blade-runner) that would win a 1984 Clio for cinema and direction in the U.S. selection. It was aired at the 1984 Superbowl last January and screened at Convergence along with other Clio-winning ads.

In a Metropolis-like setting, hordes of gargantuan, shaven-headed male zombies shuffle into a huge room whose far wall is a giant screen on which a bespectacled intellectual intones about 'one will, one mind, one resolve in the garden of pure ideology.' As the zombies stream into the room, a blonde woman dressed in a tight white T-shirt and red running shorts dashes by, chased by black-clad and faceless security guards. She races across the room, carrying a sledgehammer that, discus-like, she hurlas into the screen which exploded in a great burst of light that causes all the zombies to stir slightly from their torpor.

Now a female arm uphold an Apple II personal computer while voice-over and graphics explain that, as of January 3, 1984, with the introduction of the Apple II, '1984 won't be anything like 1984.'

A second commercial, Canadian this time, that also screened at Convergence was produced for Bell Canada by Montreal ad-agency Cossette Communications.

In a jungle setting the foreground shows a Greek temple; behind the temple stands a modern aluminum skyscraper. Among the temple pillars, a dinosaur is about to topple the entire structure. Temple and skyscraper come crashing down as the voice-over reminds one that the business world has scarcely evolved since the beginning of time. The image indicates what kind of world that is: a jungle of savage beasts.

Cut to a gigantic telephone against computer-animated background signifying the pulsations of instant communications. But now, says the voice-over, with Telemarketing the possibilities of realizing profits on a scale never before imaginable is here at last.

Both commercials are gems of "pure ideology": self-decriptions of the ideology of the technological age.

"We are living on the edge of precipice whose bottom we cannot see." Speaking was Peter Sainsbury, head of production for the British Film Institute who, as a non-commercial film producer, was acting as a self-described "outsider looking in."

Day four and the five-man international panel on distribution and exhibition in the new age was grappling with the implications of current media systems in development on traditional delivery mechanisms. Australian David Field, head of marketing for the private sector entertainment group PBL Productions, had rapidly sketched the structure of the Australia-New Zealand markets, noting that, to everyone's surprise, Australian TV penetration was the highest in the world. If throughout Oceania, VCR penetration reaches 80% levels, the numbers are still small, Field noted, quickly referring to Southeast Asian markets like Singapore and Hong Kong. Because of pricing difficulties, there are problems selling into Asia. Field said and "the major market is still Australia."

For Mikio Suzuki, head of programming for Japan's public sector NHK, both the financial situation of the public service companies and changing attitudes of viewers, particularly among the young "fed up with conventional media," are a cause for concern as Japanese television, which recently launched the world's first direct broadcast satellite-expands throughout Asia. As increasing numbers of Asian territories, like Korea, Singapore, develop their own software-making capability, Suzuki envisages a growing "Oriental market", especially in the areas of cartoons and drama. Whether programming would remain Oriental or turn into another showcase for the West, Suzuki did not know: "No matter how much programming there is, it's not enough."

Turning to Europe, Peter Sainsbury found "the British in a peculiar position in terms of media, very involved in the EEC on one hand, but also dominated by the fact of a common language with the U.S." With the distribution of British-made theatrical features "more or less dead" as "national" attitudes of viewers, particularly among the young "fed up with conventional media," are a cause for concern as Japanese television, which recently launched the world's first direct broadcast satellite-expands throughout Asia. As increasing numbers of Asian territories, like Korea, Singapore, develop their own software-making capability, Suzuki envisages a growing "Oriental market", especially in the areas of cartoons and drama. Whether programming would remain Oriental or turn into another showcase for the West, Suzuki did not know: "No matter how much programming there is, it's not enough."

"The BBC and independent television companies are developing DBS in the expectation of a powerful programming expanse," Field said. "Within the next five years we'll see a whole range of different technologies come into place..." Canadian Broadcasting Corp.'s CBC Enterprises general manager Paul Cadieux described the evolution of CBC's international sales, particularly in the narrower specialty programming on U.S. cable and in Europe. Both in the U.S. and in the U.K. Cadieux said, CBC was finding more and more of "sell-through market. People are acquiring video systems, not just renting them like features. Ballets, operas are treated..."
much like recordings: they're something people want to keep to watch over and over.

From that brief overview of five international markets, the panellists attempted to examine what it all meant. David Field began with the Australian quota system in broadcasting and the importance of national television. A detailed discussion of the Australian quota system in television broadcasting and the importance of national television. A detailed discussion of the Australian quota system in television broadcasting and the importance of national television. A detailed discussion of the Australian quota system in television broadcasting and the importance of national television. A detailed discussion of the Australian quota system in television broadcasting and the importance of national television.

The real technological revolution


The following is an excerpt from his presentation at the American Film Institute's National Video Festival a few years ago. I saw a demonstration by a guy who developed a software program for computer-image processor to make material shot on videotape and shown on television look like it was shot on film and shown on television. He was very proud of this. It reprocessed the video signal so the contrast ratio, cold response, grain structure, etc. all seemed to be transformed to video. His market, explained, was to pacify dissatisfied and nervous art directors and their clients who didn't like the fact that their new commercials didn't "look" the way commercials are supposed to look.

The art world is slowly responding to a lot of these changes, but there are even bigger problems. As artists working in the late 20th century, not only do we find ourselves detached and disenfranchised from a society that doesn't seem to think it has a place or a use for a true artist experience. that thinks that art is painting some funny called "artists" did 100 years ago in Paris and Italy before that, but particularly we are concerned about the video artists, have found themselves in a deeper "Twilight Zone".

Now, things are changing. After having been ignored by the institutions, industry, and therefore the general population, we find ourselves now receiving new attention and new interest because we do video. We are capital "V" and we get invited to conferences like this. At a conference on technological change, I get a little unsettled to talk about technology in isolation of its use and application. It makes me think of the Pentang press-releases when they describe the capabilities of various missiles, tanks, and bombs without any acknowledgment of what it's like to be burned, mauled, or irradiated.

For me, the larger question that must be asked at a gathering like this is to what purpose and ends are we channelling all these creative heights? It's behind the design, production, and use of these tools.

As we watch the film industry frantically trying to "filmify" video so they will be more comfortable using it and don't "waste" any time converting over to it, when we watch the day approaching when electronic cinema will arrive and we can see the future of the future, Field said. "Unless you have something successful in the home market, it won't succeed overseas," and he used the analogy of the difference between a gold nugget and a gold plate.

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For Mikio Suzuki, the split between mass-media and mini-media had created a feeling of detachment from mass-media that, as a member of a large public-sector organization, he found particularly alarming.

"But nobody knows the future of exhibition and distribution. In 1955 the production standard for HDTV will be settled between Japan and the U.S. and once production standards are set-up, the next step will be very quick and accelerated."

The point of the new technology is that it's not only for TV. Off-station distribution will be much easier and a new era of distribution will be on-hand in three years time. NHK, for example, has started on the future distribution of HDTV using small theatre chains. HDTV too, by connecting the airwaves with printing, could have a "revolutionary impact" on print-forms that "within a decade could create a wholly new phase."

Suzuki also felt that changes in quality and software had created "a new faith." Background video is something completely different. Perhaps the new generation, fed up with conventional software, is slowly trying out new phases of perception.

For Sainsbury the "technological future appears to be inscrutable." Despite the collapse of the British cinema market, he could see three levels of continuing film production: the studio-based, location-based. U.S. financed commercial feature; a vulnerable low-budget level of independent film production, and television-supported independent cinema or TV essentially a form of highly-developed TV drama in the traditional U.K. mentality.

With the British government phasing itself out of supporting the small amount of indigenous filmmaking, the three levels would likely drop to two: commercial U.S. or U.K. filmmaking and a subsidized cinematheque that would include BFI-type production and more modest, low-budget films made through disguised subsidies like Channel Four (funded by a tax on the independent networks). In the ease of the BFI, the funding comes from the cultural sector as opposed to the business sector, and if it is a type of filmmaking that presents strong aesthetic arguments for the continued use of film, it is also very artistic and very vulnerable. Present uses of video, he said, are mainly in electronic news gathering, advertising and music.

Overall, Sainsbury was "not too happy about the ways the new technology is developing: the government and vested-interest views are very crude and simplistic."

Among apparent changes, the BBC is "more and more of a dinosaur. There are serious imbalances in independent production, and no sympathy from the government."

"It's a very uneven, drastic situation and for the foreseeable future, continued uncertainty, continued setbacks, especially financial, and continued U.S. domination."

For Cadieux the new technology had in the past decade completely changed marketing. Transfer to tape allowed selling to broadcast markets around the world and an increase in "more specialized product for cheaper dollars.""What we're looking for is how to universalize certain idealistic standards. We want Canada to open up to other markets. We have to produce and we have to defend our ability to produce, and we have to fight to convince advertisers to raise their standards."

"So I would encourage people to go further, to let themselves be educated, to learn what's new — because when it comes to the new, the advertising agencies are the first to be interested."

"And I would conclude that there is a convergence happening — between ideas, producers and technicians."

"Because the war is going to be fought on television, and in the name of the power to inform."

"Jean Jacques Stelelsky, vice-president and creative director, Cassette Communications, Montreal."

"To me new technology is not the starting point. To me the starting point is the creative concept. The technologies are used to develop the creative concepts."

"We creative people have two minds: how to put video technology into film to express the creative concept better; the other mind is more conservative: it has a deep attachment and affinity to film."

"Koh Okada, vice-president. First Creative Group, Tokyo. Both men were speaking on the panel on Advertising and the New Technology, day four."

On the morning of day five, the final day, a seven-member panel met around the ambitious topic of the Global Overview on the film/video convergence. Some highlights:

Moderator and U.S. cinematographer Harry Mathias:

"World broadcasting groups, the CCIR, the world-regulating congress, the SMPTE, the EBU have called for one world, high-definition production standard, to originate under the basis of one universal standard or from national standards."

A world-wide production standard makes a lot of sense; it was such a standard that led to 35mm film, for example. Many observers feel the NHK high-definition standard will be adopted, though other standards are possible."

Clark Higgins, U.S. electronic production designer:

"What is being achieved is better, more efficient ways to create production out of sound and images (Francis Ford Coppola's electronic cinema is more efficient, more work effective)."

Mikio Suzuki, NHK, Japan:

"I recall the days when EFF was first introduced in 1975: for the first time it was possible to make a 50-min., documentary with a Sony cassette prototype that then cost $1 million. My boss couldn't understand what a small portable camera and tape could do."

Peter Sainsbury, BFI, London:

"Broadcasting developed the construction of advertising messages. Through this mechanism broadcasting created an institutional and consensual language."

Filmmaking in England today is seen as a rear-guard action against the broadcast institutions' non-contradictory language. There is little point in discussing convergence unless we take on the political that the technology is totally controlled by these same institutions."

Conclusions?

"There's nothing to summarize," says the BFI's Sainsbury. "We've opened up a lot of questions and I can only hope they stay open for a long time."

"We live in a very challenging time," says NHK's Suzuki.

- Mikio Suzuki, NHK, Japan: