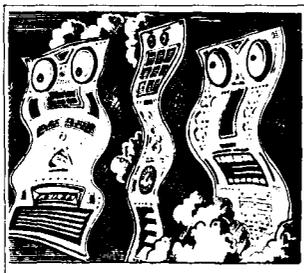# "New Tech" & the Soul of Man

By O. L. Smaryl

"**N**EW TECHNOLOGY" is the product of the imagination of a select band of physicists and engineers. The name must be familiar by now, but what does it stand for? Computers? robots? information processing? I would define it as a technique which is born of the labours of modern electronics and optics, and has brought about radically new relations between computers, communications, and the control of machines. A more direct definition would say that it is concerned with a new type of high-level automation.

An example. Automation of the old type may be represented by a lawn-mower to which all the information about a lawn (e.g. where the trees are) is given; it may then cut the lawn, moving in a predetermined manner. Such a machine could not "think": it would mow down everything in its path, including its master.

An automatic lawn-mower using "New Technology" would be equipped with sensors and an electronic brain; it could make decisions on the spot. If, for example, the croquet set was left out on the lawn, the mower could gently push the various pieces into the area already cut, and then carry on with the job. This intelligent machine might also be endowed with social graces. If another lawn-mower came within hearing distance, it could slow down and say in synthesised speech: "Nice to see you. And have those old wheels been oiled today? . . ."

"New Technology" could perform this kind of feat because of its amazing speed, vast storage capacity, minute power consumption, and incredibly low price. This is not to say that other technologies have been stagnant. A quarter-of-a-century has brought major changes in the design of aeroplanes, for example, but not comparable achievements. According to an article written a few years ago:[1]

> ". . . if the aircraft industry evolved as spectacularly as the computer industry over the past 25 years, a Boeing 767 would cost \$500 today, and it would circle the globe in twenty minutes on five gallons of fuel."

What will be the consequences of the *ménage à trois* of computers, communications, and control? There is a danger in making guesses, so I shall modestly rely on guide-lines that may lead to what scientists call "a first order approximation". May I suggest that the best guide is Marxism? Marxism has the great virtue of setting the scene in terms of a struggle between the progressives and the reactionaries, between the good guys and the bad guys. At the same time, the model it provides is far from static. In contrast to standard Hollywood movies, in Marxist historiography it is quite possible for certain actors to start off as apparent heroes and finish the course as died-in-the-wood villains. Take the bourgeoisie. They were the good guys when they fought feudal landlords, but as soon as they started to oppress the working class they became the bad guys. Such metamorphoses can take place within a very short time; One may be "in" in February, and "out" in October.

I have a penchant for explanations in terms of a struggle between adversaries; I also find attractive the holy trinity of thesis, antithesis, and synthesis. But those are not the only reasons for my partiality for Marxist theory. I really have no option. What other theory would predict such unequivocal relationships between the state of technology and the structure of society?

And who else besides Karl Marx (in his *Preface to the Critique of Political Economy*, Berlin, 1859) would so categorically state that:

> "At a certain stage of their development the material productive forces of society come in conflict with the existing relations of production. . . . With the change of the economic foundation the entire immense superstructure is more or less rapidly transformed."

And, a little further on:

> "No social order ever perishes before all the productive forces for which there is room in it have developed; and new conditions of their existence have matured in the womb of the old society itself."

IF THE GATES of Highgate Cemetery suddenly burst open and Karl Marx rose from his ashes, what would he see? New higher relations of production maturing in the womb of the present society and shaking the old order to its roots. The conflict has begun, and the battle lines are clearly drawn: the antagonists are the working class on one side, and those with a vested interest in "New Technology" on the other. It is no exaggeration to say that proletarians are fighting for their working lives, and our natural sympathies should be with the workers of the world. If some of us are worried about trends of relatively minor importance like the impending extinction of the whale, how much more should we worry about the disapppearance of the working class? But concern, sympathy, compassion are of little avail in a battle in which the forces of history are resolutely engaged against the forces of sentiment. *Objectively*, the working class is reactionary: and how could mere rhetoric do away with that simple fact? The working class will disappear because the type of operations performed

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[1] H. D. Toong and A. Gupta, "Personal Computers", *Scientific American* (December 1982).

nowadays by people in various factories will be done better and more cheaply by machines. In this coming age of super-automation, all work which involves low-level judgments will be unnecessary—and unavailable.

Will there, then, still be a class structure? The Marxist answer to that question is again unequivocal. Classes must exist as long as different people have different relations to "the means of production". So there will be an upper class and a lower class; a ruling class whose members will have access to these means, and a class of underdogs who will neither be able to produce anything saleable nor able to sell their labour on the open market.

Will the theory of "surplus value" still stand? Yes, it will; there will be an excess of production, consumed mostly by the parasitic class. However, owing to the changed relations of unfettered production, the parasitic class will be the lower class—kept in idle luxury by the upper class.

Will there be any radical changes in the ways and means of production? I think there will be, brought about by three circumstances: first, the low price of computers; secondly, their small size; and thirdly, the vast transmission capacity of optical fibres.[2] All three point towards decentralisation. If computers are cheap and small enough, then one can set up a business in the spare bedroom and use optical fibres (avail-

able in about a decade's time, I presume) to talk to other computers in the big wide world out there.

Mass production will still be the concern of large conglomerates, but they will become ponderous, unwieldy giants, conservative in outlook, unable and unwilling to adapt swiftly. Major innovations will come mainly from small independent groups of highly creative individuals. Why should this be so? I think the question should be turned round. Why should creative people work for large companies? At present the great corporations offer better facilities and better salaries, but require in exchange, like Mephistopheles from Faust, their souls. Why should innovative engineers compromise anything in the future when they can look forward to much fun (to a good software engineer, a computer is like a *genie* from the *Arabian Nights*) and to inordinate profits at a small risk—and still keep body and soul for themselves?

Dissident Spectre

THE *"Catch 22" of Soviet electronics is: "Computer, Yes; Free Information, No."* The situation is one that may give comfort to the guardians of secrecy in the Kremlin. But it is one that is alarming members of the scientific and academic élite, who are saying that unless something is done to raise computer consciousness in the Soviet Union, the East-West gap in electronic technology will become unbridgeable.

Although large computers have long become a fixture in government agencies, large industrial plants and in the military, the debate over the spread of personal computers has disclosed an anxiety that unless Soviet society can be made "computer-friendly", computers will remain an exotic tool.

But while Soviet scientists cite slow production, shoddy computers, lack of consumer interest and similar factors, Western experts believe a far greater obstacle stands in the way—the inherent wariness of the state about any technology whose grist is information. At Soviet offices, common office copiers are kept under strict control and are locked away at night.

Such considerations effectively rule out the possibility that private citizens will be able to buy personal computers any time soon, and officials usually talk about supplying them to schools, offices, and research facilities.

There is also the spectre of dissidents armed with high-speed printers, churning out copies of Alexander I. Solzhenitsyn's history of the Soviet labour camp system, "The Gulag Archipelago", from floppy disks smuggled in by foreign tourists.

INTERNATIONAL HERALD TRIBUNE

L ET ME COME DOWN to more serious questions. Will democracy survive? There are some who argue that "New Technology" is just the thing Big Brother would love. In my view there is no such danger. Decentralisation of brain power will necessarily be followed by decentralisation of political power. Local issues will have an audience, but state politics or USWE (United States of Western Europe) politics will become of less interest. In an era when unlimited entertainment is available (thanks to optical fibres), who will want to listen to a speech by the Prime Minister? Anyway, the real issues will become technically more and more complex, and will doubtless need computers both for their formulation and for their evaluation.

What about elections? There will of course, be one every year or so. The actual choice will be between several competing computer programmes to run the various administrative units.
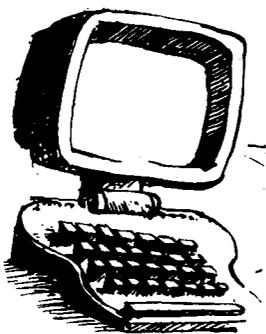
According to Marxist theory, the existence of more than one class will lead to class war. That may make my analysis all too fallible. At this point, therefore, I must "revise" one important Marxist tenet. I hold the view that the class war is not so much about possession of "the means of production" as about the ways of power. I contend that the instinct for domination will be satisfied by the *Volks-computer* owned by every man, woman, and child (above the age of four). It will, of course, be much less powerful than those the mandarin boffins have, but it will still be able to play the part of a second-hand *genie*.

I am not as optimistic as the Nobel Prize-winner Dennis Gabor was when he envisaged (in *Inventing the Future*, 1983):

> ". . . the coming of the world of *post-historic* man; of the common man living for his own happiness . . . and of the uncommon man who finds his fulfilment in enriching the life of the common man."

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[2] It may be worth noting here (in case it is not generally known) that with present techniques the full text of the 30-volume *Encyclopaedia Britannica* can be transmitted on a single fibre in a fraction of a second.

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But why shouldn't Western society find the resources to be able to adapt to these changes? A combination of *panem et circenses* will satisfy the common man, and the un-common man will be kept happy with the new tools at his disposal.

WHAT MIGHT BE THE EFFECT of "New Technology" on Soviet society? Obviously, the rigid, centrally organised, information-starved society that exists in the Soviet Union today is entirely at variance with the demands of "New Technology". The Soviet leaders will, of course, try to delay the necessary reforms; but even their power is insufficient to oppose historical inevitability. I suspect that the Soviet system will collapse because in its present form it will not be able to harness "New Technology". Does that matter? Could not an economically weak Soviet Union carry on indefinitely? It is true that whatever the material complications, internal disaffection could not bring the system down; the *KGB* would see to that. The change will come when the Soviet leaders realise that without social reforms they will be losing the global military race. Then, belatedly, they will allow decentralisation of the economy and the setting up of small private firms, and will relax their absolute monopoly of information.

But once "New Technology" takes a grip on the economy, will a reversal of the policy ever be possible? As soon as information is available there will be genuine discussions—first of local and then of planetary issues. Initially, there will be only one computer programme, but in the fullness of time alternative programmes will be able to compete for electoral support. The beginning of the end may well come around 2030 when a Soviet delegation flies to Geneva to discuss a convenient merger with the United States of Western Europe. They will have to. How could they possibly fight "historical inevitability"?

Paris Notebook

By Jean-François Revel
The Power of "the Fourth Estate"

ONE RECENT EVENING (it was Sunday, 17 May) the television and radio news bulletins opened with Michel Platini's decision to terminate his footballing career. Several minutes were devoted to gathering the impressions of the ageing young man in question, his family, and various public figures, including the General Secretary of the Socialist Party, Lionel Jospin. (But not Jacques Toubon, which shows how completely the Right is out of the limelight these days.) Cameras and microphones next turned their attention and ours to the Belgian *Grand Prix* and its winner, Alain Prost, who by a thrilling coincidence turned out to be the same age (32) as Platini. Surprise, surprise. We were then transported abruptly to the Paris Marathon and on to the Cannes Film Festival.

The only political subject dealt with at any length was the most "mediagenic", namely the arguments among the majority about the *Front National*. In other words, the alacrity with which the French liberal Right had rushed headlong into all the traps that the Socialists laid for it, using Jean-Marie Le Pen as bait. The only event of that third weekend in May 1987 that may have a lasting influence on our future and may well find a place in the history books—the Prime Minister's visit to Moscow (and its consequences for European defence in the event of a possible Soviet-American disarmament treaty)—received little or no mention.

At the same time, a conference was drawing to a close in Paris. The International Geopolitical Institute, founded and presided over by Marie-France Garaud, had organised an international symposium on the subject "*Médias, Pouvoirs et Démocraties*". For three days, a glittering company had been assembled from the Old and New Worlds, comprising politi-