

FRENCH GOVERNMENT CONFERENCE ON
INFORMATION TECHNOLOGY & SOCIETY

PARIS, 24-28 SEPTEMBER 1979

REPORT ON FRENCH CONFERENCE

INFORMATIQUE ET SOCIETE

The Hon. Mr. Justice M.D. Kirby
Chairman of the Australian Law Reform Commission

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BACKGROUND TO CONFERENCE

1. In September, 1979 a conference was called by the French Government on the subject of Information Technology and Society. The conference arose out of the idea of the President of the Republic, Mr. Giscard d'Estaing. The President expressed the wish that an international conference on Information Technology and Society should be organised. As explained in a publication by the Ministry of Industry, which assembled and ran the conference, the aim was to :

- * make public opinion aware of the realities and future prospects of computerisation by initiating a broad discussion which, at the same time demystified and clarified the problem and familiarised ordinary citizens with their share of responsibility in evaluating options that would affect their future
- * to make innovative contributions to international thinking on these topics.

2. The conference was organised in a number of Commissions and plenary sessions. All of them were

editorial sections. If the aim of the conference was to raise public debate about the issues produced by the advent of information technology, it succeeded, at least in France. The participants were encouraged to discuss the issues in a non-technical way. Representatives of different opinion groups (trade unions, employers' associations), business bodies (industry leaders, computer manufacturers and users) and critical observers (sociologists, economists and academics generally) were involved in the various sessions of the conference. A feature of the conference was the participation of ordinary citizens and critical participation of quite outspoken people who expressed openly fears about the impact of computerisation on employment, liberty and French culture.

GENERAL TOPICS ADDRESSES

3. Each day of the conference was organised to cover a different general subject with Commissions clustering around certain general themes. The full conference agenda is ... attached. The general subjects dealt with were :

Monday	24.9.79	Economic Change
Tuesday	25.9.79	Work and Employment
Wednesday	26.9.79	Everyday life
Thursday	27.9.79	International Co-operation and Independence
Friday	28.9.79	Democracy

4. There were two major public sessions in which about 2,000 people took part. The first was the opening session at which the Minister of Industry addressed participants. Suitably enough, he was joined by satellite communication from Switzerland by the Minister for Telecommunications. At the closing session, President Giscard d'Estaing addressed participants and reflected on the themes of the conference.

INITIATION OF THE CONFERENCE

5. The immediate impetus for the conference was the request by the President that it should be held. This request arose out of a report, the principal author of which was M. Simon Nora. This report suggested several of the changes to society that would follow the introduction of widespread information technology, particularly linked to telecommunications. The so-called Nora Report gained widespread currency throughout France. It was reviewed and debated through the public media. It immediately became a best-seller. It focused public debate especially on the fears of the impact of information technology on unemployment. The theme of the Nora Report was generally pessimistic. It suggested that the proliferation of computers and the development of information technology would lead to significant endemic unemployment in France. It was this fear, promoted by the Nora Report and fuelled by media debate, as well as the recognition of other potential changes brought about by computers and information technology, that led to the calling of the French Government Conference, 12 with regard :

SCOPE OF THIS REPORT Work and Environment

6. As the principal purpose for my attendance at the conference was to present a paper at the session on data traffic across national borders (Commission 11) this was the subject matter of the conference that most involved me. This session was attended principally in my capacity as Chairman of an O.E.C.D. Expert Group which has prepared guidelines on trans border data flows. The purpose of these guidelines is to help harmonise domestic laws on privacy protection, in the hope that proliferation of those laws will not accidentally or deliberately impede the general free flows of information between countries. For lack of specific involvement and knowledge in the other issues, and because of the overlap of many Commissions, it was not possible to cover every session. The purpose of this report is to outline generally the plenary sessions, to review some of the Commissions and to report on the synthesis presented at the close of the conference by the French President.

THE SCOPE OF THE PROBLEM

7. At the opening session, Mr. N. Segar, French Minister for Telecommunications, referred to the enormous growth of telecommunications traffic. Even within France, the numbers of subscribers were increasing by two million per year. But now a remarkable new development was occurring which had been described as "COMPUTICATIONS". This was the linking of telecommunications and computers. Improved methods of switching technology had facilitated this marriage of computers and telecommunications.

8. One of the most important developments of French technology related to telefacsimile. For as little as FF 2,000 a machine could now be purchased which would reproduce documents at long distance. It was anticipated that there would be three million of these produced a year. In ten years there would be thirty million of them. It was expected that in due course this would completely replace the mailing system.

9. Another development was teletel. Instead of television sets having a passive relationship to man, it would be possible for a dialogue to take place between television sets and man with the aid of telecommunication. It was expected that teletel would begin in France next year.

10. The videophone was also on the horizon. Telefax and telewriting were about to be developed on a widespread basis. Word processing had already taken off in France. These were but some of the technological developments linked with telecommunications.

11. The question was raised in these circumstances as to what form of society would exist when communications were so radically altered. The French Minister prognosticated changes in knowledge when access to data banks was opened up to a wider audience, changes in concepts such as distance. For example teleconferences would be increasingly used as a substitute for fuel expensive travel. Interactive telematic services would be developed in proliferating

variety to permit the remarkable dialogue between man and machine.

12. Changes of this kind could have good and bad effects. On the one hand they could lead to people losing contact with nature and with their neighbour and simply becoming an extension of machines. But it was believed that this would never take place because of man's intelligence. He would be strong enough to acquire the new tools but to remain master of them. Until Gutenberg, only a few intelligent people in the Western community could have access to information. They therefore had very great power and say over the future of people who could not read. Similarly, we are now on the eve of another revolution which will change society and have implications for democratic institutions. The access to knowledge and information which the printed page permitted would pale into insignificance beside the access that could be secured by interrogating data banks and using the other means of telecommunications. The purpose of the Semaine Informatique et Societe, declared Minister Segar, was to examine the implications of these changes for society.

IMPLICATIONS OF SCIENCE FOR SOCIETY

13. Mr. Andre Giraud, the Minister for Industry, then, examined the impact of technology on a pluralistic society. He said that the purpose of the conference was to open up to the community the views of scientists and other representatives of relevant disciplines. It was fully accepted that a certain degree of control over science was necessary so that in the future man would not be a slave to science. It was also fully recognised that such an important development as E.D.P. would have a very great impact on the lives of ordinary citizens. The purpose of the conference was to examine the impacts before they occurred and to identify them for society and decision-makers.

14. E.D.P. was seen as a means for improving man's intellectual capacities. It was not an exaggeration to say that this development was similar to that which took place when man first stood up. It was when man stood that

he freed his hands to permit the doing of things and the development of the brain. This led to spectacular results. But in Minister Giraud's view the results of the E.D.P. revolution would be no less spectacular. The problem was that they would occur very quickly. The difficulties of absorbing technological change which had occurred in the past were no guide to the revolution which "starts today". Previously technological change was heavy, centralised, expensive and therefore relatively slow in its introduction. Data processing is not, however, something for the elite. Miniaturisation of technology makes it cheaper and therefore easier to introduce. There was likely to be very little time-gap within which to adjust society to the changes which the technology brought about. Even in such apparently trivial matters as consulting the bank, reserving train and plane tickets, organising accounts and banking, the computer would shortly do things which presently had to be done by others. Automated machines would increasingly replace man for repetitive processes. The greater access to information would have an effect on people's lives, beginning to end.

15. Mr. Giraud was optimistic about the impact of this technology. He said that so far E.D.P. had contributed to the creation of jobs. Whether this would continue was problematical. But quite apart from that problem, there were others more difficult to perceive and describe. For example, E.D.P. was often said to be a means of decentralising control which, in France, too often centred in Paris. But on the other hand, the obverse of this effect could be the isolation of individuals and so-called "electronic coldness". Mr. Giraud said that it would be important to educate the community to understand the developments of E.D.P. It would be important for political leaders to inform public opinion to overcome reticence about E.D.P. developments which so often seemed to be beyond human understanding. It was also important that there should be no delusions about the scope of the impact of the technology on society. The industrial revolution had been used to the advantage of some only. It would be important for the E.D.P. revolution to be put to the advantage of all mankind.

CULTURAL IDENTITY

16. Mr. Giraud then touched on a theme which recurred through the conference, namely the French fear of a loss of cultural identity in a world of Anglophone data banks. He said that it was important when looking to the future to examine the impact of E.D.P. on French cultural life. It was important that the identity of France should not be threatened. It was vital that the French language should be defended and should not just disappear. Mastery of technology required that France should not just assume its independence but should be willing to defend it. He believed that technological advances already taking place in France would provide means of defending French culture. The French had nothing to be ashamed of in the efforts they were making towards innovative developments in the area of information technology. The task of the conference was to reconcile technology and man. The international conference in Paris was only one feature of efforts being made throughout France to raise discussions about information technology and its effects on society. In even the smallest town there were exhibitions, discussions and debates and reports upon the Paris conference. A variety of displays was being set up throughout the country to coincide with the conference and the media were involved in the dissemination of information and ideas.

UNITED STATES VIEW ON THE CONFERENCE

17. In some quarters in France there is a tension about the role of the United States in data processing. The fact that so much French data, including personal data and data relevant to the French economy and even, as it is said, French sovereignty, is processed in the United States is a constant source of anxiety and concern. For this reason a great deal of interest was focused on the intervention of Mr. Zbigniew Brzezinski (United States), President Carter's security advisor. Mr. Brzezinski addressed the conference by way of telecommunication picture beamed by satellite. He congratulated the French Government on the initiative of convening the conference and focusing attention on the rapidly developing technology and its meaning and impact

on society. Mr. Brzezinski said that essentially information was policy-neutral. He reminded participants that the same point had been made in the Nora Report. In pluralistic societies, information technology becomes a powerful tool to deepen and broaden public understanding and knowledge. Used wisely, it lowered barriers of cultural and social ignorance and suspicion which impede international co-operation. He acknowledged that in some totalitarian states information would be managed to distort reality.

"There is danger and blessing in our technetronic era; we are not unaware here of the threats it holds for personal liberty and privacy; totalitarian leaders are not unaware of the dangers it holds for them as knowledge crosses frontiers".

18. Mr. Brzezinski cited the following as principal issues raised by information technology :

- * Trade in computers and computer technology
- * Access to and appropriate use of national data
e.g. those dealing with local economies,
agricultural production and natural resources
- * Protection of personal privacy in the
proliferating international data networks
- * Access to information for industrial and
social development

19. Mr. Brzezinski said that fortunately there were efforts to get international agreement on some of the international effects of information technology :

- * In the O.E.C.D., there was discussion about trans border data flows and the protection of personal privacy
- * In UNESCO there was discussion about the so-called information order
- * In the I.T.U. there was a review of the international data network standards
- * In the World Administrative Radio Conference there was a review of the assignment of spectrum frequencies.

He said that one of the most dynamic results of the new technology was that the world was becoming even more closely linked by international telecommunications of various kinds. These would have an effect on global policies as well as on domestic changes. He said that information was a very important component of national and international ties. He specified a number of attitudes to the information issue which the United States took:

- (i) Commitment to the free flow of information
- (ii) Availability of information resources to countries which need them to bring themselves into the industrial or post-industrial era
- (iii) Freedom of trade in information from as many artificial restraints as possible, whether unrealistic technical standards, tariff barriers or otherwise
- (iv) Rendering telecommunications facilities and services as "transparent" as possible
- (v) Resolving differences between nations in an atmosphere of mutual respect and without disrupting international practices.

Mr. Brzezinski stressed the United States concern to protect individual privacy and the efforts that were being taken by President Carter to do this within the United States.

"We are deeply concerned in the U.S. with the seemingly inevitable tendency of government to acquire vast information resources, and to use them in ways which may threaten individual rights or affect economic life. I would expect that our new concentration on these issues domestically will be reflected in the foreign policy of the U.S., as indeed it must be in the international concern of all countries attending this conference and many who are not".

20. Mr. Brzezinski predicted greater mutual interdependence as a result of computers, international communications links and cultural exchanges. He said that the new technology would put a greater premium on the need to accommodate differences

in information policies and to seek out harmonisation of national and international tensions.

COMPUTERISATION AND ECONOMIC CHANGE

21. The first three Commissions dealt with the impact of computerisation on economic activities :

- * C1 Information Technology and the Limits of Industrial Growth
- * C2 Computerisation and Organisational Efficiency
- * C3 New Information-related Economic Activities

The first session examined the impact of computerisation on productivity and competitiveness in the industrial sector. There was no doubt that there would be extremely important gains in productivity. They would bring benefits for all involved but also problems of personnel, reorganisation of manufacturing processes and so on. Japanese participants spoke of the concern voiced in Japan about ensuring the national independence of Japan and protecting the spiritual values of the country under the pressure of new international technology. Other participants stressed the fact that growing automation of industrial processes would require a new relationship between man and machine. The importance of educating the present and future generation of workers in the computerised industry concerning its operations and effects was stressed. One participant emphasised that fact that originally computerisation had tended towards centralisation of control. However now with miniaturisation it was possible to envisage decentralisation of production and decision-making giving people in all localities a chance of influencing the direction of business there.

22. The session on computerisation and business efficiency stressed that computerisation was in one sense simply the continuation of a process of automation which has been going on for a long time. Many participants emphasised that the sharp distinctions between primary, secondary and service sectors of the economy would disappear under the impact of computerisation. Others stressed that France would not be able to avoid information technology because it was in competition with other countries that were embracing it with enthusiasm.

In the short term information technology might be able to actually save certain industries which were in a marginal condition of profitability and thereby actually save jobs. In the long-term it could be hoped that computerisation would encourage the development of new products which would be good for business and also for employment.

23. The third session on new information-related economic activities studied advances both in the United States and in Europe. From the point of view of employment, it was considered that these activities already accounted for between 30 and 40% of the population actively engaged in work established since 1950. There was a general consensus that information technology would produce many more products and encourage new employment.

IMPACT ON WORK AND EMPLOYMENT

24. There were two sessions on the theme, Information Technology, Work and Employment.

- * C4 Working Conditions and Organisation
- * C5 Computerisation and the Level of Employment.

25. Attention in relation to the impact of computerisation on work concentrated on :

- * The preservation of respect for the physical and mental attributes of workers
- * Opening up the potential of individual and collective activity
- * Permanence of employment and in particular of the young.

26. The various advantages of computerisation were stressed. It would encourage experimentation in employment which was less possible with less malleable equipment. It would also make possible consultation with those who are using it and their representatives. A number of questions were raised during the sessions. These dealt with :

- * How the technology of computerisation would be integrated into the political, economic and social features of society and of business enterprises

- * How one would use computerisation to improve the quality of work for ordinary people
- * How one would turn to advantage the computer in order to encourage the people concerned in its use to take part in developments involving computerisation
- * In the light of developments overseas, how France should respond to the responsibilities of unions in connection with computerisation and employment. One participant, Mr. Gerard Galpin, Head of the Employment Department at Force Ouvrier (one of the largest unions in France representing nearly three million white-collar workers) stressed that it was a responsibility of the unions to educate people for the new working environment and private circumstances. The Force Ouvrier, which is heavily involved in such sectors as banking and insurance, found great apathy about the problems raised by computerisation. The union sought to use the new technology to improve the quality of life for French workers, especially through such measures as a shorter working week. In contrast to British white-collar unions, however, it was not seeking a policy-making role in the decision-making process. Technology agreements, for example, as advocated by British white-collar unions (e.g. A.S.T.M.S.) are not stressed by the French union movement. There is less enthusiasm for the leisure revolution as postulated by some British unionists. There is less stress upon the need to educate people to accept lengthy periods of unemployment and/or leisure in the French union movement than, for example, in the British.

27. Mr. H.P. Gassmann (O.E.C.D. Secretariat) produced the results of a three-year O.E.C.D. study in connection with the levels of employment in the computer field. The percentage of the population actively at work directly or indirectly with computers was given as were the growth rates. In France in 1975 it was estimated at 32.2% of the population. At the same time the percentage in the United States was 41%. The same study examined the vulnerability of particular jobs to E.D.P.

28. Many speakers stressed that in their view the impact of computerisation on employment was the most crucial problem facing Western communities. It would supersede even the problems of energy as the first issue for developed countries by the end of the century. A number of participants said that the Western communities were not taking the impact of computerisation on employment seriously enough and were not seeking out the consensus that would only arise from appropriate levels of knowledge in the community. It was also stressed that many political leaders had dealt in a naive and superficial way with figures. They had talked of the numbers of jobs which would result from the introduction of computerisation. What was too often disregarded was that these jobs would not be suitable for the people displaced. The people displaced would often be quite unsuitable to take over jobs created by computers. In terms of social disruptiveness, it was simply not enough to look at the macro-statistical position. Many members of the public came forward to assert that society existed for man and machines were developed to serve mankind not vice versa. Accordingly, it was time, in their view, for society to step in and prevent the destruction of employment and social disruptions that would originate from uncontrolled and unco-ordinated computerisation. Other participants stressed the care that would have to be taken in translating developments in the United States and Japan for their applicability in France. It was pointed out that there were different classes and historical factors in the French working population and that France was a poorer country. Great concern was voiced

by many participants about the future of youth. The need to design education that would be suitable for long periods of youth unemployment was also emphasised.

29. The levels of employment were not the only issues debated. The conditions of work were also mentioned. The difficulties of working at a cathode screen for long periods of time were stressed by some participants. The fatigue and sense of alienation were mentioned. Studies on visual and nervous fatigue were outlined and discussed. It was suggested that it would be more difficult in the future for employees to change their jobs because of the highly specialised nature of employment. This might impede the free flow of labour and tend to tie people down to particular jobs for very much longer periods. It was agreed that general guidelines should be drawn so that data processing experts were alerted to the consequences of their action for working conditions. Systems designers should be made much more aware of the emotional and psychological conditions of work with machines. It was mentioned that within the French Government a guidebook had been prepared which would be published in 1980 and which would contain hints concerning the training of data processing personnel and the development of working conditions for them.

30. At one of the major debates (D2) on the future of work as a value, Mr. M. Cooley, a Senior British Trade Unionist, delivered a highly critical paper in which he said that the same mistake was being made in the introduction of the computer revolution as had occurred with the first Industrial Revolution. There was a real chance of alienation of very large sections of the community. The employment of a person was an extremely important part of his life and was the first answer he gave when asked to describe what he was.

"As you try to introduce this kind of equipment more and more resistance to the structural unemployment will arise from it. And this will be because the external possibilities of alternative employment will diminish".

31. Mr. Cooley traced the efforts by trade unions in Britain and in Europe to provide a shorter working week and courses to permit them to find alternative activities. The moves in Scandinavia to encourage and improve quality of work would be needed if the alienation that was leading to such high levels of absenteeism in the computer operated industries was to be avoided. Mr. Cooley's paper is attached to this report and it was very well received at the conference. There was more apparent appreciation of his comments than of the more bland and optimistic observations at the same session by representatives of business. One of the French Ministers, Mrs. Pasquier, stressed the large numbers of women in the tertiary sector. She said that there was therefore much more vulnerability of women's employment to computerisation than men, proportionately.

INFORMATION TECHNOLOGY AND EVERYDAY LIFE

32. The sessions on Wednesday 26 September concentrated on the impact of information technology and electronic information networks on everyday life. The sessions were divided into :

- * C6 The Individual Education and Culture
- * C7 The Home of the Future
- * C8 The City and the Future

These sessions are not reported.

INTERNATIONAL CO-OPERATION AND NATIONAL INDEPENDENCE

33. The following three sessions involved the impact of information technology on international co-operation and its implications for national independence. The sessions were :

- * C9 National Industrial Strategy and Information Technology Policy
- * C10 Cultural Identity and the International Co-operation
- * C11 Data Traffic Across National Borders

34. In connection with the lastmentioned session, a paper was delivered by me. In support of the paper a number of oral comments were made to explain and defend the O.E.C.D. Expert Group's guidelines on privacy protection in international data flows. The aim of those guidelines is to secure harmonisation of national legislation on privacy protection, to avoid the impediments that could occur from disharmonious national privacy laws. The oral comments made ... are attached to this paper. In session 11 there was a general introduction by Mr. H. Geller of the United States Telecommunications Office. The problem was then outlined by Mr. A. Danzin, Director of the Institute of Research on Computerisation and Automation, Paris. Other participants included Mr. F. Hondius of the Council of Europe. There is some scepticism in French circles concerning the value of the O.E.C.D. guidelines as against a Draft Convention which has been prepared by the Council of Europe. The purpose of the oral comments by me was to emphasise the need to progress in stages. Those countries which do not yet have privacy protection legislation (including Australia) are not yet in a position to consider international conventions of the kind proposed by the Council of Europe. Furthermore, there is suspicion in some countries, notably the United States, that the Convention of the Council of Europe and measures proposed by the European Communities and the European Parliament, whilst ostensibly prepared in order to protect individual privacy, are actually developed in order to defend national industry, employment, sovereignty and culture.

35. A number of the participants stressed the vulnerability of nations caused by trans border data flows (T.B.D.F.). The storing of information in data bases outside a country's borders made them both less susceptible to control by that country and more susceptible to destruction or deprivation by others. The problem of privacy had been addressed but it was said that more and more attention should be given to the vulnerability of society caused by the removal of the relevance of distance.

36. Mr. J.-P. Chamoux, a consultant to the O.E.C.D., analysed the nature of data flows, the form in which they were flowing (by mail, telecommunications, satellite etc.) and the issues raised by data flows. The exponential growth of T.B.D.F. in recent years was well recognised, though not measured. Various descriptions were given of the European network such as Transpac, Euronet etc. The impossibility of complete self-reliance in the countries of Europe was stressed by many participants. Concern was nevertheless expressed that Europe would be dominated by United States data banks which would stifle European initiatives. That was the rationale for Euronet, to try to restore the balance between European and United States data processing. Another reason would be to keep some form of European control over the cost of access to scientific information. A number of participants emphasised that protectionist measures must be openly described as such and not "dressed up" as measures for the protection of individual privacy. Otherwise, the latter would be discredited and this would be unfortunate because there are real issues for individual liberties in the development of computing: occasional conventions or

37. Mr. Frits Hondius (Council of Europe) said that concern about data protection laws was only one aspect of the legal implications of information science. He mentioned copyright, patent law, vulnerability, defamation etc. as other areas of the law that would need attention both at a national and international level. He described the efforts of the Council of Europe to secure co-operation and harmonisation in data protection laws. He mentioned in particular the need for privacy in relation to medical files which were kept in automated form. He referred to the effort of the Council of Europe to draft a Convention to deal with this special subject. He said that so far seven countries in Europe had developed data protection laws to provide protection for privacy in personal information kept on computer. He said that the Council of Europe Draft Convention sought to bring harmony into the proliferating data protection laws. The Convention would be open to non-member countries.

38. Mr. Hondius stressed that it was not simply a matter of developing a broad Convention. There were difficult legal questions that had to be resolved. For example, in relation to asserting data protection, one question would arise as to where a "file" was established. If it is instantaneously retrievable in several countries, the question would be where it existed and to what legal regime it was susceptible. There was a sense of urgency in the Council of Europe's task not only because a basic right was involved but also because legislation to protect this right was being developed rapidly in many member countries. For example, Spain and Portugal had included reference to the basic right for protection in personal data in their new Constitutions. The quest for effective and enforceable data protection as against automated personal information systems would be a long one. It might take 100 years. Nevertheless it was important for countries and international organisations such as the Council of Europe to begin the task of defending the individual and information about him in computer records.

COMPUTERS AND INDIVIDUAL LIBERTY

39. On the last day of the conference there were three Commissions, each dealing with issues relevant to individual rights :

- * Cl2 Information Technology and Individual Rights
- * Cl3 De-centralisation of Power
- * Cl4 Who Sets the Guidelines for Computerisation

40. These sessions were the best attended at the conference and it was obvious that there was deep concern in some quarters about the threat to individual liberty in France, arising from automation of records. Many members of the public came forward to complain about the unnecessary collection of information, particularly by government. For example, one medical practitioner asserted that when women come for advice on contraception to government hospitals they are required to give information such as their name, details of their marriage, details of children, the numbers of abortions they have had, contraceptive practices they

have used, and so on. It was asked why the government needed all this information. The ability to store it all for future retrieval was a legitimate cause of citizen concern and all the assurances in the world that there was strict security and that access would not be had was nothing like the protection of not collecting the information in the first place.

41. The political implications of collection and storage of personal information were discussed. Mr. Simitis (Commissioner, Land Hesse Privacy Commission) said that privacy protection bodies would have to be established. However, they could only be effectively insulated from political interference and control if they were directly answerable to and/or elected by Parliament. It would be no good making them answerable to the Executive as the Executive was susceptible to bureaucratic pressures (or political pressures of its own) to collect and control personal information. Nevertheless, Mr. Simitis said that Parliamentary control would be illusory unless there was a close relationship between the data protection body and Parliament. So far in his German State it had been possible, with the aid of the press and television, to react quickly to public complaints of privacy invasion, even those alleging wrongful acts by the government. There was lengthy discussion about the various ways in which effective privacy protection machinery could be established within the bureaucracy. The recent French legislation establishing a Commission was discussed at length and criticisms of its mandate and resources were voiced from the floor.

42. One speaker referred to the dangers of perfect technological efficiency. He said that during the War large numbers of French Jews had escaped Nazi persecution because it was possible to substitute identity papers and because of the difficulty of tracing certain personal information. The same had not been true in the Netherlands and accordingly large numbers of Jews had died. In the United Kingdom no national identity card was required. Yet it could not be said that the United Kingdom was in a state of

anarchy. The need for a universal personal identifier was questioned and in particular if it was to be in a form which could not be substituted. In short, it was said that inherent in the risk of computerisation was an inability to "escape one's file". A number of speakers said that there were occasionally advantages, in human existence, in inefficiency, particularly when personal files became a matter of life and death. Reference was made to the fact that the personal identity file came into existence in French law in 1941 during the Occupation. In requiring production of such cards, police are relying on a law of 27 November 1943, also during the Occupations. The French people had been assured after the War that files on the Jewish origin of French citizens would be destroyed. But recent evidence has suggested that perhaps they were being held in the Archives. The problem of sorting and assembling such information was, however, as nothing when compared with the ability of computers to do it in the future. Several participants pointed out that one's religion might not be so important in the future as one's political or social persuasion.

43. There was considerable discussion about the need for a code of ethics in the computing occupations. It was suggested that the development of such a code of ethics and education of people in the computing occupations would be a "front line" method of ensuring respect for private information.

44. Not all comments about information systems were negative. A number of lawyers speaking about the impact of computers on the law spoke of their capacity to give analyses of court decisions. They would be able to reveal the way in which laws were being interpreted in different parts of the country and would reduce inconsistencies in the administration of justice. They would become a convenient day-to-day management tool in the life of the judiciary. More than a million sentences are passed every year in France and the utility of data processing for securing greater consistency was emphasised by several participants.

45. It was pointed out that in legal procedures (which are in France more frequently determined "on the file" than as a result of oral argument) very substantial dossiers are accumulated in the course of proceedings. In fact, if a case is disposed of by a finding that the accused should be acquitted or the case dropped or that there is no case to answer, it was more likely that there would be a big file than in the event that the matter went to trial. Mitigating evidence and other personal details would tend in the former cases to be collected. This information, on computer, could be particularly dangerous. Some people even suggested that the automation of sentences might be undesirable. It could, for example, show that this or that magistrate had a particular attitude and lead to official interference in his performance of judicial functions. In the quest for consistency, it was urged that the independence of the judiciary should not be impaired.

46. Amongst all of the participants discussing the impact of computerisation of personal files, great emphasis was placed upon the right of access by an individual to his own information. This right and the right to have incorrect information corrected and, if necessary, erased, was seen as the individual's defence against inaccurate or unfair information on file about him. Professor Rodota (Italy) said that in recent years privacy had undergone a "cultural change". It was no longer seen as a negative thing i.e. the right to refuse data or to prohibit access to data but as a positive right (i.e. the right to change, modify or erase data).

DATA PROCESSING AND UNDER-DEVELOPMENT

47. At the closing ceremony the Director-General of UNESCO, Mr. M'bow, said that E.D.P. should be looked upon as just one further means by which distance, in the world, was being reduced and by which mankind was being knitted together. It was important that whilst taking full advantage of the developments of information science, we should recognise that there was no substitute for inter-personal communication. He referred to the need for human creativity in the effective

use of information. He also appealed for concern about the vulnerability of developing nations to the impact of the information explosion. He said that access to information was access to power and that an urgent concern of developed nations should be the due protection of developing countries and their full right of access to data bases, particularly of scientific and technological data. He made an appeal for sensitivity in those countries which are the "haves" of data processing to remember the needs of the "have nots". He said it would be a grave injustice if the new information revolution progressed to the disadvantage of the developing countries.

COMPUTING AND SOCIAL MOVEMENTS

48. The President of the French Republic, Mr. Valery Giscard d'Estaing, addressed the closing session. He said that the purpose of the conference had not been just to promote a big show. He felt that society was already too spectacular. What had been sought was a free and penetrating discussion, with professional assistance, of the likely impact of computerisation on society. He said that in the past religion evoked holiness and legislation the authority of the State to escape criticism. Technology's authority was often based on ignorance and fear. The chief suspicion which information science had engendered was that the jobs of working people would be endangered. The conference had addressed this issue with care.

49. The President predicted that in the next ten years there would be deep changes to the quality of life and culture as a result of growing computerisation. Scarcity of raw material and new concerns about the environment and the preservation of the past happily coincided with the computing technology which would assist in furthering socially desirable ends. Society until now had been greedy for space, raw materials and energy. A major social movement had begun in the late 1960s in California and spread to Europe, particularly France, where new cultural values were being asserted. These involved attention to the quality of life, ecology, rejection of growth for its own sake, a concern about nature and the

environment. To this social movement had been added, after 1974, the impetus of a shortage of energy. The realisation of the limits to which fossil fuels could be exploited had concentrated attention on alternative lifestyles. What was extraordinary is that these movements and this realisation took such a long time to come about.

50. The President said that the new information technology would contribute to remarkable savings in materials and energy. The point was being reached where distance became unimportant. It was cheaper to store information in one place and transmit it via satellite over a wide field. This marriage of computers and telecommunications would significantly impact the use of many resources because it diminished reliance upon physical things. Hardware would, in the future, take a back seat. In a sense, the development might be looked upon in the future as some kind of human instinctive response of the species to correct the inefficiencies and wastefulness in the use of resources that had characterised the past century.

51. One difficulty in communicating the developments of information science and their significance for society was that the scientists had adapted language and proliferated their own jargon and esoteric code. This had led to a certain loss of contact with the rest of the community. It had to be recognised, however, that the advent of computerisation was as important as, in their time, the developments of Sumerian writing utensils and the first printing press. The enormous effects that those developments had are likely to be replicated in the latest leap of communicating information : the computer linked to telecommunications. So far the computer has been largely an instrument for the privileged few experts. However, the general movement of E.D.P. was towards extending the availability of computers. It would be important to ensure that man remained in charge and was not rendered a robot adjunct of the machine.

COMPUTERS AND CULTURE

52. The President said that the concept of time would be affected by computerisation. In the past, knowledge of times gone by was limited to human memory and access to information. Sheer mechanical and archival difficulties put impediments in the way. Now, we can add not only to the sound and film recording, the new dimension of retrieving vast amounts of information from computer storage. In a sense this permits our generation a new availability of time. Information on our time will be more readily available and constantly present in future times, by reason of the retrieval powers of computers. This would alter perceptions of history and understanding of men and of events.

53. Some people asked whether computers would produce an artificial intelligence. Certainly E.D.P. has a great power of analysis and can produce synthesis and conclusion from presented material. But it is not an intelligence which can imagine. An examination of the origins of the word "intelligence" shows that it involves collecting, acquiring and choosing or discerning between different possibilities. Certainly the computer is a form of intelligence. But it is not our human form, and excessive reliance on it or fear of it would be equally misplaced.

THE BIG PROBLEMS : WORK AND LIBERTY

54. President Giscard d'Estaing said that the great need was for vigilance as the impact of computers were worked out in society. It was obviously necessary to consider the two suggested threats which computerisation brought in its train :

- * The threat to employment
- * The threat to liberties

55. So far as the impact on employment was concerned, figures available suggest that 25,000 jobs a year are created, directly attributable to the computing industry. But the displacement of old established jobs had to be acknowledged. The time frame to adjust to such displacement is not always

great. Displacement could be traumatic in human terms. It was therefore necessary to closely watch the effects of the new technology on employment.

56. So far as liberties were concerned the President noted the discussion of the past few days. He said that in the past the limits of human memory and of access to paper files had given some protection to individual secrecy and privacy. This was now endangered and that was why a Commission on Privacy and Individual Liberties had been established by Parliament. But the impact of computers should not be looked on as entirely negative in this field. For example, computers could help the decentralisation of decision-making. Originally it was thought that all computers, because of their size and cost, would have to be centralised. Miniaturisation technology has driven away that spectre. In future information will be free from the constraints of localisation. Accordingly there will be greater opportunities for decentralisation of government and private business decisions. The capacity of the computer, with telecommunications to make decisions quickly and to take into account masses of variable information, represent a means of putting "fugitive knowledge" under the control of bemused mankind.

THREE ACTION AREAS

57. The President then proposed three directions in which he felt the conference had pointed France :

- (a) Information technology will bring about very significant changes in social life. But France is a country of concepts. It should therefore be better able to react to the impact of information technology than other countries and indeed would have a national function to help other countries cope with perceived changes.
- (b) It would be important to prepare for some of the impacts on personal privacy. A fundamental priority must be assigned to the preservation of freedom and individualism and a reassuring commitment to the protection of the individual in the age of data banks should be upheld by legal regulation.

- (c) Above all, the computer should be seen as an instrument for man. It was a means to add to the human spirit. It would be a tool at the service of man to extend his nobility.

EVALUATION

58. Minister Giraud, the sponsor of the conference, said that there had been 170 speakers, 11,000 participants, wide news coverage and a heightening of public concern. The conference had set out to focus public attention on the developments of information technology and their various consequences for French society. The Minister expressed the view that in this regard the conference had been a success. The deliberations and report would be carefully considered by the French Government and available more widely to all those interested in the identification of the various consequences of information science for man and society.

59. There is no doubt that the conference, accompanied by national exhibitions and demonstrations, heightened public awareness of certain issues. It may have also contributed to demystifying information technology, to some extent. The chief issues of concern to have emerged from the conference were :

- (i) The impact of computers on levels of employment and whether there would be a high, stable level of unemployment caused by computers. If so, the consequences for retraining and preparation for lengthy period of leisure would have to be addressed if social tensions and unrest were to be avoided and a group of "second-class" citizens was not to be created.
- (ii) The impact of computers on individual liberties is obviously a keen concern of French citizens : expert and non-expert alike. Having the memories of war and foreign occupation still fresh in mind, the perils of information systems for life and liberty are more keenly felt than, say, in Australia, where such problems tend to be regarded as somewhat theoretical. Not so in France. The dangers of computerised information

systems for privacy and individual liberties are clearly perceived. A sense of urgency permeates the debate about fashioning effective tools to protect privacy and ensure data security and data protection for French citizens.

- (iii) The impact of computerisation on culture and the French language is keenly felt. Data banks are still perceived as an Anglo-Saxon phenomenon. One researcher illustrated his concern: "If his research into a scientific subject was ever intended to be of international note, it would have to be translated or at least abstracted into English for inclusion in a scientific data bank. Likewise data from other countries was significantly available only in the English language. The fear of loss of cultural integrity is felt with particular passion by Frenchmen, concerned to defend the French language, culture and their 'mission'." Although, in Australia, we have the "advantage" of the English language (and therefore do not face any perceived dangers of language "imperialism") the problem of cultural "imperialism" is nonetheless real.

60. The French Government Conference was most useful in that it promoted public participation in its sessions and communication to the public through the news media. At an appropriate time, it would be hoped that a similar effort to focus public attention in Australia could be achieved to a similar high standard. The report of the Committee on Technological Change might provide such an occasion. The report of the Law Reform Commission on Privacy Protection might be another.

ATTACHMENTS

Conference Agenda

Mr. Cooley's paper "Microprocessors or Men?"

Oral Comments by Hon. Mr. Justice M.D. Kirby