MONASH UNIVERSITY/LAW COUNCIL OF AUSTRALIA

SEMINAR ON SCIENCE, TECHNOLOGY AND THE LAW

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SCIENCE, TECHNOLOGY & LAW REFORM

Hon Justice M D Kirby

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The Hon. Mr. Justice M.D. Kirby**

> "It is said of Justice Frankfurter that, when he was a law teacher he once asked his students - "Who was the greatest law reformer of the 18th and 19th Centuries?". His class responded with various answers such as "Bentham" and "Mansfield". They were all wrong, said the eminent lecturer and the proper answer was James Watt, the inventor of the steam engine".
> G.C. Weeramantry *The Law in Crisis*, 1975 pp.249-50.

THE CONTEST: LAW v TECHNOLOGY

There is an inevitable tension between science and technology, on the one hand, and law and lawyers on the other. We live in an age of great technological change. Even those with only rudimentary knowledge of history will know that this century has seen change at the gallop. The predictions of Jules Verne have come true. It is not much of an exaggeration to say that nowadays the ink of the science fiction writer is scarcely dry on the page before apparently wild imaginings become scientific achievements.

Now, change at this pace and of this magnitude inevitably poses problems for the law. I do not assert that lawyers pay no regard to the future. On the contrary, legal documents seek to foresee changes in the relationships between particular parties.[1] Parliaments and subordinate law makers seek, in drafting their rules, to envisage at least the major attributes of human conduct that will need regulation. This involves looking into the future and so fashioning the rules that they will govern relevant human conduct, so far as this can be predicted. Even the common law does not just blunder from case to case. Principles are applied, of varying generality. When courts fashion these principles, they do so at appropriate levels of sophistication and with an eye upon the future situation and conduct by which such principles will be called into operation. In short, it would be facile to characterise the law as some kind of permanent Lot's wife, always looking backwards. That is not the case. Whether originating in agreement of the parties or by imposition of law makers, legal regulation seeks to look forward. It seeks to accommodate future conduct. But of course, it can only do so by reference to current knowledge.[2] And more important than the endeavour to cope with all the possibilities of future change, is the effort of the law to provide a force for stability and predictability in society.

This is the germ of the problem. Whether contained in the agreement between the parties, reached at a particular point in time, or in the language of a statute or by-law drafted at a particular time or found in the verbiage of a judgment written in a particular case at a particular time, it is of the nature of the law that it will be in a final form. But society does not stand still. On the contrary, in the present age, it advances at a dazzling pace.

The tension, then, is between a rule which, of necessity, states principles at a given time and interpersonnel relationships. These go on happening, complicated by the input of new ideas, new social themes which throw over accepted dogma, and new science and technology, which were simply not conceived when the legal principle was established.[3]

If to this tension is added the lawyer's natural inclination, for a variety of reasons, to seek order, discipline, predictability and certainty, you have the makings of conflict. I do not say that all lawyers seek these values. Especially today, there is a sizable number who are alive to the implications for legal change of scientific, technological and idealogical changes in our society. The fact remains that, putting it broadly, the law seeks to preserve. It is a conservative force. Paul Tillich, one of the most renowned theologians of our time, described law as "the attempt to impose what belonged to a special time, on all times". It tends to deal in absolutes. It rests upon "the search for certainty". It addresses its audience at one time in terms of values which are stated for all times.[4] Uncomfortably for the law, times change: never more than at the present.

THE SPEED AND SCOPE OF CHANGE

It is neither appropriate nor necessary to list, even in outline, the enormous technological developments of our time. Suffice it to take one illustration. Since the rudimentary computer was invented in the 19th Century we have seen quite enormous developments that cannot but have implications for society and society's laws. In 1950 there were about 60 computers in use in the world. They were still "an intellectual toy, something for academics to play with and science fiction writers to speculate about".[5] In 1954 there were about 5,000 computers in use in the United States. A mere decade later, 30,000 computers were fully operative. In 1975 conservative estimates suggested that there were 85,000 computers in use in the world. Many said the figure was greater than 100,000. By 1980, it is expected that there will be 200,000 computers in use in the United States alone with annual sales of 18 billion dollars representing 14% of all of the equipment and machinery manufactured in that country. It is predicted that between 2 and 3 million people will work directly with these machines.[6] I have heard it said that by 1984 there will be

10 000 computers in use in Australia alone.

These changes are not limited to the numbers of units operating. In 15 years the speed with which average computer retrieval could be achieved has increased one thousand fold. The cost, which is the key to the proliferation of computerized information has dropped to one hundredth of the level it was at the beginning of the 1960s.[7]

In additon to these developments there are radical advances in technology that can no longer be dismissed as fictional. Who did not see the newspaper report of one scientist who recently predicted that future generations of humans will have computers embedded in their person to complement and supplement the capacities of the human brain? I have been told that at Stanford University research is progressing satisfactorily upon a project to develop a computer that will respond to E.E.G. impulses. No longer will it be necessary manually to retrieve information. The merest thought of the desired information and it will be supplied.

In an age that confronts changes such as this, in only one avenue of scientific and technological endeavour, who can doubt that we are suffering from a kind of technological "jet lag": let it be called "future shock" or something else?[8] The symptoms of physical, psychological and other dislocation that can be seen in individuals may also be detected in social collections of individuals. It can be seen in Australia today.

THE IMPLICATIONS OF CHANGE FOR THE LAW

What have all these changes got to do with the law? A first answer is obvious. Laws which were developed with given knowledge of human affairs may become outmoded, irrelevant or even counterproductive when set alongside scientific and technological developments. I shall illustrate each of these categories later. The law can accommodate them by change and reform.

Many will see much more important issues at stake than modernization and adaptation of particular laws in the context of computers. The Canadian Task Force on *Privacy and Computers* put it this way:

> "The enormous technological capabilities of computerized information systems can...raise certain threats to important human values...like privacy...which are integral to our very conception of what is to be human".[9]

Although this statement came in the context of computers and privacy, it could equally be applied in many other areas, as I shall show. Substitute for the word "what it is to be human" the word "what it is to be an individual" and "what it is to live in a free society" and you have the statement of the problem posed for legal systems by the radical advances of science and technology of recent years.

Until now we have assumed that scientific progress and technological advancement are good things. Only lately had our society begun to do some real social costing. The real cost of the disposable can, of the motor car and of the destruction of historic buildings cannot be measured in simple terms. It is wid recognised that scientific and technological change may promote far greater efficiency but may not for that reason be acceptable when measured against the social values that are destroyed. This leads many to suggest that the law will have an increasing role in re-asserting against the scientist and technologist, the standards which society counts as important.[10]

RESPONSES TO CHANGE

With such a variety of changes occurring, it is not surprising to see varying reactions to the velocity of change. Charles Reich in *The Greening of America* describes the response of many of the young generations to the pace of change.[11] Many simply opt out or "drop out". They seek an easier, slower, simpler life style, one radically different from the work ethic that until now has been fairly universally accepted in our society.

Another response is to attack the products of technology and science with an aim of destroying them. The concentration of data bases within connected computer systems may present vulnerable targets: vulnerable not only to internal abuse but also to external attack. Although I know of no true Luddite attack on technology in Australia, I understand that in Montreal, computers have been destroyed by people who objected to their implications both for individuals and for society as a whole.[12] I am sure that the spirit of "self help" is reviving and that we will see more of this, rather than less.

Some there are who resist technological and scientific developments either for reasons of principle or because it is much more comfortable and familiar to do things in the time honoured way. Sometimes, there is no doubt a mixture of motives. Into this category I would put the school of Anti Technologists a growing band whose influence is already felt in the law and will be felt increasingly in the future.[13] The whole movement for environment protection, the preservation of historic buildings and the prevention of mining and other development, demonstrate that the forces of resistance to change have muscle.

It would be wrong to think that resistance is always grounded in high principle and deeply felt conviction. Sometimes it is sheer cussedness. Sometimes it is nothing more than a natural human objection to changing well settled modes of behaviour. Often, the very fact that conduct has been ordered in a particular way for a long time builds up in the minds of those involved a conviction that the "usual" way of doing things is the "best" way. Sometimes, no doubt, it is. Sometimes, however, attitudes of this kind, in the law, hold up doggedly the advantages that could be procured from scientific and technological advances.

By way of illustration, I would mention the use of telephones to roster magistrat to hear appeals against police refusals of bail, the use of tape recording to preserve confessional evidence and the use of photographs or films to lay at rest disputes about the fairness of the conduct of an identification parade.[14]

Although some will opt out, others will actually attack change and others will resist the implications for the law of science and technology, the more usual reactions are otherwise. Perhaps nothing will be done. In this event legal rules and principles may be by-passed, ignored or become more and more irrelevant. Or attempts will be made to adapt and mould the law to accommodate change. It is in this last reaction, that Law Reform Commissions and like agencies are relevant. I propose, with illustrations from the past and current programme of the Australian Law Reform Commission, to demonstrate the contribution that a law reform agency can make to the resolution of the incipient tension between law and some scientific changes.

THE WORK OF LAW REFORM

The statutory function of the Law Reform Commission is to review modernize and simplify the law, to eliminate defects in it and to systematically develop it with a view to the adoption of new or more effective methods for administering the law and dispensing justice.[15] The methods and techniques adopted by the Australian Commission are referred to in the *Annual Reports* of the Commission and need not be recounted here.[16] It is sufficient to say that the Commission has taken its stand in favour of public and expert involvement in the framing of laws that would be inappropriate, impossible or at least extremely difficult in the more orthodox sources of legal change: the Departments of State and Parliamentary Counsel's Office.

In all of the Commission's References attempts have been made to gather representative experts in a range of disciplines relevant to the matters referred to the Commission.[17] Thus, in the report on *Complaints Against Police* the consultants appointed to assist the Commissioners included a chief superintendent of police, two academic writers and a federal judge. Many more like consultants were appointed for the report on *Criminal Investigation*. The report *Alcohol, Drugs and Driving* was prepared with the assistance of a large number of correspondents overseas and a wide range of experts from all parts of this country. They ranged from a professor of inorganic and physical chemistry to an instrument scientist, an expert on road safety, a Reader in forensic medicine a professor of analytical chemistry, experts in the treatment and rehabilitation of drug dependent persons, medical officers working closely with police as well as academic and professional lawyers.[18] The Reference, which is current, on *Consumers in Debt* has seen the appointment of the judge of a State Credit Tribunal, an officer of the Federal Bankruptcy Administration as well as persons

w. relevant backgrounds in academic life, the finance industry and voluntary agencies involved in financial counselling to the poor. The *Privacy* Reference has required the appointment of experts in computers, just as the Reference on *Human Tissue Transplants* has necessitated help to the Commission from medical practitioners with a wide range of skills in all aspects of transplant surgery. Each of the References which the Commission has received from successive Commonwealth Attorneys-General has required it to accommodate the interface of law, science and technology.

LAW REFORM CATCHING UP WITH SCIENCE

Many of the tasks committed to law reform bodies represent efforts to ensure that the law accommodates itself to scientific and technological change. The Reference on *Privacy* currently before the Australian Law Reform Commission is a good case in point. Whatever the precise content of the concept of privacy, there can be little doubt that technological developments pose distinct threats to privacy. The development of surveillance devices, the miniturization of listening devices, the growth and proliferation of computers already referred to plainly have implications for the "right to be let alone".[19] Less anonymity, less reserve, less solitude and less intimacy are possible in a society which would tolerate unrestricted use of these wonders of science.[20] But if the law is silent there will be no relevant regulation. Self-discipline based upon principles of "fair play" and "decent standards" will amount to a puny shield against a determined intruder with unlimited access to computerized data or the most modern instruments of optical and other surveillance.

One strength of the common law has been its adaptability: its capacit to mould rules for the regulation of human conduct, by deduction and analogy, for other general principles. But this is not always possible. In the area of privacy protection, the decision of the High Court of Australia in *Victoria Racing and Recreation Grounds Co. Ltd. v Taylor*[21] would appear to hold that "however desirable some limitation upon invasions of privacy might be, no authority was cited which shows that any general right of privacy exists".[22] Although a general residuum of privacy might exist in the theory of British constitutional freedoms, when it comes to the test, there is no mechanism available generally to initiate redress for intrusions into privacy from the traditional quarter, namely the courts. The Commonwealth Attorney-General, Mr. Ellicott, has rightly said that in its initial dynamic the common law expressed the true spirit of law reform: law and lawyers responding to new situations demanding just solutions.[23] Although inventiveness does survive today, for privacy protection, at least, this avenue of redress was stillborn. Therefore, if remedies, sanctions and social standards are to be found, they must be fashioned elsewhere than in the courts.

The Canadian Task Force on Computers and Privacy proposed the creation of a Federal Board to lay down regulations and administer legislation, including the licensing of all data banks, the classification of information, the control of links between data banks, the control of output of information and the provision of an individual right to verify or seek amendment to computerized data.[24] A recent Bill introduced in the Canadian Parliament proposes the establishment of a Privacy Commissioner within the Canadian Human Rights Commission.[25] He would have power to receive, investigate and report on complaints from individuals concerning information about them recorded in Federal Government data banks.[26] A New Zealand Bill, recently introduced, envisages a role in privacy protection for the proposed New Zealand Human Rights Commission.[27] Legislation in four States of Australia already governs the use of surveillance devices such as listening devices. Certain Commonwealth laws control telephone tapping.[28] The picture that emerges is one of piece-meal legislation which especially lacks effectiveness in a large federation with the additional problems of trans-border movement of information.

The point for present purposes is that general principles of common law are either silent or inadequate to protect privacy of individuals against the burgeoning growth of intrusive technology. Present statutory rules are likewise inadequate, selective or ill-focused. The task before the Law Reform Commission is to suggest laws that will provide comprehensive, workable, enforceable restrictions to limit the potential for privacy intrustion that undoubtedly exists in the present scientific developments that have been mentioned.

I know that some will wring their hands and say that it is all too difficult. The Constitution imposes limits upon what the Commonwealth, acting alone, can do. The experience of recent developments teaches, if nothing else, that it is difficult to foresee the extent, let alone the nature of future technological triumphs. The very expertise of the people involved and the inherent limitation upon any lay discipline of the mysteries of science in action, need not be elaborated.

Allowing for these difficulties, are we simply to abandon the endeavour? Surely not. The law should seek to articulate the civilizing standards of society. It must come to grips with these new problems, as best it can: stating standards, providing machinery of supervision and means of enforcement of these standards. Jacques Ellul, a French sociologist has said:

> "that it is to be a dictatorship of dossiers and data banks rather than of hobnailed boots will not make it any less a dictatorship".[29]

I s because this peril is recognised that most Western countries at the moment are seeking to provide machinery that will protect the privacy of the individual. In Australia, this task has been assigned to the Law Reform Commission.

I have dwelt on privacy but there are many other law reform projects which illustrate the endeavour of the law to accommodate itself to science and technology. The protective rules against the admission of hearsay evidence and secondary evidence in courts of law become irrelevant and indeed obstructive in a society in which so much information is no longer collected in primary written records but by computer tapes. Reform of the laws of evidence are therefore necessary to deal with information gathered in this form.[30]

Leaving entirely the subject of computers, the *Defamation* Referenc currently before the Commission illustrates another problem posed for the law by the developments of science. At the time of the Constitution, it could fairly be expected that a defamatory statement in one locality would be limited in its effect to that locality, and certainly to that State. It is no longer so. Not only have aircraft and other fast means of transport vastly increased the distribution of published literature. The developments of technology, not conceived at the time of federation, have positively made the localisation of defamation laws, the source of much legal mischief. By developments of technology, I refer to the national broadcasting systems which can distribute oral defamation instantaneously in a number or all of the eight separate jurisdictions of the country. But I also refer to teleprinting and telefacsmile, telex and the use of inter-state telephones all of which make State borders an irrelevant or mischievious consideration for this area of the law. The mischief I refer to is the confusion, uncertainty and timidity that arises from the plethora of different defamation laws currently in force throughout Australia.[31] The Law Reform Commission's Reference requires it to explore the means of overcoming the problems for the law and for society posed, ultimately, by the technological advances that I have mentioned.

The Reference on *Human Tissue Transplants* likewise obliges the Commission to face up to developments of medical science and surgical techniques that make the law, as it stands, irrelevant or positively obstructive. Before the developments of modern means of artificial means of respiration persons were regarded as dead when their heart stopped beating. This was because the other processes of death (including irreversible cessation of brain function) automatically followed within a matter of minutes, if not seconds.[32] Nowadays, as recent celebrated cases here and overseas plainly demonstrate, irreversible cessation of brain functions can occur but the heart may, by artificial means, be kept beating. Is such a person to be regarded as "dead" or "alive" for the

p oses of the law? Is a decision to remove artificial respiratory aids from such a person a decision to "murder" him or the only humane and dignified thing to be done in the circumstances? Who ought to make such decisions? In the context of transplants and the need for donors of organs, what protections ought the law to provide, to ensure that conflicts of interest do not arise between those attending to the donor and those whose first duty is to the potential recipient of an organ?

Rapid developments in immunology are just around the corner. It is certainly not too much to expect that within the foreseeable future it will be scientifically possible to develop a foetus artificially and to promote genetic planning of a highly selective kind. But should questions such as this be left to the narrow group of scientists or experts who, with all good will, may be blinded by the technical advances from seeing the social implications of what they are doing?[33] Although the current Reference before the Law Reform Commission on *Human Tissue Transplants* does not raise all of these questions, it raises enough of them to bring the law far beyond the primitive rules of assault and battery, murder and the rights to the body of the legal personal representatives. The questions that have to be faced up to are complex, sensitive, even hurtful. Some in the medical profession will seek to keep the law out of these questions. But the issues of life and death, of human dignity and respect are too important for the law to forfeit its role of educator and guardian. Law reform bodies can help the law to find a proper role.

There are many other instances that one could mention here. The Report of the Commission on *Alcohol, Drugs and Driving* was at pains to deal with the implications of research into drugs for the detection and treatment of drug dependent motorists or motorists affected by the consumption of drugs.[34] Because this is a growing problem for road safety, the Commission proposed that, subject to proper pre-conditions and methods, body samples should be required to assist in the detection of drugs.[35] Equally, the advances in the treatment and rehabilitation of people, including drivers with drug problems and alcohol dependants, call for new approaches in the law beyond the punitive. That is why in its report on this matter, the Commission proposed a number of changes that acknowledge the advances that have been made, however tentative they may be at this stage, and seek to take advantage of them: for the individual but also for society.[36]

LAW REFORM UTILIZING TECHNOLOGY

So far I have concentrated on the efforts made to ensure that the law catches up to the implications of science and technology. But this is largely a negative thing: either recognizing and legitimizing events that are happening and will probably continue to happen anyway or seeking to regulate

a: prevent the insupportable implications of developments which society is not prepared to tolerate. I want to end on a more optimistic note. Law reformers can, on occasions, actually utilize the developments of science and technology in the discharge of their functions. The Australian Law Reform Commission has already done so and, mindful of its statutory purpose to modernize and simplify the law, and to make it more effective,[37] will seek, with inter-disciplinary assistance, ways in which science can come to the aid of the law.

It is in the Commission's fourth Report *Alcohol, Drugs and Driving* that the opportunities were most clearly stated:

> "How is the law to deal justly and promptly with those members of society who potentially or actually endanger themselves and others by driving a motor vehicle after having consumed a relevant amount of alcohol or other drug?...The answer [to this question] will require an examination of scientific instruments that have been devised for the specific purpose of putting at rest many old court-room controversies. New questions are raised concerning the proper faith that may be put by the law in machines, given that the consequences may visit criminal penalties upon the accused. These questions point the way for other likely advances in the law in years to come. It is therefore important that at the outset we should get right our approach to these novel legal developments".[38]

In the course of this report, the Commission examined the development of the Breathalyzer and other like scientific implements, produced to substitute empirical scientific findings for the vagaries of opinions as to sobriety. The control of drinking and drug affected drivers on our roads is a major social obligation. Indeed, it is the very size of the social problem that justifies the leap taken by the law to resolve criminal liability of the citizen by reference, and only by reference, to the findings of a breath analyzing instrument.[39] But unless such an instrument had been developed it is difficult (considering the numbers now being processed before our courts) to conceive how this anti-social behaviour could possibly have been dealt with by the regular procedures of the criminal justice system. If the cases now being determined by Breath analysis evidence were to revert to opinion evidence of policemen and others there would be a breakdown in the enforcement of society's self-protecting standard controlling the mixture of driving and drug consumption. Indeed, the very initiating cause of the Reference of this matter to the Commission was the collapse of the present *Motor Traffic Ordinance* of the Capital Territory, based upon a number of decisions of the courts upon its meaning.[40]

In addition to satisfying itself about the reasonable reliability of breath analyzing equipment and its fairness to the accused, given the context of our criminal justice system, the Law Reform Commission went further to utilize technological developments. The most modern Breathalyzers, not currently in use in Australia, contain facilities that can "print out" the result of the breath analysis test. The Commission recommended that this model breathalyzer, which was demonstrated to it, should be used "wheverever possible" (para. 292).[41] The Commission was also of the view that a triplicate serialized "print out" certificate should be used so that one copy could be given to the accused, one retained by the police and the third available for tender at court. (para. 293).[42] Apart from facilitating the notification of rights and obligations, it was hoped that such a certificate would utilize technology to dispose of one more area for dispute, namely the precise reading of the instrument, presently required by visual examination of an arrow against a scale.

In its Report, the Commission was at pains to stress that past experience had taught this much: that future developments in technology are inevitable and that marrying a statute to a particular instrument or device is undesirable and even dangerous. One of the many problems in the *Motor Traffic Ordinance* which was under review arose from fairly specific requirement contained in the statute concerning the operation of particular breath analyzing instruments. The Ordinance had no sooner been passed than the instrument describ in detail in its pages, was superseded. Laws are not so readily changed as technology. Amendments compete for scarce parliamentary time. Accordingly the Commission recomended that:

> "The Ordinance should permit the use of other breath analyzing equipment as it is developed. It should avoid restricting...police, as they are now, to particular implements which time and scientific advances will render outmoded. The object of the Ordinance should be to encourage the use of the most modern and acceptable methods of breath analysis. The police should not again be wedded to a particular instrument which, in the space of a year of the Ordinance was already superceded. The Minister should be empowered to approve by notice published in the Gazette other suitable devices and instruments for screening tests and breath analysis" (para.294).[43]

The report on *Criminal Investigation* also sought to utilize, in the police investigation process, the advances of modern science. In the Foreword

t he report, I stressed this approach:

> "The reforms should be seen as part of a total scheme to modernize and rationalize this area of the law...The thrust of the Commission's proposals is towards recognizing, controlling and using, in the interest of the accused as well as the authorities, modern technology: tape recorders, telephones, telex, computers and copiers". [44]

When one considers the debates that surround confessional evidence and the time of courts taken to resolve these debates, it is impossible to doubt that some at least of them could have been avoided by the use of tape recording devices. Especially in a large country, such as Australia, and in remote districts, it is difficult to believe that telephones should not be specifically recognized as appropriate instruments for permitting, indeed encouraging, judicial superintendence over police decisions on bail, searches and so on.[45] Recent cases and other enquiries emphasise the potential for injustice in identification parades.[46] Why should not photography or even film be specifically recognized and required as a means of satisfying the court that the identification procedure was fairly conducted?[47] We pride ourselves on the fact that our criminal justice system would prefer the release of many guilty men than to punish one innocent accused. Yet recent cases cast doubt upon the effectiveness of the system in achieving this end.[48]

It has been said that the police are "unalterably" opposed to sound recording of confessional evidence and other suggestions made to call in aid the devices of modern technology. Part of this resistance is doubtless based upon objection to what must seem as cumbersome and unnecessary procedures. Part may be based upon resistance to change itself. Present methods have endured so long that they have many supporters in police ranks. Just as the law and lawyers must accommodate themselves to technological advances, the police will have to do so. Resistance to the use of methods that can fairly end controversy are bound, in the end, to fail.

Even in the methods of law reform, it is important to be alert to the opportunities of technological development. The *Privacy* Reference specifically calls upon the Commission to review Commonwealth and Territory legislation and to test it by proper standards of privacy observance. There is perhaps a certain irony in the fact that the Commission will use in this endeavour the computerized Commonwealth statute book.[49] It will extract by computer technology those provisions of Commonwealth statutes that may have implications for privacy intrustion. Retrieval of legal data by computer means will undoubtedly allow law reformers of the future to proceed with greater

rance and certainty. There will be less chance of a reform in one area merely creating unexpected and unthought of problems in another.[50]

CONCLUSIONS

In truth this leads to the conclusion. Law is of necessity a force for stability and certainty in the world. Part of the crisis in the law is the world's growing uncertainty and instability. The processes of change are fed by remarkable advances of science and technology, a great number of them in our own time: many of them within the last decade. The law states society's standards. So dazzling have been the changes and with such speed have they occurred that the law has in many areas fallen far behind. This indisputable fact raises serious questions about the ability of the parliamentary process and legal decision making to cope with the accommodating changes that are and will be necessary. But that is a separate subject for separate debate.[51]

For present purposes the point that has to be made is only this. One of the mechanisms that has been developed by Parliament, in a self-preservation instinct, if you like, is the Law Reform Commission. Its function, in matters that are referred to it, is to assist Parliament to review, modernize and simplify the law. It has a special function to accommodate the law to scientific and technological changes because of its statutory duties and the way in which it goes about its work.

Already the Law Reform Commission has shown by its Reports that the law can not only face up to the implications of technological change but can positively use scientific developments to advance justice in society. The current programme of the Commission has required it to face squarely many and varied scientific developments. These in turn raise fundamental questions about the nature of the society we want to live in and the interests and values we want to preserve and protect. Identifying some of these problems and then fashioning the legal instruments that will accommodate the law to change are surely tasks worthy of a national Law Commission. But are we doing enough?

FOOTNOTES

Paper delivered to a seminar on Science, Technology and the Law conducted jointly by Monash University and the Law Council of Australia at Monash University on 27 January 1977.

* Chairman of the Law Reform Commission of Australia.

2. J.S. Grafstein "Law and Technology - Emerging New Legal Environment: Trends Towards Technological Assessment", Paper 16, the Canadian Bar Association Programme on *"Computers and the Law: Emerging Issues"*, 21 Oct. 1976, *mimeo* p.2.

3. The gap between man's perception of the myriad of socio-economic problems and his ability to meet them through a system of laws drafted much earlier is referred to in L.H. Tribe "Technology Assessment and the Fourth Discontinuit The Limits of Instrumental Rationality". 46 *S. Calif. L. Rev.* 617 (1973); see also "Electronic Funds Transfer in Iowa" 61 *Iowa L. Rev.* 1355 (1976).

4. *Ibid.*

5. Cited by E.P. Hartt "Some Thoughts on the Criminal Law and the Future", George M. Duck Lecture, University of Windsor, Canada, *mimeo*, 5 April 1972, pp.5-6.

6. D. Wilson "Computerization of Welfare Recipents" 4 *Rutgers Jo. Computers and the Law* 163 (1974).

7. D. Malamet "Privacy in the Computer Age: The Challenge of a New Technology to a Basic Right", unpublished thesis, *mimeo*, May 1976 pp.4-5; K. Karst, ""The Files": Legal Controls over the Accuracy and Accessibility of Stored Personal Data", 31 *Law and Contemporary Problems* 342 (1966).

8. P. Sieghart, *Privacy and Computers* 1976 p.41, Table 3, *Cf.* "The computer's private eye" *The Economist*, 30 October 1976 p.18.

9. A. Toffler *Future Shock*, 1970 p.2.

10. Canadian Privacy and Computers Task Force *Privacy and Computers*, 1972, p.10.

11. N. Griswald "The Right to be Let Alone" 55 *North Western Univ. L. Rev.* 216 at p.226 (1960).

12. C.A. Reich *The Greening of America*, 1970.

13. Grafstein, p.9. The reference is to the destruction of computers at Sir George Williams in Montreal.

14. Among the "anti-technologists" I would number Illich, Schumacher, Asimov, Mishan and, on a more modest level, leaders of the consumer movement, supporters of "green bans" and so on.

15. All recommended in the second reports of the Australian Law Reform Commission *Criminal Investigation*, 1975. See below.

16. *Law Reform Commission Act* 1973 (Cwth) s.6 (1).

17. The Law Reform Commission *Annual Report, 1975* A.L.R.C.3 pp.40ff; *Annual Repo 1976*, A.L.R.C. 5 pp.47ff.

18. On the importance attached to the use of consultants and experts, see A.L.R.C. p.48.

8. The Law Reform Commission, *Alcohol, Drugs and Driving, 1976*(A.L.R.C. 4), p.xiii

9. This definition of privacy originated with Judge Cooley's text on the *Law of Torts*, seconded 1888.

10. These are the multiple facits of privacy detected by Professor A.F. Westin *Privacy and Freedom*, 1968.

11. (1937) 58 *C.L.R.* 479.

12. *Ibid*, Latham C.J., p. 496.

13. R.J. Ellicott, opening address of the Third Law Reform Conference, Canberra, 1975 cited A.L.R.C.5 p.39.

14. Canadian TaskForce, *Privacy and Computers*, pp.183ff.

15. Bill c-25 *Canadian Human Rights Bill, 1976*, in clause 57.

16. *Ibid*, clause 58.

17. *Human Rights Commission Bill, 1976* (New Zealand).

18. *Listening Devices Act, 1969* (Victoria); *Listening Devices Act, 1969* (N.S.W.); *Invasion of Privacy Act, 1971* (Queensland); *Listening Devices Act, 1972* (South Australia).

19. Cited A. Miller "The Dossier Society", *Uni. of Illinois Law Reform* 154 at p.158 (1971).

30. *Evidence (Amendment) Act, 1976*. This subject is dealt with in a number of law reform reports, e.g. N.S.W. Law Reform Commission's Report on *Evidence, 197*; Queensland Law Reform Commission's Report on *Evidence, 1975;* Tasmanian Law Reform Commission's *Report and Recommendations on the Evidence Bill, 1975 (Micro Film and other Reproductions).*

31. *Cf.* R.J. Ellicott "National Law Reform and the Role of the States" cited in A.L.R.C. 5, p.8.

32. A recent article on the problem for the law in these scientific developments is "The Tragic choice; Termination of Care for Patients in a Permanent Vegetative State" 51 *N.York Uni. L. Rev.* 285 (1976).

33. Grafstein p.19, Weeramantry p.249.

34. A.L.R.C.4, pp.94ff.

35. *Ibid* p.131.

36. *Ibid* pp.154ff.

37. Above, n.15.

38. A.L.R.C. 4, p.1.

39. *R. v Curran* [1971] 1 *W.L.R.* 87, reviewed in (1976) 92 *L.Q.R.* 163 p.164.

40. A.L.R.C. 4, pp.10ff.

4 *Ibid*, p.125.

12. *Loc cit.*

13. *Ibid*, p.126.

14. A.L.R.C. 2, pp.xiv-xv.

15. *Ibid*, p.81 (bail appeals); p.95(search warrants); p.51 (authorization of finger printing); p.47 (communication with a lawyer); p.57 (authorization of medical examinations).

16. National Council for Civil Liberties (England), *Identification Parades and Procedures, mimeo*, 1974; Report of the Departmental Committee on Evidence of Identification in Criminal Cases (Lord Devlin, Chairman); H.C. 338, 1976.

17. This is what the Commission recommended. A.L.R.C. 2, p.54 "this view is taken consistently with the theme, appearing elsewhere in the Report, that the time has come to recognize in the statute book the significant technologica advancements of the times". For the time being, photography was recommended.

18. C.P. Hain *Mistaken Identity*, 1976; Identification Evidence (1976) 126 *New L.J.* 729.

19. See the report to the Australian Attorney-General by the Committee on Computerization of Legal Data, March 1974

0. A constant problem for law reformers see, e.g. P. James "A Cross-Fertilization Failure in Reform" (1976) 126 *New L.J.* 208.

1. *Cf.* A.L.R.C. 5, pp.10,13.