THE AUSTRALIAN SEVENTH INTERNTIONAL SYMPOSIUM

ON THE FORENSIC SCIENCES

SYMPOSIUM DINNER, SYDNEY, 10 MARCH 1981

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LAW, SCIENCE AND TECHNOLOGY

We are living in a time when science and technology are changing the face of society as never before. Such a pace of change presents special problems for lawmakers and those who advise them. Putting it broadly, the three chief scientific and technological forces that are at work in the world today may conveniently be collected under the following heads:

- Energy sciences
- Biological sciences
- Information sciences

No task has yet been assigned to the Australian Law Reform Commission concerning the impact of the law on the energy sciences. There is no doubt that energy law, and specifically nuclear law will be a growing issue for lawyers and law reformers of the future. The Law Reform Committee of South Australia has produced a report on the legal implications of solar energy.[1] The report examines changes in the law that would be needed to cope with the energy crisis, to adapt to the changeover to new forms of energy and to promote maximum use of solar energy. Reforms in building design, access to light and sun and planning codes were suggested. In the United States, legislation has already been enacted to confer so-called 'sun rights'.

Even more puzzling and difficult are the problems presented to the law by the remarkable advances of the new biological sciences. In a sense, our capacity and inclination to question the directions of biological sciences is a great achievement of humanity.[2] In this area we have already seen many vigorous public debates. They have ranged from the laws which should govern abortion to the laws on voluntary euthanasia and the so-called 'right to die'. Within the past year, test tube fertilisation and artificial insemination generally have caught public attention in Australia.

But other developments, about which the law is currently silent, stand in the wings. The possibility of human cloning is one. The alleged development of an animal/human symbiont in China is another. The use of host or surrogate mothers is yet another. Our generation is the first after millions of years to contemplate radical interference with the random ways of nature.

One project of the Australian Law Reform Commission required us to face squarely some of the implications of biological advances. I refer to the report of the Commission on human tissue transplantation.[3] Two participants in that report were Sir Zelman Cowen, then a part-time Commissioner, and Mr. Justice Brennan, one of the first Law Commissioners and now, recently, elevated to the High Court of Australia.

The Commission had to deal with the definition of 'death' for legal purposes in a world of hospital ventilators which could artificially sustain blood circulation and respiration. Also examined was the issue of donations by minors to brothers or sisters of non-regenerative tissues, such as a kidney. The Commission also had to consider whether a regime should be adopted in the law of Australia by which all citizens, at their death, are taken to be donors of suitable organs and tissues, unless they have registered an objection in their lifetime. Such a rule has been adopted in several of the countries of Europe. Legal authorisation for the retention from coroners' corpses of the human pituitary, was another issue addressed. The report of the Law Reform Commission was accepted in three jurisdictions of Australia and is still under consideration in the remainder. The role of the Commission was to act as a catalyst. In interdisciplinary discussions and by a process of public debate and consultation, a report was produced identifying the policy issues for our law makers and helping Parliaments to grapple with some of the problems of reform produced by new technology.

The third technology which I have identified is the technology of information. Any layman can observe the rapid penetration of Australian society by the computer, the word processor and telecommunications. A number of implications are posed for our community and for its laws. Amongst the problems to be faced are:

- the impact of the new technology on unemployment, with the social breakdown and disruption this can cause;
- its impact on national security and defence in a world of inter-connected data bases;
- its results on national language and cultural independence;
- the greater vulnerability of the computerised society, at risk from industrial dislocation, terrorism and simple accident, fire, mistaken erasure, and accidental destruction of critical tapes.

One of the tasks that has been given to the Australian Law Reform Commission is the design of new laws for the protection of privacy in the computerised society. Science and technology presents many threats to privacy in today's world. They include telephonic interception, hidden cameras and other forms of surreptitious surveillance. But overwhelmingly the concern of Western communities is that the computerisation of personal records will diminish the control which the individual has over information about himself. This is not just a local debate. It is one of recognised importance throughout the Western world.[4]

THE LAW USING SCIENCE AND TECHNOLOGY

So far I have spoken of the problems which the technological society presents for the law. There are many more I could mention, some of an institutional character. The law tends to speak to each generation in the language and of the values of previous generations. Lawmaking institutions move slowly. Technology waits for no lawmaker. The 'time cushion' which used to exist within which the lawmaker could consider the implications of change for the law, has been rapidly reduced in recent years. What are needed are new institutions that can help parliaments and the Executive to adapt, modernise and simplify the law as it is affected by scientific change. One of the reasons for the establishment of law reform commissions is to do precisely this: to help the lay parliament to cope with change, including technological change. Though the resources of the Australian Law Reform Commission are small — a research team of eight working on as many major projects of national law reform — we have gone out of our way to secure the participation in our work of experts, relevant to the subject under inquiry. Thus, in our most recent task on reform of the law of evidence, we have a team numbering judges, barristers, legal academics, a senior police officer and an academic psychologist. In our project on human tissue transplants, we had consultants from every relevant branch of the medical profession. But we also had a Catholic and Protestant theologian, and a professor of philosophy to help us. In our project on privacy protection, we have expertise from the social sciences, computing sciences, the media, psychologists and so on.

In all of our works, we 'go public'. Reform of the law is not only too important to be left to lawyers. It is too important to be left to the experts. Ultimately law reforms must run the gauntlet of parliamentary debate. That is the reason for our endeavour to attract widespread public discussion of everything we do. It is the reason for the use of print and electronic media.

One of the themes that runs through our work is the importance of the law taking the fullest advantage of science and technology, both in its procedures and in its substantive rules. We practise what we preach. The Commission itself is utilising the computerisation of Federal statutes. Thus in our project examining the ways by which we could secure greater consistency in the punishment of Federal offenders, we utilised the computer to show the gross disparities and inconsistencies between punishments provided in the Federal statute book. The need for securing consistency and the utility of the computer to help us do so is not limited to the statute book. Inconsistencies exist in the punishment of Federal offenders, convicted in different parts of Australia. To reduce these disparities, which undermine the equality principle of justice, the Commission proposed a number of remedies, including appeal to a common court (the Federal Court of Australia) and the provision of guidelines to bring greater consistency into the exercise of the judicial discretion in sentencing.[5]

Leaving aside institutional considerations of this kind, the Commission has also been at pains to incorporate in its reports a full recognition of the need for substantive laws to embrace the use of modern technology to set at rest debate about evidence relevant to the issues for trial.

Our fourth report, Alcohol, Drugs & Driving[6], addressed the intractible problem of antisocial conduct that has accompanied the automobile society. To natural and inevitable perils of fast transport are added the special dangers which result from the conduct of intoxicated drivers, affected by alcohol and, now, increasingly, other drugs. As in all of its tasks, the Commission had a panel of consultants to help it to balance the conclusions. In this case they included the late Dr. N.E.W. McCallum, Reader in Forensic Medicine in the University of Melbourne, and Dr. E.G. Wilson, Queensland Government Medical Officer. We also had the closest support and assistance from officers of the Australian police forces, Federal and State. The report endorsed the use of the modern Breathalyser and extended the facility for the taking of blood, skin and other body samples for the scientific detection of intoxicants to which the Breathalyser is not specific. The Commission's report was adopted in substance and now forms the basis of the law in the Capital Territory. It cannot be said often enough that but for the invention and use of the Breathalyser, we would simply not have been able to cope in the courts, even as inadequately as we do, with the proof by oral testimony of the circumstances surrounding intoxicated driving. Not only has the Breathalyser laid at rest many pointless disputes, irrelevant to the real social issue at stake. It has done so in a way that produces consistency of decision-making and an assurance of fairness and reliability that cannot always be matched by oral testimony, with its notorious problems of perception and memory.

THE TAPE RECORDER ISSUE

In an earlier report, Criminal Investigation, the Law Reform Commission proposed many reforms designed to facilitate the use of science and technology, in a like way, to put at rest disputes relevant to the guilt or innocence of the accused. One proposal was for a facility for telephone warrants to authorise urgent police searches and arrests.[7] This proposal has now passed into law in the Northern Territory of Australia. There can be little doubt that it will be adopted elsewhere as a means of retaining the benefit of independent judicial scrutiny of serious police actions, whilst acknowledging the needs of police to act promptly in a country which is specially subject to the tyranny of distance.

Many other proposals were contained in the report. One of them suggested the use of photography to record an identity parade and to place before the jury the way in which the accused was identified, where identity is in issue.[8] The common law already acknowledges the special dangers of convictions based on identity evidence.[9] A need to protect against wrongful convictions on erroneous identification evidence cannot be met entirely by the facility of photography or even video recording. But a start must be made. Placing before the tribunal of fact (judge or jury) the actual evidence may be infinitely preferable to a courtroom debate, months later, concerning what people think occurred.

A central endeavour of the Criminal Investigation report is to deal with the problem of confessions to police. The report proposed that just as police in the '60s had adopted the Breathalyser and used it with powerful effect, so in the following decade, they should come to use recordings of interrogation: putting before the judge and jury or magistrate not a recollection long after the event, nor even a typed epitome, but the actual conversation between interrogator and suspect. The proposal of the Commission found favour with the Government. The Prime Minister rightly told a legal convention that this was an area in which there had been a lot of talk, much academic writing but not much action.[10] Attorney-General Ellicott introduced the Criminal Investigation Bill 1977. It stopped the talking. It proposed tape recording of interrogations by Federal police. The Bill has lapsed. But a companion piece dealing with a fair and independent system for complaints against Federal police, was this month introduced into Federal Parliament.[11] The general approbation which has greeted this measure, based substantially upon the report of the Australian Law Reform Commission and also upon initiatives taken by the Commissioner of Federal Police himself, encourages me to believe that we may now turn back to the rather more difficult issue of the code of conduct that should govern Federal police engaged in criminal investigation. This code should not be uncertain. It should be available to public and police alike in the form of an Act of Parliament. It should not, as now, be hidden away in obscure case books and unavailable police instructions.

In his latest message to the Police Force of Victoria, Chief Commissioner Miller has taken justifiable pride in the way police forces are adapting to the world of technology:

> It is only in the last decade that we have seen the advent of personal radio, computerisation, increased mobility, police aviation, crime intelligence, strategy planning, operations analysis, sophisticated training programmes and other operational and administrative refinements. [For] ... half the members of the Force, these are not innovations but established features of the organisation they joined.[12]

It is my hope that before too long, the Chief Commissioner and his colleagues in the other Police Forces of Australia will add to this proud list, and to the other justifiable reasons for satisfaction with forensic advances, the gradual implementation of sound and video recording of police interrogations.

It will come. It is only a matter of time. The process has already begun. In 1980 one Victorian Supreme Court judge tried a charge of murder at Wangaratta. The offence had been investigated by the local detective. Everything had been recorded on a portable tape recorder. The result was that from the first statement which the accused man made to the police within a few minutes of the death of the victim, until the end of the police interview, everything was on tape. The tape was played at the trial. The result was that there was not a single challenge by the defence to one word of the police evidence as to the confessions. It was, I believe, a very good example of the advantages to the police force of recording the whole of their conversations with accused persons.

In another case last year, Mr. Justice McGarvie presided at the trial of one McIntosh, accused of involvement in an armed robbery. The case of the Crown depended substantially on confessional evidence. During the trial it emerged that someone had turned on the tape recorder at a time when other members of the armed robbery squad did not expect it and would have regarded it as inappropriate. The tape was called for in the trial. The defence used the tape to support allegations that the evidence of alleged confessions was unreliable and indeed false. The accused was subsequently acquitted by the jury. At the conclusion of the case, Mr. Justice McGarvie made a statement to the jury. I think it is worth calling to general notice some of the comments his Honour made:

> This jury has had an experience with regard to records of interview and tape recording which very few juries have had. You have had the opportunity of hearing a tape recording of certain information being obtained from an accused person and typed on a typewriter. It was an issue in the case whether that information related to information being obtained for a fingerprint form or whether it was the start of the record of interview. I say no more than that you have had a very great advantage in having before you a tape recording which must have been of considerable assistance to you in reaching your decision on this important issue.
>
> I would like to take the opportunity, because you are so conversant with this case, of telling you something about the opinions which have been expressed by persons of authority about the usefulness of tape recordings in the course of police investigations.[13]

Mr. Justice McGarvie then recited to the jury the long catalogue of judicial pronouncements, law reform reports and other observations which have over two decades now urged the adoption of sound recording as a security for police interrogation. Mr. Justice Sholl had said it in 1962. Solicitor-General Murray (now Mr. Justice Murray) had reported it in 1965. Justice Roma Mitchell and the South Australian Criminal Law Reform Committee had urged it in 1974. The Australian Law Reform Commission had urged it in 1975. In 1976 in the High Court of Australia, Mr. Justice Gibbs, now Chief Justice, had urged it. Three other members of the Court agreed. In 1978 the Beach report urged it. Even some observations of my own were read to the jury. Mr. Justice McGarvie went on:

> Mr. Foreman and members of the jury. You have had the unique experience of having, at first hand, experience of a case in which the tape recording of information being obtained from an accused person played a vital role. There has seldom been a case which more emphasised the weight and validity of the statements from those persons of authority that I have just read to you. If the equipment available in the office of the armed robbery squad at Russell Street had been turned on to record the whole of the interviews there of which evidence has been given, instead of being used only to record the read-backs of records of interview, the case you have just concluded would have been free of many of its uncertainties.[14]

Having been involved at the Bar in one case where the police in New South Wales used tape recording in a criminal investigation — a case involving an attempt to corrupt a police officer — I can only say that it is my view that when police become accustomed to the use of recording, they will find it a tremendous weapon in the hands of the Crown to do justice according to law and to fight crime successfully. Every pause, indecision, uncertainty, prevarication of the accused will be recorded, to be played before the court. The pauses in the typed record of interview and the cold print of a typewriter, will be replaced by the searching, objective scrutiny of the available modern technology. In the forensic, dramatic medium of the trial, I have no doubt that the recording will be a great weapon for the agents of society. It will also help to restore community confidence in the reliability of confessions and admissions and will do so in a way that is entirely apt for our time: by the acceptance and use of available technology.

I realise that some opponents of recording fear that tapes may be interfered with — giving rise to pointless correlative debates distracting from the real issues for trial. But here again technology will come to our aid:

- Already recorders exist which will superimpose a variable sound pattern as background to conversation. Any interference with the tape will be shown in disturbance of the pattern.

- More recently a device has been developed which will superimpose time lapse intervals upon the tape — making successful interference with a tape of continuous conversation next to impossible.

- Finally, multi tape recorders are now readily available permitting (as the Criminal Investigation Bill 1977 contemplated) instantaneous supply of a copy tape to the accused so that variations in the master could be readily disputed.

Objections on this ground cannot seriously be sustained. But the price of encouraging the use of tapes will be a greater willingness of courts to facilitate their admission into evidence — and where necessary new evidence laws that will speed the process.

The process has, as I have said, begun. The use of sound recording in homicide cases is now a commonplace in Victoria. It has always been fairly routine in police corruption cases. The courts' resistance to unsigned records of interview is now most pronounced. Only last week, in dismissing a special leave application in the case of Boyson, the Chief Justice of Australia (Sir Harry Gibbs) indicated the preference of the

High Court of Australia for judicial views resistant to the acceptance of unsigned confessions. The road ahead is clear. Forward-looking police will, in this area as in others, embrace the advantages which the new technology presents. Although the recent Royal Commission on Criminal Procedure in Britain shied away from the universal recording of all interrogations by police, it did so mainly on the grounds of costs and urged that experimentation should continue, especially with summary readbacks.[15] The Times, in its comment on the report, was unconvinced, describing this part of the recommendations as 'unnecessarily cautious' and the costs involved as 'relatively modest and ... only a very small proportion of the total budget for the administration of justice'.[16] Sound and video recording will come. The issue is simply one of time.

EVIDENCE LAW REFORM

Finally, a word about reform of the law of evidence: the latest task to be entrusted to the Australian Law Reform Commission. Although limited to Federal courts, we are working closely with State colleagues. There is no doubt that the time has come to consider anew the basic procedures of our trial system and the steps we should take to improve our unique and special way of resolving issues in courtrooms. The Commission has published a discussion paper.[17] I would welcome the identification of problems experienced in the proof of scientific matters before the courts. Among the issues under consideration are:

- our assumptions about human behaviour (particularly about memory and recollection) upon which many of our evidence laws are based;
- the acceptability in today's society of some of the rules which impede the proof of relevant matters by the application of rules competing with the quest for truth. The rules as to competence and compellability of spouses is one such matter. The privilege, in some jurisdictions, of doctors and priests is another. The entitlement to make an unsworn statement, in lieu of giving evidence, is yet another.
- the admissibility of computer evidence in a society in which increasing numbers of decisions are made on the basis of computer-generated material must not impede the proper opportunity to examine the accuracy and reliability of such evidence.
- The need to simplify complex evidence, whether business records, computer-generated or otherwise, may be the price we have to pay for the retention of the jury system and the continuous oral trial of our tradition.

CONCLUSIONS

Where does this leave us? We live in a time of great social and moral changes. The most relentless dynamic is that provided by science and technology. It presents special difficulties for lawmakers and law reformers. The nature of the law tends to be conservatising. In times of rapid change, our institutions are not well adapted to the needs of modernising the law and its procedures.

The Australian Law Reform Commission has been established to help lawmakers to cope with the 'too hard basket'. This we endeavour to do by processes of interdisciplinary consultation and public participation. A constant theme of our work has been the need to adapt the law to science and technology. The process is not always easy. People get set in old ways. The changes themselves are dazzling and difficult for laymen to understand. Legal institutions are resistant to change. The law finds science an uncomfortable bedfellow, with its remorseless concentration on empirical data. But a world in which everyday life is moved and influenced by science and in which the law stands still and rejects its implications is a dangerous world. It is dangerous for the rule of law itself. It is for that reason that I warmly applaud the work of the Australian Forensic Science Society, which brings together so many diverse disciplines and confronts them with the relentless implications of scientific advances. May the work of the Society and of this Symposium prosper.

FOOTNOTES

1. South Australian Law Reform Committee, Solar Energy and the Law in South Australia, discussion paper, 1978.

2. Sir Roger Ormrod, 'A Lawyer Looks at Medical Ethics', (1978) 46 Medico-Legal Journal, 18, 21.

3. The Law Reform Commission, Human Tissue Transplants (ALRC 7), 1978.

4. Notably the report of S. Nora and A. Minc, 'L'Informatisation de la Societe, (Report on the Computerisation of Society), Paris, 1978 (France), and Report of the Consultative Committee on the Implications of Telecommunications for Canadian Society (Clyne Report), Ottawa, 1979 (Canada). There are many other notable reports, particularly in Scandinavia. See, generally, Privacy Protection Study Commission, Personal Privacy in an Information Society, Washington, 1977 (United States) and Report of the Committee on Data Protection (Sir Norman Lindop, Chairman), Cmnd 7341, London, 1978 (United Kingdom).

5. The Law Reform Commission, Sentencing of Federal Offenders (ALRC 15) (Interim), 1980.

6. ALRC 4, 1976.

7. The Law Reform Commission, Criminal Investigation (ALRC 2), 1975, 95.

8. id., 53.

9. R v. Turnbull [1971] 1 QB 224.

10. (1977) 51 ALJ 342, 344.

11. Complaints (Australian Federal Police) Bill 1981 (Cwlth). See also Australian Federal Police Amendment Bill 1981 (Cwlth).

12. S.I. Miller, Chief Commissioner's Message in Police Life, Jan-Feb 1981, 3.

13. McGarvie J. in The Queen v. McIntosh, unreported, Transcript (17 October 1980), 1132ff.

14. id., 1135.

15. Royal Commission on Criminal Procedure (UK), Report, Cmnd. 8092, 1981.

16. The Times, 9 January 1981.

17. The Law Reform Commission, Discussion Paper No. 16, Reform of Evidence Law, 1980.