

topic area. I am not sure why the perspective is different from Mason's; in my opinion they are similar and complementary. Nonetheless, McFarlan provides a useful discussion on five broad research issues: how IS technology can be used as a competitive weapon; how the competitive environment influences IS strategy; how corporate style and culture affect IS strategy; how organisational learning affects the management of technological diffusion; and how information systems should be managed as products.

In a fifth section of the conference proceedings, senior academics from leading information systems research institutions present a summary of the research strategies employed within their institutions. These summaries are interesting from two perspectives. First, they reflect the diversity of types of research in the IS discipline and the lack of an apparent central theme in the research pursued. Second, for the would-be Ph.D. student or the academic seeking a suitable environment for a sabbatical leave, the summaries indicate the research biases that will be found in the different schools.

As I indicated at the outset of this review, the topics chosen for the colloquium reflect a Harvard bias on what is appropriate research within the IS discipline. For some of us there are some glaring omissions in the topics covered; for example, research on systems analysis and design is largely ignored, and there appears to be little concern with the deep structural and theoretical underpinnings of the discipline. On this last issue, the proceedings reflect a situation that now troubles a number of researchers in the discipline; namely, that IS research seems to represent a hodgepodge of activity with poor theoretical roots and little concern for building a cumulative body of results that are robust across time. I have argued elsewhere that this is an inevitable result when disciplines pay insufficient attention to theory building and to the articulation of what Thomas Kuhn has called a paradigm.

In spite of these reservations, however, I highly recommend the book to researchers in the IS discipline. There is a wealth of research ideas presented in the various papers and commentaries, and in general the papers are high quality, innovative, interesting, and informative. The demise of the Australian dollar makes the book expensive, but it is well worth the money.

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***Towards a Cashless Society* by the Technological Change Committee of the Australian Science of Technology Council (ASTEC)**  
(AGPS, Canberra, 1986) pp. xi + 175, ISBN 0-644-04999-5.

"EFTPOS is not a Greek Island. It is an abbreviation for electronic funds transfer at the point of sale and is one way for paying electronically for goods one buys". So begins this report of the Technological Change Committee of ASTEC, in a straight forward, jargon-free style that carries through most, if not all, the subsequent nine chapters and 175 pages.

It is a comprehensive and scholarly exposition (225 references) that canvasses important issues surrounding this societal transformation of which we are all a part, whether we like it or not. By its pervasive and multi-fronted

growth, this type of development creeps forward almost unnoticed; a garage here, a supermarket there until, before we know it, the basis of our everyday transactions has been changed. "As industrial relations questions have preoccupied employers, unions and politicians, the community as a whole has been relatively ignored in this process". The spread of EFTPOS is so broad that there is no community interest group with sufficient focus or bargaining power to examine critically and negotiate the decisions which have been taken unilaterally.

The beneficiaries of EFTPOS, as the report clearly identifies, are the retailers and the banks who save labour in purchasing transactions and subsequent financial accounting. The consumer advantages are a more convenient method of payment and — so proponents claim — the benefits of staff savings returned in the form of more personal service and lower prices than would otherwise apply. While EFTPOS certainly speeds payment at check-outs, there is not much evidence yet of lower costs or improved service. Try finding someone in your local supermarket who can tell you where the mustard is hidden!

If these were the only penalties, we could live with EFTPOS comfortably enough and await competitive market forces to deliver the consumers' share of increased efficiency gains. But the real dangers are far more sinister and it is to the report's credit that they are given a thorough examination. They are: high financial exposure in the event of loss, theft or fraudulent use of your EFTPOS card; the ability to compile detailed personal profiles of card users; and increased opportunity for computer crime. A detailed Annex presents some disturbing facts about the first two dangers. For example, with plastic cards such as Bankcard and Mastercard, customer liability for transactions on a lost or stolen card has been limited to \$50 when transactions were 'paper-initiated', but liability has been unlimited when transactions were completed electronically by automatic teller machine or EFTPOS. Conditions of use are frequently not known by users and may be varied at the Bank's discretion. To anyone who has been through a disputed account hassle with even an old fashioned credit card, the future prospects are frightening.

On the second issue of invasion of privacy, the defence of the EFTPOS providers is based on the argument that all the individual information that the system captures is already available in some form or other, and the number of complaints about invasion of privacy are insignificant compared with the number of users. The first argument ignores the fact that the interference derived from collective data can be immeasurably greater than the sum of its individual parts. A telling example prepared by the Center for Strategic and International Studies at Georgetown University in the United States makes the case with a daily surveillance report on a possible future EFTPOS card user. Extracts include:

Surveillance Report — Confidential — July 13, 1984.

Subject: John Q Public, 4 Home St Anywhere, USA Male, Aged 40, Married. Electrical Engineer.

Purchases: Wall St Journal \$1., Breakfast \$2.25, Gasoline \$6. Phone (111-1234) \$.25, Bank (cash withdrawal \$200) Lingerie \$135.67 . . . Bourbon \$12.53, Boston Globe \$.50

Computer Analysis	Subject purchased third bottle of bourbon this month. Withdrew \$200 cash. Very unusual since all legal purchases can be made using Universal FT card. Bought expensive lingerie; not his wife's size . .
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It would be dangerous to dismiss this as light hearted banter. Even on the least harmful level, it could generate a whole new regime of aggressive, personalised marketing.

The second argument is simply that so far there have been few complaints on these grounds. This does not nullify the fact that surveys show that two thirds of the population have fears about privacy. The committee asked Lord Denning what he thought was the greatest danger from high technology. His reply was that it was invasion of privacy. The report rightly identifies weaknesses in present Australian law on this issue and points out that new protective legislation to be enacted following the recommendation of the Australian Law Reform Commission will apply only to information held in Federal government data banks.

Computer crime is already of alarming proportions, and the very scale of EFTPOS, along with introduction of a public telecommunications network into the process, must surely compound the problems. On a more pragmatic level, another consumer disadvantage which is alluded to only obliquely is the financial effect of instantaneous bank debiting compared with the implicit two weeks average credit provided by a monthly billed credit card. With universal EFTPOS this could represent for a household with total annual expenditure of \$20,000, a loss of interest (say 12½%) of around \$100 per year.

EFTPOS will bring about other changes whose effects are little understood. Change will affect the workforce and the role of part-time jobs, it will encourage the merging of banking and retail outlets, and will bring psychological stress from instant purchasing power in households that may lack financial discipline. The report deals with all these questions, but rightly focusses on the crucial issues — the need for effective consultative machinery to involve a much wider section of the public, for measures to make conditions of card use more equitable and less hazardous for customers, and for enforceable constraints to protect them against the collation and exploitation of personal information.

There are no easy solutions and the committee's recommendations necessarily require the slow and tortuous processes of further enquiries followed by legislative action that must involve both federal and state governments. We can only hope that by the time this has happened, EFTPOS will not have become an irreversible *fait accompli*.

It is easy to be swept along in the early stages by the obvious advantages of technological innovations like EFTPOS whose most valuable proponents naturally include those with most to gain. It is equally misguided to oppose such innovation blindly. The answer lies in creating understanding, anticipating the hazards and negotiating timely and reasonable controls.

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