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The dreams of the cashless society: A study of EFTPOS in New Zealand

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ABSTRACT

This paper looks at the way in which utopian dreams, such as the cashless society, influence the adoption of information technology. Some authors claim that utopian visions are used by IT firms to market their services and products, and that the hype that often accompanies technological innovations is part of a "large scale social process" in contemporary societies. This article discusses the social role of technological utopianism with respect to the introduction of EFTPOS in New Zealand. The case of New Zealand is interesting, given that New Zealand has the highest saturation of EFTPOS terminals in the world.

INTRODUCTION

The term 'utopia' was first used by Thomas More (147801535), who wrote about an ideal society in which people lived harmoniously and free of privation. He derived 'utopia' from two Greek words, Etopia (meaning 'good place') and Outopia (meaning 'no place'). Today the word 'utopia' is defined by the *Concise Oxford Dictionary* as "imaginary place with perfect social and political system; ideally perfect place or state of things." A Utopian is defined as an "ardent but unpractical reformer."

A number of researchers have drawn attention to the relatively new phenomenon of "technological utopianism" (e.g., Kling, 1996; Kumar, 1987; Neville-Singleton & Sington, 1993; Sibley, 1971). This is the belief that improvements in science and technology, especially improvements in information technology, will lead to all kinds of beneficial social and cultural changes. This "breathless enthusiasm" (Kling, 1996) is especially evident in the popular computer press and in the writings of futuristic thinkers such as Alvin Toffler.

In this paper we discuss one such utopian dream, that of the cashless society. In newspapers and magazines the cashless society has been heralded for some time, yet the elimination of cash

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would appear to be as far away as ever. We examine utopian dreams about the cashless society with respect to the introduction of Electronic Funds Transfer at the Point of Sale (EFTPOS) in New Zealand. The case of New Zealand is interesting, given that New Zealand has the highest saturation of EFTPOS terminals in the world (New Zealand Bankers Association, 1995). The purpose of this paper is to see to what extent those responsible for the development of EFTPOS were influenced by utopian dreams about the cashless society.

The research methodology adopted was a contextualized, interpretive one, employing the techniques of case study research. The case study material was collected by one of the authors using unstructured interviews, unpublished documents, and newspaper and magazine reports.

The paper proceeds as follows. The first section discusses the dreams of technological utopianism. Section 2 looks at just one utopian ideal, that of the cashless society. In the third section, the development and current status of one form of electronic payment system in New Zealand, called EFTPOS, is discussed. The fourth section examines the extent to which those responsible for the development of EFTPOS in New Zealand were influenced by utopian dreams about the cashless society. The fifth and final section presents the conclusions.

TECHNOLOGICAL UTOPIANISM

Technological utopianism is the belief that improvements in science and technology, especially improvements in information technology, will lead to all kinds of beneficial social and cultural changes. It is the idea that new technological innovations will help bring about some kind of individual and collective redemption. The growth of science and technology in the 18th century was increasingly associated with the idea of progress. Scientists such as J. B. Bury and William Godwin argued that we can change the environment through science, hence there would come a day when we should be able to live forever.

Kling (1996) draws attention to the way in which utopian images are prevalent in contemporary literature about computerization and society. Powerful images linking computing and social changes have become part of our vocabulary: information society, network nation, interactive media, virtual reality, computer revolution. These terms all conjure up exciting and positive images of computerization. Winner (1995) says that the belief that new technology will bring universal wealth, enhanced freedom, revitalized politics, satisfying community and personal fulfillment is very common.

There are numerous examples of technological utopianism. Toffler (1980), for instance, has many optimistic predictions, saying that the work of constructing a new civilization is racing forward on many levels at once. For another example, one has to look at any computer magazine at the moment to see the hype associated with the Internet.

It would appear that technological utopianism is not just an American phenomenon, but is alive and well in other parts of the world such as Australia. A report released in the name of the New Zealand Minister of Information Technology, entitled "ImpacT2001 - how Information Tech-

nology will change New Zealand," is full of utopian claims concerning IT. The report claims that the growth and expansion of IT will lead to universal change for the better. It concludes, "The improved quality of life and greater opportunities IT offers various groups in society will be significant and should lead to greater social cohesion and national sense of purpose" (Williamson, 1996, p. 51). Thomas (1996) says that the Internet, sometimes called the Information Superhighway, will bring hugely beneficial social changes. He says that "the outlook is for New Zealanders to become better educated, healthier, more productive and more informed than ever before in history" (Thomas, 1996, p. 30) - all due to the Internet!

Some researchers, such as Kling (1996) and Forester (1992), are critical of the utopian visions associated with information technology. Forester reviews the utopian literature of two or three decades ago showing that, when computers were first on the scene, there was excited talk of emerging technologies that would result in massive social changes. Some of the changes predicted were a four-day working week, early retirement, a leisure society, the workerless factory, the paperless office, and the cashless society. Forester shows how far these prophecies were from the mark: in the 1990s the majority of the workforce are working harder and longer than ever, the average amount of leisure time has decreased, robots have far from taken over from the workforce, we use more paper in our offices than before, and cash is still the predominant form of exchange.

Surman (1996) is critical of the hype associated with the Information Superhighway. He points out that data confidentiality, security and privacy are emerging as important issues now that the Internet is being used for criminal activities. Criminals are using the Internet for drug trafficking, gambling, money laundering, child pornography, and illicit trade in weapons. Billions of dollars are lost every year through intellectual property theft (*New Zealand Herald,* 16 October 1996).

This leads us to consider the other extreme: technological anti-utopianism. Technological anti-utopianism paints a bleak picture of the advancing technological age. George Orwell's *1984* is a classic example of this genre. Orwell's phrase, "Big Brother is watching You," has become the motto for those who see future progress in IT as threatening privacy, individual freedom and civil liberties.

Clearly, there is much disagreement and debate about the current and potential impact of IT on society. Commentators range from the wildly optimistic to those who are fearful for what the future holds.

THE CASHLESS SOCIETY

In this section we will discuss just one utopian ideal, that of the cashless society. Some forecasters view the prospect of a cashless society with delight, looking on it as increasing the efficiency of the economy. Utopians tend to think that the advent of a cashless society will bring universal change for the better.

For example, Gleick (1997) says, "Cash is heavy, expensive to make, move, count and guard. Cash is also quaint, technologically speaking. The notes in your pocket are as outmoded

as Morse code. Cash is dying" (Bleick, 1997, p. 21). He describes digital money as "perfect money" which weighs nothing, travels at the speed of light, and doesn't get scuffed, worn or dirty. Washman (1990) claims that criminals would be easier to track down, legal judgements easier to enforce, illegal aliens simpler to spot, and debtors unable to avoid their responsibilities. He suggests that the cashless society would have a crippling effect on the world drug trade.

Of course there are those who view the advent of the cashless society with foreboding - they see it as yet another way in which the details of our lives become subject to scrutiny. Baxter (1996), for example, sees the cashless society as leading to a "one world government" where every person will have a unique number. Quoting the Book of Revelation in the Bible, Baxter says that without this unique number (the "mark of the beast") nobody will be able to buy or sell. Forester (1992) says that electronic payment systems give organizations the capability to track individuals and increase the likelihood of invasions of privacy. The ability to store information about all electronic transactions, phone calls, air travel, medical records and so on are potential threats to personal privacy.

What makes the cashless society technically feasible are the many non-cash payment methods that have been or are being introduced such as checks, credit cards, debit cards, electronic funds transfer at point of sale (EFTPOS) cards, smart cards, and so on. Kling (1983) draws attention to the fact that certain social values are often embedded in the deployment of specific EFT systems. There are significant differences between EFT payment methods.

For example, the current EFTPOS system in New Zealand relies on the use of a magnetic stripe card, which stores information about the account holder, account details and for security reasons, a personal identification number (PIN). The card provides a link through the EFTPOS terminal to the customer's bank, which verifies that the account balance is sufficient for the transaction. Smart cards, by contrast, are "stored value cards," where there is no need to communicate via a telephone line with the bank for every transaction. The cards store their own balance which can be topped up when required. The key difference between the two technologies is that a magnetic stripe card requires all transaction and account information to be stored centrally, whereas a smart card does not.

EFTPOS IN NEW ZEALAND

This section looks at the development and current status of one form of electronic payment system in New Zealand, called EFTPOS. As was mentioned earlier, EFTPOS (Electronic Funds Transfer at the Point of Sale) is a system which allows customers to use their credit and/or debit cards to pay for goods and services and withdraw cash from a terminal at a retailer's site. The terminal relies on a national communications network to communicate directly to the customer's bank to authorize and update the customer's funds.

In our research we were interested to find out if those involved with the development of EFTPOS in New Zealand were influenced in some way by utopian dreams and visions about the cashless society. We wanted to discover the objectives and motivations behind the introduction of EFTPOS to the New Zealand market.

History

EFTPOS was introduced in New Zealand in 1986. The initial push for EFTPOS came from the banks, which say ETPOS as a vehicle to improve the efficiency of the banking system. At that time the technology was basic, unreliable, and very expensive, with the cost per terminal being approximately NZ$2,500 (*The Dominion,* 16 November 1987).

In the regulatory environment at that time, the banking sector was divided into two: the trading banks and the savings banks. The trading banks were those banks which could purchase money directly from the Reserve Bank of New Zealand, whereas the savings banks were those banks whose only source of money was customer deposits. The four trading banks (Bank of New Zealand, Australia and New Zealand Bank, National Bank and Westpac) used a common processing center called Databank (which they jointly owned), whereas the savings banks (Auckland Savings Bank, Trustbank, and others) had their own systems. The savings banks, however, were legally required to clear checks through Databank (which was in effect owned by their competitors).

This divided approach to banking (and information processing in banking) was carried over into the early introduction to EFTPOS. When the first EFTPOS system was introduced by the Bank of New Zealand (BNZ), only customers holding cards from one of the four trading banks could use the system.

When the trading banks were criticized for the high cost of introducing EFTPOS (*The Dominion,* 10 August 1987), the Chief Manager of the BNZ Card Services Division defended its use.

> He said EFTPOS provides clear benefits and linked the retailer directly to the bank enabling instant verification of all payments. For the retailer there is less cash handling, immediate use of funds, no need to request customer identification, no risk of bad or fraudulent checks, risk of cash theft is reduced, and there is less paperwork. He said that although the costs of installing EFTPOS, which is a nationwide computer network, were considerable, the costs had been absorbed as part of the bank's provision for research and development (*New Zealand Herald,* 8 September 1987).

At this stage the savings banks were prohibited from entering the merchant banking sector.

In the late 1987, however, the government deregulated the New Zealand banking industry. One outcome of this was that the savings banks were now able to compete for the retail banking business. Subsequently the Auckland Savings Bank (ASB) and Trustbank saw EDTPOS as a marketing tool to win the retail banking business away from the four trading banks. They developed their own EFTPOS network called Cashline, adopted an aggressive marketing campaign, and targeted supermarkets and petrol stations in their rill out of EFTPOS terminals. By mid-1988 it had become technically feasible for EFTPOS terminals to process more than one type of card. All the banks therefore agreed to start an interchange system in September of that same year, whereby fees would be paid from one bank to another based on customer usage. About four days before the interchange system was due to start, however, the BNZ decided to pull out of EFTPOS

altogether. The announcement came as a shock to the other banks, which feared that this decision would sound the death knell for EFTPOS in New Zealand. The BNZ decision was justified by the Chief Manager of the BNZ Card Services Decision, who said that he was "not happy with the attitude of Trustbank (and ASB) using EFTPOS as a competitive vehicle when it was, in essence, a delivery system" (*New Zealand Herald,* 15 September 1988). Clearly, the BNZ disagreed with the savings banks concerning the objectives and aims of EFTPOS.

Three weeks later, the ANZ pulled out of EFTPOS also, citing high EFTPOS transaction costs ($4 per transaction) compared with the cost of processing a check (between $1 to $2 per transaction). The ANZ insisted that the current EFTPOS system was uneconomical.

At this time the National Bank also considered pulling out of the EFTPOS network. However, New Zealand Wines and Spirits, one of the bank's largest retail customers, threatened to withdraw their banking from the National Bank if it discarded EFTPOS. Only one month earlier the bank had brought the liquor stores online nationwide (*The Dominion,* 4 October 1988). The National Bank, therefore, decided to continue offering the EFTPOS service. Westpac followed the National Bank's lead, for similar reasons. With both the National Bank and Westpac deciding to continue with EFTPOS, the two trading banks formed a consortium called HandyBank to process customers' cards from both banks.

In May 1989, some six months later, the Trustbank/ASB Banks (Cashline system) and the Westpac/National consortium (HandyBank system) combined resources to form an integrated point of sale network. Since the Cashline system could process both debit and credit cards (Visa and MasterCard), this meant that there was now just one nationwide EFTPOS system which could process all cards. It was at this time that Electronic Transaction Services Ltd. (ETSL), a separate company to supervise EFPOS transactions through New Zealand, was formed. This development was significant, given that until now Databank has been the only check clearing house in the country. The establishment of ETSL represented a major change in the political structure of the New Zealand banking industry, since the savings banks has a share in this new company (unlike Databank, from which they had been excluded).

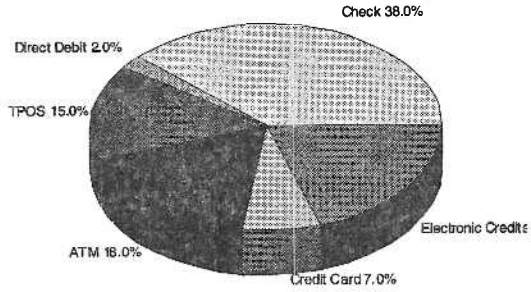
Since the BNZ had cut off their card base and refused to process EFTPOS transactions, the BNZ ended up losing a significant number of its customers to these other banks in the next few years. In 1992, both the BNZ and ANZ rejoined the EFTPOS network.

Current Use of EFTPOS

Today, non-cash payments methods (e.g., checks, credit cards, debit cards [EFTPOS]) provide more than 70% of the *value* of financial transactions in the New Zealand community. Electronic transactions are growing rapidly, but cash still accounts for the greatest *number* of transactions (New Zealand Bankers Association, 1995).

Although EFTPOS and Automatic Teller Machine (ATM) transactions continue to enjoy high growth rates, they only account for 15% and 18% respectively of the more than one billion transactions in 1995. Check payments on the other hand account for 38% of all non-cash payments. Figure 1 shows the percentage of electronic transactions by type.

Figure 1. Percentage of Electronic Transactions by Type



Source: New Zealand Bankers Association, 1995

The table below gives an international comparison for population per ATM and EFTPOS terminals for eight developed countries as at the end of 1995. As can be seen, New Zealand has more EFTPOS terminals per head than any other nation, one for every 122 people. The closest to New Zealand in saturation of EFTPOS technology is France, with one terminal for every 132 people.

Table 1. International Comparison Banking Services

Country	ATMs	Population per ATM	EFTPOS Terminals	Population Per Terminal
Australia	8,700	2,033	49,000	359
Canada	16,927	1,725	119,733	244
France	20,533	2,810	437,000	132
Germany	29,400	2,768	62,500	1,302
Japan	122,250	1,022	28,320	4,413
New Zealand	**1,419**	**2,466**	**28,719**	**122**
United Kingdom	19,500	2,994	350,000	167
United States	109,080	2,390	375,500	694
AVERAGE		**2,275**		**929**

Source: New Zealand Bankers Association, 1995

The Cultural Constitution of EFTPOS

How did EFTPOS in New Zealand become so well accepted? To answer this question, we need to consider how EFTPOS was adopted and how it was culturally constituted through the media (in particular professional and business articles, and newspaper magazines). We also need to consider how these views about EFTPOS shaped subsequent action (e.g., in the form of consumer protection legislation).

As was mentioned earlier, the banks were the ones behind the promotion of EFTPOS in the first instance. However, there was considerable resistance from consumer and industry groups to EFTPOS in the mid to late 1980s, mostly because the banks retained sole control. The New Zealand Computer Society, for example, was critical of the lack of a clear method of handling customer disputes with respect to EFTPOS transactions. The society questioned whether "the providers should be judge and jury in their own case. Justice must not only be done but be seen to be done" (New Zealand Computer Society, 1986). The society called for the appointment of an independent authority, such as an ombudsman, to adjudicate in disputed cases over EFT transactions. The society also criticized the early contracts between the provider and cardholder, which it said were biased in favor of the providers.

The Consumers' Institute (the main consumers' advocacy group in New Zealand) was equally critical of EFTPOS at this time. As well as mentioning the risks to the consumer of using EFTPOS, the Director of the Consumers' Institute criticized the costs of it. He said,

> The true question would be that it is now costing a dollar to process a cheque and about $10 to $15 to handle an EFTPOS transaction - which would you prefer? What consumer in their right mind would ever touch EFTPOS? They (the banks) have now spent what is undoubtedly millions of dollars in setting up the system, which is not being used to a great extent. It hasn't caught on by the end-suers - the consumers and the retailers - as quickly or as with as much enthusiasm as the banks had hoped for (*The Dominion,* 10/8/87).

The banks defended themselves by expounding the future benefits that would be received by consumers and retailers alike. With continuing pressure from the Consumers' Institute and other interested groups, however, the banks eventually changed the contracts between the provider and cardholder, so that a cardholder who loses an EFTPOS (debit or credit) card cannot now be charged more than NZ$50 for fraudulent transactions before notification and nothing for transactions after notification. This is provided that the cardholder "takes reasonable steps" to safeguard the card and the PIN, and promptly notifies the card issuer if the card goes missing (*Consumer,* 1996). After some years or resistance, the banks also (albeit reluctantly) agreed to the appointment of a Banking Ombudsman. The office of the Banking Ombudsman was established by law in 1992, withe the to investigate customer complaints against banks. The office is required to produce an annual report of its activities. In the 1994 report, for example, the office investigated 313 complaints, although many of these were not specifically related to EFTPOS transactions (*Consumer,* 1995).

We can see than, that, although the banks were the ones to introduce EFTPOS to the New Zealand market place, and marketed its supposed benefits, there was considerable consumer and industry resistance to the banks having unfettered control of EFTPOS systems. This resistance was successful to the extent that consumer protection legislation was passed to protect EFTPOS users (for a discussion of other legal developments in relation to information technology in New Zealand, see Myers and Miller, 1996).

The power of the banks over the usage of EFTPOS was eroded yet further by retailers. Some of the larger retailers were wanting one single EFTPOS system to be set up for the whole country, since they did not want to have more than one type of EFTPOS terminal in their stores. As the banks were unable to agree on their approach to EFTPOS in the late 1980s, however, one large retailer (NZ Wine and Spirits) took the issue into its won hands and told the banks it was no longer going to have bank-owned terminals on its premises. Instead, the company decided to purchase its own terminals and wrote software that enabled its terminals to communicate with all the banks in 1988-89.

The Mobil Oil Company soon followed suit and installed its own multiple acquirer terminals (EFTPOS terminals that can handle more than one kind of EFTPOS card) in 1990. Mobil wanted to sell oil through the use of specialized card programs and decided to handle the transactions itself, rather than have all the transactions pass through a bank.

These initiatives by some of the largest companies in New Zealand represented an attempt by retailers to gain more control of EFTPOS vis'-à-vis' the banks. The Product Manager of Advantage Group (now the largest EFTPOS provider in the country) comments:

> This development in the EFTPOS scene was very important because it redistributed power among the key players. No longer were the banks solely in control of where and when EFTPOS was used (interview with Jeff Putt, Product Manager, Advantage Group).

By 1992, almost all supermarkets and the large chain stores in New Zealand had introduced EFTPOS. By controlling EFTPOS themselves, the retailers were able to use their system for marketing and business management and not just for banking. Articles in retailers' magazines promoted these wider benefits of EFTPOS. For example, articles appeared with headings such as "How EFTPOS helps run your business" and "EFTPOS - big advantages at minimal cost" (*The Merchant,* June 1, 1994). In the last 3-4 years, many sole traders have also installed EFTPOS terminals. In the latter case, however, the EFTPOS terminals and systems have been provided by a third party. The largest such EFTPOS supplier today is Advantage Group, which is solely a supplier of EFTPOS systems and services and not itself a bank.

We can see, then, that the power of the banks over EFTPOS was progressively eroded over a ten-year period. Consumer legislation, the establishment of a separate company in 1989 to supervise EFTPOS transactions, the increasing power or retailers, and more recently the emergence of independent suppliers of EFTPOS terminals and systems, all contributed to how EFTPOS was perceived by consumers. EFTPOS was culturally re-constituted as an important service to

retailers and more recently consumers, with the banks perceived as having only a secondary role. This shift is perceptions is perhaps epitomized by a recent headline in a business magazine, "Kiwis (i.e., New Zealanders) love their EFTPOS machines" (*MG Business,* November 11, 1996). EFTPOS has long since receded as a subject of concern for consumer groups such as the Consumers' Institute.

DISCUSSION

As was mentioned earlier, our purpose in conducting this research was to find out to what extent those responsible for the development of EFTPOS in New Zealand were influenced by utopian dreams about the cashless society. Since New Zealand has one of the highest numbers of EFTPOS terminals per head in the world, one might expect that those involved with the development of EFTPOS would be influenced more than most by utopian ideals.

However, in the brief history and review of EFTPOS presented above, it is clear that there were many reasons for the introduction of EFTPOS to the New Zealand market. The banks themselves often had conflicting ideas about the main purpose of EFTPOS. For example, the first mover in the introduction of EFTPOS, the Bank of New Zealand, saw EFTPOS as simply another way of delivering banking services. The BNZ did not view EFTPOS as a competitive weapon. The savings banks, on the other hand, saw EFTPOS as a way of capturing the retail banking business and as a means of gaining more revenue by providing more services to customers. It was a major disagreement about the purpose of EFTPOS that led to the collapse of a proposed integrated point of sale network in mid-1989.

It was only much later that all the banks saw EFTPOS, not only as a way of securing customer loyalty, but also as a means of lowering their costs. It is interesting to compare the cost of providing an ATM with the cost of an EFTPOS terminal. An ATM, even today, is relatively expensive for a bank and costs approximately NZ$60,000 to install and maintain. The basic function of an ATM is to withdraw cash, although other services are provided such as deposits, account transfers, and balance enquiries. An EFTPOS terminal, on the other hand, is very inexpensive for a bank, since the retailers themselves pay for the EFTPOS facilities.

Although the banks were responsible for introducing EFTPOS in New Zealand, in recent years it has been retailers themselves who have become the driving force behind EFTPOS. The first indication of this change occurred in 1988, when New Zealand Wines and Spirits, a national retailer, demanded that the National Bank retain its EFTPOS service. After that time all the national chain stores began requesting terminals from banks or installing terminals themselves. This meant that no longer were the merchants doing the banks a service by using their terminals; rather, the banks were seen as providing the merchants with a worthwhile product and service. Merchants have discovered that customers tend to spend more when they use EFTPOS, payment is guaranteed, and store security is improved since it is no longer necessary to store large amounts of cash on site (interview with Jeff Putt).

As part of this research, we asked those who are involved with the current development of EFTPOS in New Zealand to comment on the objectives they not have in the development of it. We found that there was little agreement concerning the role that EFTPOS might play in a future cashless society.

Jeff Putt, Product Manager for Advantage Group (the largest EFTPOS provider in New Zealand), said that "EFTPOS is taking us a step further to the cashless society by providing alternatives to the use of physical notes and coins." He agreed, however, that there are still significant barriers to the introduction of a cashless society, both technological and social.

> There are technological barriers at the moment preventing the overall move to the cashless society. Payment mechanisms need to adapt to other markets (such as a sub-$2 transactions), they must have the same functionality as cash: be anonymous, be accepted everywhere, and be mobile.

He said that social issues such as concerns about privacy and security are also important considerations (interview with Jeff Putt).

David Skinner, General Manager of Data Systems Ltd. (a division of Advantage Group), took the opposite view and emphasized that EFTPOS was never designed to replace cash in the first place.

> The big mistake that many people make is that EFTPOS was never out to change cash. . . . it was out to replace cheques. That's a fundamental mistake (interview with David Skinner).

David Skinner says that EFTPOS was intentionally targeted at the pre-determined purchases market where checks were predominant, such as grocery shopping or gas stations. Technologies such as EFTPOS were designed as a cheaper alternative to the processing of checks.

If David Skinner is correct, then the introduction of EFTPOS could be expected to have little impact on the progress of the cashless society, since checks are already a cashless form of payment. In this case, EFTPOS simply replaces one form of cashless payment (paper) with another (electronic). It is also interesting to note that one of the main advantages for customers of using EFTPOS is the ability to withdraw cash at the time of purchase. It is no longer necessary for customers to go to a bank or an ATM to make a cash withdrawal.

CONCLUSION

In this paper we have been concerned with the way in which utopian dreams, such as the cashless society, influence the adoption of information technology. Our purpose was to see to what extent those responsible for the development of EFTPOS in New Zealand were influenced by utopian dreams about the cashless society.

One of the limitations of this research is that we have been concerned with just one electronic payments technology (EFTPOS) in one country. Another limitation is that we restricted

the scope of our research to include only those directly involved with the development of this technology, and excluded other interested parties.

Despite these limitations, we believe our results are significant. We were surprised to find that there was no single overriding reason for the development of EFTPOS in New Zealand. Whereas some banks (e.g., the BNZ) saw EFTPOS as an alternative service delivery vehicle in the early days, the savings banks saw EFTPOS as a competitive weapon. Retailers had different objectives again, seeing EFTPOS as an important service in its own right. Even senior people working within the same company (the largest EFTPOS provider in New Zealand) did not agree about the relationship of EFTPOS to the cashless society. One insisted that EFTPOS was never designed to replace cash in the first place, whereas the other suggested (if somewhat cautiously) that EFTPOS was certainly a step in that direction.

We conclude that the utopian dream of the cashless society has had only a small influence on those responsible for and involved with the development of EFTPOS in New Zealand. Far more important have been issues such as competition within the banking industry and improved customer service. We acknowledge that new electronic transaction technologies such as stored value smart cards may yet provide successful, but it remains to be seen if the utopian (or anti-utopian) dream of the cashless society will ever be realized.

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