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Trust and Electronic Money

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Australia, Electronic Money, Online, Trust, Security, Information and Communication Technologies

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Preface

Much is currently being made of the potential benefits of “electronic commerce”. A critical element is the capacity to conduct financial transactions, to receive payments. Core issues of security and authentication are receiving considerable attention. New means of micropayments are being investigated. Characteristically, these issues are being viewed from a supply-side perspective.

This paper continues CIRCIT’s examination of the use of information and communication technologies from the user’s perspective. The focus is on the nature of “consumer trust” in the use of electronic money and the ways providers can increase customer profitability by engendering trust.

Recognition of the concept of “consumer trust” in online services first emerged in CIRCIT research in the work of Dr Supriya Singh and associates on *The Use of Information and Communication Technologies in the Home* (1996), and the related examination of *The Use of Electronic Money in the Home* (1996). It was reinforced by other work investigating prospects for online gambling.

Trust was not an initial focus of Dr Singh’s work with residential consumers, but the “grounded research” approach used, and the associated data capturing and computer analysis, allowed the concept to emerge and subsequently to be analysed in the manner presented in this paper.

This work is part of a continuing stream of research on understanding the demand for online services, in which we seek to bridge the different ways of thinking and studying these issues from the perspectives of customers and providers.

CIRCIT intends to extend this approach to a range of activity areas and user segments. We are also moving towards a comparative study of the use of online services across cultures as a necessary prerequisite for understanding the global context of service provision. We look forward to the active participation of interested parties in this research and its interpretation.

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John Burke
Director, CIRCIT

Executive Summary

Providers of electronic commerce are vitally interested in the greater use of electronic money. In this paper we examine how trust increases the use of electronic money and the ways in which trust is engendered. Our conclusions are based on a qualitative study of 47 people from 23 households in urban and rural Victoria, Australia. We link the study of the use of electronic money from the perspective of the residential user to central interests of the providers. The key findings are:

1. People Are More Likely to Use a Form of Payment they Trust

Trust is particularly important where the risk of mistrust is the greatest, that is, in depositing money; the payment of large sums; in situations where non-payment is likely to result in loss or penalty; and the use of new forms of money.

Consumers are more wary of paying over open networks than closed networks. They perceive open networks to be less secure, that is, more prone to theft, fraud and invasion of privacy.

People use a form of money they trust, provided:

- They have access;
- The form of money yields appropriate information and cultural meaning for the kind of payment being made;
- It is convenient; and
- It is seen to provide value.

2. Factors that Engender Trust are Broader than Issues of Security

Trust encompasses issues wider than security. "Hard trust" deals with issues of authenticity, encryption, and security of transactions. "Soft trust" clusters around control, comfort and caring.

Control is increased by a physical dimension to a form of payment, authentication of the provider of goods and services and the person receiving the payment, and/or the customer having the ability to track and substantiate a transaction.

Comfort with a form of money is directly linked to previous use, familiarity and reputation; warranting structures that vouch for quality and reliability; minimising risk and capped liability.

A caring provider shows benevolence, intimacy and a desire to communicate with the customer. Our respondents talk of caring by relating how banks - the primary payments providers in Australia - do not care for the customer.

3. Providers' Focus on Trust will Lead to a Rethink of Business Strategy

Providers and regulators of electronic money and commerce acknowledge the importance of trust. They have, however, concentrated on issues of security which have led to an exploration of technological and regulatory solutions.

An emphasis on the broader issues of trust would lead a provider to also ask:

- Have I given the customer control of information and the transaction?
- Have I increased the customer's feeling of comfort with the transaction and the relationship?
- Have I shown the customer I care?

A focus on trust moves the customer to the centre of business strategy. Transaction costs are more likely to be placed within the broader framework of customer relationship and profitability. A customer's payment activities are examined within their social and cultural context, so that providers can more profitably deliver services across cultural boundaries.

1. Introduction

Goldie¹ is a professional in her 50s, in a high income household in Melbourne. She was recently introduced to the Internet by her son and has already used it to book a holiday in France. She did not however pay online. She uses credit cards extensively in her work but does not mail, phone or fax her credit card number. She does not use the Automated Teller Machines (ATMs) and has used Electronic Funds Transfer at Point of Sale (EFTPOS) only twice. She continues to withdraw cash from the branch once a fortnight, saying "I wouldn't be sure the bank was really going to transfer the money just if I was pressing a few buttons on a wall".

Goldie's husband Gordon is an engineer. Unlike his wife, Gordon uses the ATM even to deposit cash and cheques. He seldom goes to a branch and depends on Goldie to give him his \$20 a week in cash for incidental expenses. He has no hesitation mailing his credit card number, although he would not fax or phone it.

Their son Gary, 31, an information technology professional, regularly uses EFTPOS and ATMs. He seldom goes to a branch. Gary will fax his credit card number but only after telephoning to get the name of the person who is going to pick up the fax. He has bought things online through the Internet, but has not paid for them online.

Goldie, Gordon and Gary's cases raise important questions: Why do they differ in their use of electronic money? Why will Goldie not use the ATM and EFTPOS? Why does Gordon never fax or phone his credit card number? Why will Gary not pay online? There are no differences of access between the three people in the household, as all of them have PCs and modems, and use them in their work. All of them are technically literate. All of them have been in situations where electronic payments were possible choices. Yet three people in the same household used payment instruments and transaction modes in very different ways.

It is these questions which led to our focus on the importance of trust in the use of electronic money and online money in particular. A focus on online money goes to the heart of the most testing issues in electronic commerce. Hence, electronic money becomes the peg for considering the relationship between customers and service providers in an electronic environment.

In the remainder of this section, we discuss the emergence of the central question: How does trust influence the use of electronic money. We also examine the important shifts in questions and perspectives that are involved when the user is at the centre of the study. In Section 2, we outline the relationship between "trust" and the use of electronic money, drawing on our qualitative data. In Section 3, we distinguish the concepts of "hard trust" and "soft trust". Our focus is on the factors that engender "soft trust", ie. control, comfort and caring. In Section 4 we note that providers and regulators have concentrated on issues of security rather than trust. We explore how a complementary emphasis on trust would influence business strategy and philosophy.

¹ All the names cited from our sample are fictitious to protect confidentiality.

1.1 Emergence of the Central Question

The central question we are researching is: How does trust influence the use of electronic money? This question leads to an examination of the factors which engender trust in electronic money?

The question emerged from two previous studies - Singh, Bow and Wale's (1996) *The Use of Information and Communication Technologies in the Home* and Singh's (1996) *The Use of Electronic Money in the Home*. All three studies are based on qualitative data from 47 open-ended, one-two hour interviews with people in 23 middle-upper-income, mainly Anglo-Celtic households in Victoria. It was a snowball sample which started from multiple points of contact, drawing on the personal, academic and organisational networks of three interviewers. The sample was over-representative of people who had PCs and modems, and those who used accounting software. A table detailing the characteristics of the sample is provided in the Appendix.

These are "grounded" studies, in that they do not set out to prove or disprove a specific hypothesis. Instead, they begin with an area of study - in our case it was the broad area of the use of Information and Communication Technologies (ICTs) - and in the process of data collection and analysis, the questions and the key concepts emerged. Data collection, analysis and theory influence each other in a "reciprocal relationship" (Strauss and Corbin, 1990, p 23).

In Singh, Bow and Wale (1996), the initial question was: How do people use information and communication technologies such as the telephone, television, radio and PC at home? This question led to an investigation of the social and cultural meanings of these technologies as reflected in where they were placed in the home, and when and how they were used. It soon became clear that this approach needed to be complemented by questions in which the activity rather than the technology was at the centre. The questions then became: How do people shop? How do people bank? How do people seek information? What role do ICTs play in these different activities?

Singh (1996) in *The Use of Electronic Money in the Home* focused on payments activities. Access and appropriate information were identified as important factors in the use of electronic money. Access and information still could not answer questions such as: Why do some people use cash and others use EFTPOS for grocery payments? Why do some people feel comfortable paying for online purchases by credit card over the Internet, while others do not?

The recognition of "trust" as an important factor of use came only during the late stages of analysis in Singh (1996), as the theory was being tested and verified against the data. "Trust" had not been central to the questions asked in the interviews or in the initial coding process. However, the qualitative data captured issues of trust when people spoke of why they used or did not use electronic money and online services. Qualitative computing using NUD•IST (Non-Numerical Unstructured Data Indexing, Searching and Theorizing), a computer programme for qualitative analysis, made it possible to recode the data to explore the different ways people talked or did not talk of trust or mistrust in relation to electronic money. We were also able to identify the context within which they spoke of trust and investigate why they trusted or did not trust a product or service.

It needs to be stated up front that our conclusions relating to trust and the use of electronic money are confined to the distinctive cultural context of middle and upper income Anglo-Celtic families in Australia. Psychological factors are also important for an examination of trust, however our study focuses on the social and cultural context.

1.2 The User's Perspective

The retail user is at the centre of this study of payments. The user's perspective focuses attention on the way people pay for a variety of goods and services within their social and cultural context. This perspective usefully complements that of payments providers. The provider's perspective tends to focus on the costs, organisational implications and the technologies underlying the electronic payments instruments and transaction modes.

When the customer and his or her activities are placed at the centre, the questions revolve around activities, rather than technologies and applications. Instead of asking about the use of the credit card, the question focuses on the way a person pays for goods and services. Instead of asking about online shopping, the question probes how a person shops at present for various goods and services, and how online shopping would change these patterns.

Figure 1: The Provider's Perspective: The Technology/Applications Approach

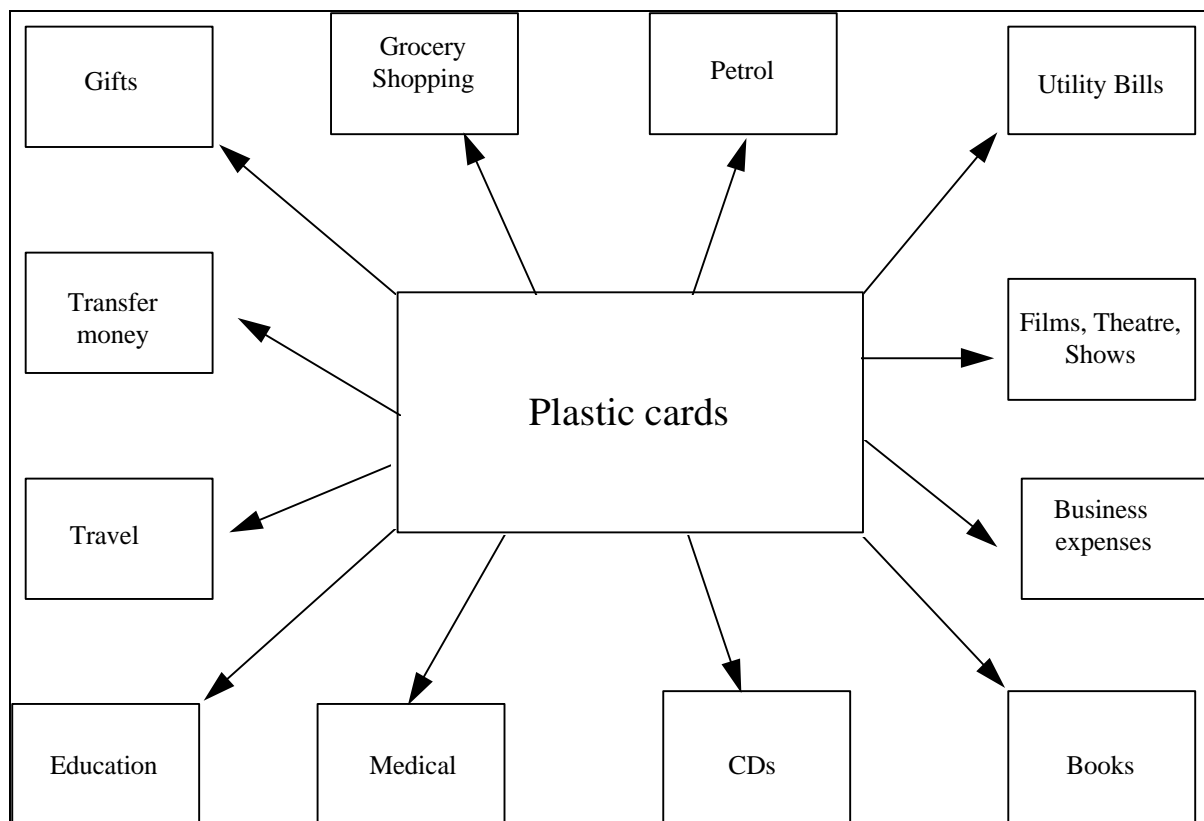
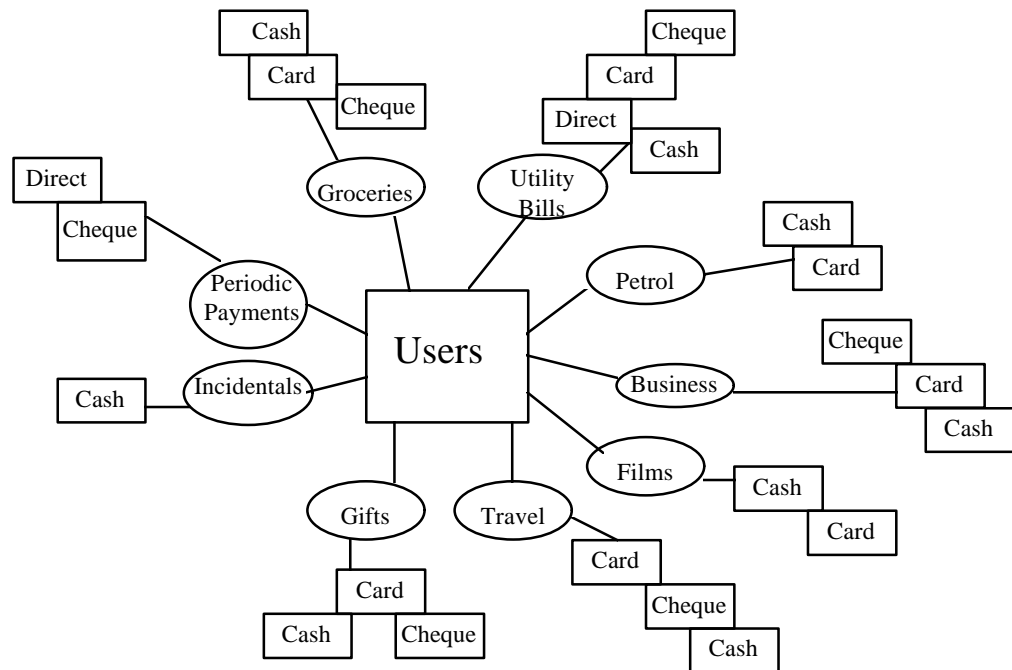


Figure 2: The User's Perspective: The Activities Approach



When the kaleidoscope shifts to place the customer at the centre of questioning, the emphasis shifts from issues of supply to those of use; from technologies and applications to a customer's activities. The idiom of discussion moves away from the technological metaphors of "roll-out" and "tool-kits" to understanding how the new technologies "fit" into a person's life and make new meanings. Instead of "convergence" being the most important aspect of the new information and communication technologies (ICTs), the focus is on how the new ICTs increase people's options to mix and match new and old ways to shop, bank, communicate and work.

1.3 The Conceptual Framework of Money

Retail customers are studied in their social and cultural context. This context is central to understanding payments behaviour. Unlike the dominant view of money as an impersonal, universal and homogenous commodity which is distinguished only by quantity, money is a social and cultural phenomenon, with meanings that differ according to social context and culture (Singh, in press; Zelizer, 1994). The historical and sociological study of money shows there are multiple kinds of money, each qualitatively distinct. Money paid for groceries differs from money paid for the mortgage or for superannuation. Money between husband and wife is generally not accounted for in the same way as money between business partners.

People often separate various kinds of money by using different financial institutions and deposit accounts. For instance, the transaction and mortgage accounts may be with one bank in a cheque account, while the savings may be in a savings account or a fixed deposit in another bank or credit union (Lave, 1988; Singh, in press). Payments for different kinds of goods and services are also separated using different forms of money. Here we are using "forms of money" to refer to the way people combine payments instruments and transaction modes - such as paying cash or cheque over the counter; a credit card over the phone or Internet; or using a debit card via EFTPOS.

These forms of money, from the perspective of the retail consumer, can be broadly categorised as physical or electronic. Physical forms of money include paying by cash and cheque over the counter, or sending a cheque by mail. Electronic forms of money include paperless payments instruments like credit cards, debit cards, smart cards, direct debit and credit, and electronic cash and cheques used in combination with electronic transaction modes such as ATMs, EFTPOS, the telephone, fax, email, Internet or Intranet.

Different kinds and forms of money have cultural meanings that change from one culture to another. These meanings are shaped by social relations and cultural values, in particular the historical development of the banking and payments system. Hence, social and cultural changes often are expressed in changed meanings of money.

2. Trust and the Use of Electronic Money

People are more likely to use a form of payment they trust. Trust, however, does not ensure use. A person may trust cheques but may not pay everything by cheque. Use of a particular form of money is also influenced by access to a payments instrument and transaction mode; cultural meaning; information that is appropriate to the payment being made; cost; and convenience.

There is a popular view that Australians are avid users of all forms of electronic money. Electronic money, despite a fast rate of growth, is still a small part of the mix of payments instruments used by retail consumers. Reserve Bank of Australia data show that:

- In 1995 payment by credit and debit cards comprised only 0.2 percent of cashless transactions in value, and 25.8 percent by volume. ATM transactions are not included as they are not payment transactions (Unpublished data from the Reserve Bank of Australia, 1997).
- Cash remains the most convenient and popular form of payment for everyday, low-value transactions and could possibly account for as much as 90 percent of these transactions (Australian Payments System Council, 1995).
- The cheque is the most popular form of non-cash payment in Australia. In 1995, its volume (38 percent) exceeded that of credit cards (10 percent), EFTPOS (13 percent), ATM (17 percent), direct entry credit (18 percent) and direct entry debit (4 percent) (Mackrell 1996).
- Although high-value electronic funds transfer is now for the first time higher in value (63 percent) than cheques (35 percent), cheques continue to dominate over retail low value electronic funds transfer which remained unchanged between 1991 and 1995 at 2 percent (Mackrell 1996).
- Australia ranked seventh in the number of inhabitants per ATM and EFTPOS outlet in 1995, among the 12 major developed countries monitored by the Bank for International Payments (Commonwealth of Australia, 1997). However, National Australia Bank data shows about 34 percent of all deposit transactions are through branches (National Australia Bank, 1996, Table 5.1). Around 45 percent of consumers have never used EFTPOS, and approximately 35 percent have never used an ATM (Asher, 1997).

We unravel the role of trust in the use of electronic money firstly by detailing the importance of trust for payments where the risk of mistrust is the greatest. We then examine other factors that influence the use of a form of payment.

2.1 Trust, Risk and the Choice of a Form of Money

Trust is difficult to define because it is nebulous and all pervading. People speak of trust in terms of *comfort*, *certainty*, being *more confident and in control*, *faith* and *reliability*. They also spoke of trust in terms of *security* and related aspects such as *fraud*, *theft* and *privacy*. People in our sample spoke of trust and money most clearly when they were speaking of a lack of trust. They speak of trust in relation to payments particularly in contexts where the risk of loss is greatest and where the information is less easily available, ie. in depositing rather than withdrawing; paying large sums as against small sums; in situations where non-payment is going to result in loss or penalty; paying with new forms of electronic money; and payment over open rather than closed networks.

Nobody talked of trusting or not trusting the traditional physical forms of money, such as cash or cheque over the counter, other than to contrast them with electronic forms of money. Cash and cheques are taken for granted and have a measure of comfort and experience behind them in modern Anglo-Celtic society in Australia. These payments instruments are no longer questioned. This comfort with cheques is not universal, for cheques are acceptable only between known persons in countries such as Malaysia and India. In Malaysia, for instance, many of the recent payments initiatives have been geared towards making the cheque a more trustworthy instrument (Singh, 1995b).

2.1.1 Depositing Money

It is the risk of loss which makes trust more important for depositing money, rather than withdrawing money. Although many people in Australia trust the ATM enough to withdraw money, only one or two percent of deposits are made through ATMs. In the United States, even with the new generation ATMs, the figure is said to be five percent (Allard, 1996).

Harry, in his late 20s, says:

Using the ATM is not a trustworthy way of putting money into the account. I mean it's trustworthy in that it gets there but I can put money into an ATM Monday morning and it won't clear till Friday afternoon. Or I can put it in Friday and it will clear Saturday morning. So they're completely inconsistent at the branch we use. And I've no guarantee money will go through.

Gary, who is 31 and works in information technology, noted:

I would never deposit my money in an ATM.... I've never done that. I'm quite happy to withdraw because if things go wrong, at worst they get my card and maybe I don't get the money. But the other way around it, depositing money in the slot I would never do that. Because there's no person there to witness the fact that I actually went ahead

The concern with depositing electronically increases when the sums get larger. Jean, an information technology consultant goes to the bank to deposit cheques. She says consultancy cheques are irregular, but are often sizeable. So she would rather bank them personally over the counter. Nonetheless, Jean is enthusiastic about ATMs, and is looking forward to doing more of her cash shopping via a smart card.

2.1.2 Perceptions of Security and Privacy on Open and Closed Networks

The risk of loss appears greater as payments move from traditional forms to new forms, and from closed networks to open networks. The difference between electronic commerce over the Internet and previous electronic payments such as ATMs, EFTPOS and credit cards, is that previous electronic payments went over closed systems rather than the open and public networks.² People

² 'Open' or 'public' networks such as the public switched and mobile telephone networks, exhibit 'any-to-any-connectivity. Parties utilising these networks for business (or private) purposes are generally not well identified, or known in advance to one another. Therefore trust, security and confidentiality are far less predictable or controllable. 'Closed' systems or networks, such as ATMs and EFTPOS, have always been carried over telecommunications systems which service only the business parties involved (Vaughan, Sowards and Kelso,

speak of the risk of theft or fraud as almost wholly to do with the risk that hackers will access one's credit card numbers on open networks. The Internet features more often than the phone and the fax, as on the Internet "anybody" can have access to data or money.

The concern with open networks is articulated most strongly by those who do not use "Internet money", that is any form of money that uses the Internet as the transaction mode. Of the 14 people who spoke of whether they had bought or would buy online goods and services, seven said they would not pay for them online.

Ryan, 36, in information technology, is typical of this group. He will use the ATMs, EFTPOS and give his credit card number over the phone. He is a frequent user of the Internet, and has advertised things for sale on it. He says:

I'm happy to buy things [on the Internet], use it as a first stage, but ...At the moment I won't put my Bankcard number or any details on the Internet because it's just not secure.

It is important to stress that people we interviewed were talking about their *perception of security* rather than a technical evaluation of security. Computer experts see the encrypted credit card number as more secure than the credit card with the magnetic stripe. The encrypted credit card is also seen to be less prone to fraud than a credit card given to a waiter in a restaurant, or a number given over the phone to a catalogue sales person. VeriSign says of their new verification system with Visa, "This is probably 100 times safer than what's done off-line in the mail-order and telephone-order businesses" (Visa Teams..., pB2). This has its parallels in the health field. Privacy of data on smart cards may in fact be greater than present levels of privacy. Guibert (1997) says there are grave gaps in the security of the physical storage of health information.

Payments accounts with banks, payments providers, or sellers of goods and services remove the need for customers to risk paying over open systems. Richmond (1996) found that setting up a payments account in advance had a bigger impact on online shopping behaviour than the artistic and aesthetic layout of the Web site, specials and promotions, association with interactive entertainment activity, or multimedia sound, 3D, animation or virtual reality. The online payment was seen by the customer as a credit card payment. The customer had to make only a purchase decision instead of also deciding whether to purchase online. Reducing the need for open network payments is also at the centre of Telstra's Surelink security system. After registering online, the customer's internet payment goes via the Telstra gateway over closed networks (Presentation by Robert Kirby, Telstra Multimedia, to the Australian Payments System Council, 16 May 1997).

Consumer trust in the security of a system is often built on ignorance of the potential of fraud or level of actual fraud. The value of consumer ignorance is appreciated by financial institutions and credit card companies. These organisations bear the loss of credit card fraud in silence, preferring it to disclosure and the ensuing lack of trust in the system. This is not possible over the Internet, where the activities of hackers and cases of fraud are broadcast over the Net and soon make the news in other media.

Concerns of security spill over into concerns for privacy. Privacy is spoken of in terms of harassment, surveillance, tampering/destruction of data and fraud. What is noticeable is that the

1997). Rohan Samarajiva clarifies the distinction further saying that there is a distinct difference in perception. It must be noted however that technically, some portions of "closed systems" traverse open or public networks. These technical separations can be pierced with consequent security implications (Personal communication, 14 March 1997).

privacy fears were expressed in response to direct questions from the interviewer, rather than raised spontaneously. Consumers' concern with privacy was prompted by a knowledge of the possibilities of technologies yielding more transaction generated information - of companies and the government accessing details about one's personal life; people being able to access bank accounts or credit card numbers; credit cards yielding information about patterns of purchases which could lead to fraud.

Jean, an information technology consultant in her mid-40s used to work on loyalty programmes. She is aware that companies "really know an awful lot about people just from monitoring how they spend their money". Though she says she is not unduly worried about it, she lets her Fly Buy points (a loyalty programme) accumulate to her sister. She has noticed nevertheless, that over one week, she had ten calls wanting to sell her something or soliciting information. She says,

I don't know if this is related to a Fly Buy card or whatever I'm almost to the point where I want to change it to a silent number because I feel like I'm being harassed.... I've had too many of these calls....I think it's a real invasion of privacy.

Some people in our sample like Fred, a businessman, were less concerned about privacy and saw the "lack of traceability" as a bigger threat. Others like Gary say:

I've got past worrying about the system as a whole not ensuring privacy, I will now operate under the assumption that it doesn't and just accept that but I really am not keen to offer that information any further than I already have. So the structures that are there at the moment, I accept them, and things like my age and my income band and so forth are probably available in the public domain now and there's nothing that I can really do about that, so I wouldn't say that that really worried me... the concern is not so much with the availability of personal data as the fact that my funds could be tampered with and I'm not yet convinced that they're really secure.

2.1.3 Trust and Risk

This focus on trust in situations of risk and information imbalance echoes sociological discussions of trust. Luhmann (1988) states that trust presupposes a situation of risk and a choice between two or more alternatives. Giddens (1994) also notes that:

Trust is related to absence in time and space. There would be no need to trust anyone whose activities were continually visible and whose thought processes were transparent or to trust any system whose workings were wholly known or understood (Giddens, 1994, p 33).

As the information imbalance increases, so does the need for trust. Kollock (1994) illustrates the relationship between information imbalance and the development of committed, trusted relationships by comparing the buying and selling of rubber and rice in Thailand. At the time of sale it is not possible to tell the quality of rubber, for the quality can only be determined after extensive processing many months later. Instead of this situation leading to only low quality rubber being sold, buyers and sellers repeatedly deal with people they trust and who have a reputation for trustworthiness. Hence, in the rubber market, reputation and commitment play an important part. The market for rice however, is different for there is little information asymmetry. The quality can be ascertained by rubbing two grains of rice together between blocks of wood. The markets are impersonal auction markets. The transactions are immediate and relatively impersonal.

Samarajiva (forthcoming) notes that trust is even more important when dealing with complex organisations, particularly when:

interactions and transactions are mediated by interactive systems.... Given the documented importance of proximity, co-presence and talk, particularly for contextualizing interactions and building relationships, interactive systems that minimize proximity heighten the need for trust. Individuals lack information both about the business organization and about the interactive system (pp 8-9)

2.2 Access, Information and Use

Trust becomes important for use when people have a choice between different forms of payment that are accessible, appropriate in terms of information and cultural meaning; convenient and seen to provide value for money.

Lack of access to the PC, modem and the Internet, debit, credit and ATM cards, excludes the possible use of electronic money. The figures for ATM and EFTPOS access have been cited above. Access to PCs and modems is increasing in Australia, but even according to the most recent estimates in May 1997:

- Half the households (48%) do not have a PC; and
- More than three quarters (77%) do not have a modem.³

It is important to keep in mind that at present more than three quarters of Australian households are not connected online at home, although some of them could have access at work, in an educational institution or in libraries and other public venues.

Having online access does not mean that people necessarily use online money for all their payments. As illustrated in figure 2, people “mix and match” different forms of money for diverse kinds of payments. An important factor in this mix is the appropriateness of the information yielded by a form of money for a particular kind of payment.⁴ The important dimensions of information are those that relate to time, range, immediate record and context. The questions behind these information dimensions are: Does a form of money give immediate information or deferred information? Does the information pertain to money spent or is it also on money still in hand or in the account? Is the immediate record evidential, discretionary, or is there no record at all? Is the transaction context personal or impersonal, physical or virtual?

It is these four information dimensions which mark out possible forms of money which are used for specific kinds of payments. For instance, in the sample, cheques are an important way of paying utility bills, while cash and EFTPOS are important for grocery shopping. This is because the cheque provides the necessary evidential record for proving that the utility bill has been paid. For grocery shopping, cash is particularly suitable where it is important to track the amount of money spent and the amount still in hand.

The importance of each of these dimensions varies with activities and socio-economic factors. Record is more important for a tax payment than for a gift. Immediate information about money spent and money still in hand that comes from cash, is more important for a family on a tight

³ Presentation by Robert Kirby, Telstra Multimedia to the Australian Payments System Council, 16 May 1997).

⁴ The information dimensions are discussed in greater detail in Singh, 1996.

budget, than a family with a higher disposable income. A deferred record of grocery, petrol and incidental expenditure via EFTPOS or a credit card is preferable for a marital couple trying to budget their money, or separate joint money and individual money in their marriage; or keep marriage money distinct from business money.

2.3 Cost and Convenience

The cost of transactions is a central consideration for providers of payments services and has driven much of their enthusiasm for electronic payments. Consumers' experience of costs is not always the same as that of providers. Cash is an appropriate example. Consumers see cash as free, whereas cheques, credit cards, direct credit and debit, smart cards can incur a direct or indirect fee. For providers, however, cash incurs handling, storage and distribution costs.

New electronic payments instruments and transaction modes have been free initially to encourage use. This was the case for credit cards when they were introduced in 1974, and the ATMs and EFTPOS in the 1980s. Uri, who has an Information Technology business says, he would be willing to try online banking if it were free. He says, "Certainly if there was a charge attached to it most people wouldn't do it. Certainly I wouldn't."

Speed and convenience of electronic payments has been the edge over traditional ways of paying. The convenience of ATMs, EFTPOS and credit cards has been a major impetus for use. In our sample of the 14 who spoke of electronic commerce, five have already used Internet money for purchasing books, magazine subscriptions, CDs, software and information services from the United States. Two used debit cards and three used credit cards on the Internet to pay for the goods. They bought on the Net because the goods and services were cheaper and/or the goods were not available at the time in Australia. They paid on the Internet because it was more convenient and the goods and services were delivered faster.

The use of the credit card on the Internet for at least two people was linked with other risk minimising behaviour. Arthur in his 20s first used his employer's credit card to register for a conference and book his accommodation in the United States, as his employer was paying for the expenses. When that transaction went through all right, he moved on to paying for CDs online with his own card. Bob, an academic pays for books online, but has set up an account with the bookshop he frequents when he is in Boston.

2.4 The Cultural Meaning of Forms of Money

The cultural and historical meanings of forms of money influence use. These meanings are related to historical developments of the payments and banking system in different countries and to values surrounding different kinds of money. Our middle and upper-income Anglo-Celtic respondents preferred cash and EFTPOS to credit cards and cheques for grocery shopping. In Australia, the cheque was very much a residual way of paying for groceries, used when the retailer did not have EFTPOS and cash was difficult to obtain because of the lack of bank branches and/or ATMs. In our sample, it was the rural households who reported regularly using cheques to pay for groceries. Credit cards were not preferred because there is a strong Anglo-Celtic cultural norm against buying food on credit.

The use of the cheque for grocery payments is different in the United States where groceries are paid primarily by cheque (37%), followed by debit cards (26%), cash (25%) and credit cards (12%) (Lipis and Hodgdon, 1996). The greater use of the cheque is not confined to grocery payments

alone. An average of 237 cheques were written per head in the United States in 1994, compared to 55 cheques per head in Australia (Mackrell, 1996).

Australians' minimal use of direct debit is in strong contrast to the European preference for GIRO payments. The GIRO system is a mandate for periodic direct debit payment. According to Chris de Smet (1996), President, AT&T services, AT&T Europe, Africa and Middle East, Belgium, in Europe the GIRO system works within the context of a banking system where there is a stable and long-standing relationship between customers and their bankers. The cheque account is central to this relationship. Typically, banks automatically offer two to three times the monthly salary as an overdraft at rates indexed to prime lending rates, plus three percent, thus eliminating the need for revolving credit.

In Europe, the GIRO payment also yields greater information, in that a statement is issued to the customer after each GIRO payment. If there is a problem the money goes back to the customer without question. Thus, the customer retains greater control over the information and the transaction. Unlike Australia and the US, in many European countries electronic payment processing is the norm. The problem for providers is in harmonising national GIRO systems with regional networks, rather than seeking a behaviour change among their customers.

The cultural meanings of money are most evident in the way people in different cultures use cash. In Anglo-Celtic society in Australia, there is a deep rooted opposition between cash and gifts. Cash is seen as impersonal and tied to the market and therefore seen to be an unsuitable medium for the expression of personal, spontaneous feelings. The presence of cash in the limited sense of currency and in the broader sense of money, is seen to defile personal relationships. Cash is only acceptable, if it is transformed. Viviana Zelizer (1994) describes how in the early decades of the 20th century, cash was transformed for gift giving by converting it into "love tokens", eg. by gift-wrapping, packaging or enclosing it in special money-holders or by becoming a special currency through money orders or gift certificates.

The impersonality and defiling characteristics of cash and currency are culturally distinctive as in many cultures - the Ukrainian farming communities in Canada, Italian and East European Jewish migrants to New York; the Mukuvvar fishing community in South India; Simunul Bajaus in Malaysia - cash is seen as a particularly appropriate gift for weddings.⁵ For some presentations, such as the wedding "shagan" in North India and the "ang pow" among the Chinese for Chinese New Year⁶. the ritually appropriate gift is cash - in crisp new notes in special envelopes.

⁵ See Cheal, 1988; Ewen, 1985; Ram, 1991; Singh, 1984; Toren, 1989

⁶ See Singh (in press) for a more detailed discussion.

3. Engendering Trust

An important question for providers is: How is trust engendered in electronic money and the online environment? In answering this question, it is useful to distinguish between trust and security and between interpersonal trust and system trust.

Trust encompasses issues wider than security. The discussion of the Aspen Forum on Electronic Commerce is helpful in distinguishing between security and trust, particularly in relation to electronic commerce. David Bollier reporting on the discussion, notes:

It may be conceptually useful to distinguish between issues of “hard trust,” which involve authenticity, encryption, and security in transactions, and issues of “soft trust,” which involve human psychology, brand loyalty, and user-friendliness... It is important to see that the problems of engendering trust are not simply technical in nature.... Trust is also a matter of making psychological, sociological, and institutional adjustments (1996, p 21).

Our data and the literature on trust show the criteria that engender “soft trust” in physical and electronic forms of money, fall into three clusters, control, comfort, and caring. The difference between control, comfort, and caring is conceptual. In practice, the distinctions between them are hazy, as is apparent from our data. In all three clusters, the quality of information is central. Providers of services have seen transaction information generated and stored by online systems as a valuable key to predicting consumer behaviour and determining marketing strategies. Users of electronic money are more interested in how they can use online systems to have greater control and comfort with the flow and management of their own money.

In order to understand how trust is engendered in electronic money, it is also important to note the difference between interpersonal trust and system trust. System trust needs to be further distinguished as trust in physical systems and trust in online systems. With electronic money, we are dealing with interactive online systems. However, much of the discussion in the literature around trust deals with building trust in a physical, interpersonal environment. As Samarajiva (forthcoming) notes, “Little is known about how to create a trust-conducive environment based on interactive media systems” (p 11).

The difference between interpersonal trust and system trust is like the difference between trusting your spouse with money in marriage and having trust and confidence in the payments system. With interpersonal trust, there is trust in a person, whereas trust in money in the market context is trust in a symbolic representation of exchange value. Simmel in *The Philosophy of Money* (1990) details how interpersonal barter relationships are replaced by a more abstract, impersonal and symbolic system of money in a market society. The symbolic representation becomes more abstract as one moves from physical forms of money to electronic forms of money.

In interpersonal and system trust there is “faith in the reliability of a person or system in the face of contingent outcomes” (Samarajiva, forthcoming, p 8). Both need to be worked on and have “strong aspects of mutuality” (Samarajiva, forthcoming, p 9). In both cases, trust at some level means an absence of questions and a willingness to accept certain things on faith. For instance, trust in “marriage money” (money in marriage) blocks some questions a person would ask in business, particularly questions about the share of financial contributions, expenditure, contractual

obligations and accountability.⁷ Similarly, trust in a particular currency or a form of money such as cash or cheque is also marked by an absence of questions. Regulators of the payments and banking systems aim to create a system that is stable and secure, so that there is no question as to whether or not people trust a bank or a currency. When questions arise about the safety of money in a bank or about the value of a particular currency, trust has already been shaken.

According to Liu (1996), trust in an abstract system is:

influenced by experiences at access points, which are points of connection between individuals and the representatives of abstract systems, as well as by updates of knowledge provided by communication media and other sources... A sense of reliability and consistency toward the representatives (either objects or persons) of a specific abstract system at a given access point contributes to the establishment of trust in that abstract system. On the other hand, in some cases, a person who has unpleasant experiences at a given access point of a specific abstract system may decide to opt out of the relationship completely, or remains in the relationship with a sense of angst (p 51).

Giddens states that the commitments at access points which tie lay actors into trust relations ordinarily involve:

displays of manifest trustworthiness and integrity, coupled with an attitude of "business-as-usual" or unflappability. Although one is aware that the real repository of trust is in the abstract system, rather than the individuals who in specific contexts "represent" it, access points carry a reminder that it is flesh-and-blood people...who are its operators (1994, p 85)

Electronic money does not offer the comfort of the physical payments instrument and the face-to-face transaction. Neither does it have as long a history of use and familiarity. Trust, however, may be built on specific qualities of the online environment such as speed, instantaneous communication, personalisation of information, and tracking procedures. As Samarajiva says, one of the challenges of engendering trust in online money is to "make the proper links between interpersonal trust, that most people can relate to easily... and system trust" (Personal Communication, 14 March 1997).

3.1 Control

In this study, we use the term "control" in the sense of "to check and regulate; to exercise restraint over" money, rather than its other meanings which are more allied to domination or standards. People we interviewed spoke of controlling money in the sense of having access to money and enough information to track, monitor and regulate the flow of money in different areas of their lives. It is this control that results in a person's comfort in money management and is central to a customer's satisfaction with his or her relationship with a financial services provider.

Information is the key factor for the use and control of money. As with trust, people speak most vividly of control when they experience a lack of control. Our data show the customer feels in control of money when there is:

⁷ See Singh, 1994; 1995a and in press, for a discussion of the ways trust blocks questions about money in marriage. Also see Fehlberg, 1996 for an examination of the role of trust in entering into "sexually transmitted debt" referring primarily to debt incurred because of a person's relationship to her/his spouse or partner.

- A physical payments instrument and/or record of payment;
- A clear identification of the person at the other end of the transaction;
- An ability to track and substantiate a transaction;
- Information to help manage and control the flow of money; and
- The option to determine his or her desired level of privacy.

3.1.1 The Importance of the Physical

There is a deep rooted sense of money as something tangible and physical. Cash remains the reference point for the way people talk about money. They speak of paying by cash or cheque; cash or credit card; cash, EFTPOS or credit card. Cash is seen as “real money” or “actual money”. It is common for people to say they have no money when they mean they have no cash. The metaphor of money as something physical is repeated in phrases such as "heaps of money", "handling" money, of "actual money in hand", not “touching” savings (Singh, in press).

Not only is physical money seen to be more “real” and tangible but the information about physical forms of money is more controlled by the customer. The personal transaction involves immediate verification. The paper receipt is proof of having paid, and this proof is with the customer rather than dependent on the reliability of computer records, or archived within a corporation’s system. It is the paper record that is one of the most attractive features of the ATM and the EFTPOS transaction, allowing a person to keep track of the flow of money, and account and substantiate for expenditure. The lack of a paper trail is seen as one of the greatest disadvantages of direct debit in Australia.

3.1.2 Authentication: The Importance of the Face-to-Face Transaction

The importance of authentication from the customer’s perspective is the ability to identify the provider of goods and services and the recipient of the payment, while the providers’ emphasis is on authenticating the person making the payments.

Much of the comfort with personal transaction modes such as the branch, the post-office, lies in the customer being able to identify that a particular person or a representative of an organisation, received the payment. The ATM is not trusted for depositing money because there is no immediate, personal verification of the transaction. This need for personal authentication is evident different age groups. Luke, a teenager, doesn’t deposit in an ATM, saying, “I don’t trust it..I’d rather see them type it in so that I know the money is there.”

The popularity of the post office in paying for bills also has its root in the personal element of the over-the-counter transaction. Australia Post claims to be Australia’s “biggest over-the-counter electronic bill paying and agency banking service, handling more than 150 million transactions each year” (Australian Payments System Council, 1996).

In online systems, the authentication of the provider and the recipient of payments is a particularly important concern. People try to approximate some of the face-to-face security by dealing with people they know or have dealt with before. Gary tries to replicate the personal verification even when he is sending a fax. He says:

I think I would need to know that there was someone there. Even when I order something by fax, I ring up, I get the name of the person who's going

to be picking the fax off the machine so that I can write, you know, attention such and such on the fax. So I have identified a person who's responsible at the other end for dealing with my transaction.

Gary says he would be hesitant to engage in a financial transaction with the people he only knows through the Internet. He may have emailed them, but if he has not met them personally, he says:

I would be hesitant to make a financial transaction with them because I haven't spoken to the person. I have nothing other than a set of characters that actually demonstrates that they exist.

Gary says that when he sees the photograph of a person he has been corresponding with, on the Internet, it "has a real impact". He, however, falls short of saying whether that would give him sufficient comfort to financially transact with the person.

3.1.3 Ability to Track and Substantiate a Transaction

Control can be exercised at the point of initiating the transaction; tracking its progress; verifying that it has been successfully concluded; and/or assessing the consequences of the transaction on the money that remains in hand or in the account. Over the counter cash and cheque transactions have remained popular and trusted despite the availability of many other options, as they offer instantaneous control over all these stages of payments and money management. One of the advantages of the ATM is that it allows a person to check the balance in a statement account. As Lisa, a professional in her 40s, says, she can track her money "... by looking in my purse to know how much money I've got left until the end of the week".

Direct debit to pay bills is unpopular not only because it is not physical or interpersonal, but because it generates no immediate information about the initiation, progress, termination of the transaction or the balance in the account. This lack of control is at the centre of customers' mistrust of direct debit. Gordon, in his 50s, is typical when he says he dislikes giving future authorisations for automatic debits, which remove his power to initiate or cancel a transaction. He says he wants to be able to check the bill to see whether it is correct, instead of having to pay and arguing later. This need for control, however, alters according to the kind of transaction. For regular, fixed payments, he and his wife use direct debit.

Lisa also does not like direct debit. She says:

I don't like ... direct debit, you know, where you tell the gas company it can take it out each month. I don't like that idea. I guess, I feel if it's an amount which you query - they've taken it out already, so you've got to fight to get it back. I've never queried and never fought to get anything back in my life. It's the principle of the thing.

With electronic commerce, the greatest opportunity is for transaction generated information to be turned on its head, to provide greater information to the customer about his or her transaction. The speed of communication also allows the customer to immediately know what is happening to his or her order. This approach allows a customer to track the transaction online from the order to the delivery. As Bollier says, the virtual nature of online transactions makes an immediate outcome reassuring and gives a feeling of control. "If an ATM reliably provides money or a direct mail catalogue quickly fulfils orders, consumers are prone to trust this mode of business" (1996, p 22).

Arthur, in his 20s and working with the Internet, feels he is in control. He says:

I put in an order for a couple of CDs last week. I can see - Has it been shipped yet? Have they got the various CDs? Have they got it on order? If it hasn't arrived two weeks from then, you can start screaming at them. Then you have that kind of control.

His colleague, Arnold, also in his 20s, says, he feels in control when there is an “instant response” to his order and “instant feedback”.

Personal financial management programs like Quicken and Microsoft Money allow a person to more easily track and monitor the flow of money from different sources and for various purposes. The linking of these programs to online banking and bill paying help people separate, track and manage their money at home and in business. Fred has his own business and has been using Quicken for the past two years. The information he obtained from Quicken was different from the information in bank statements. He says, with Quicken "You can immediately, from the records, retrieve and produce visual charts... You can readily query the report whereas with a bank statement, that's all you've got."

Fred sees traceability as the essential characteristic of controlling information about transactions. He says:

If I saw something going wrong with the accounts, I'd know the same day almost certainly because I enter transactions as they occur. And the more online I am the more traceability I've got - the more validation I've got.

By giving the customer the tools to manage information about his or her money, non-banks have taken advantage of “a widening gap between the information that financial institutions actually provide to their customers and the information that might be delivered” (Bowers and Singer, 1996, p 82). This has contributed to non-banks controlling nearly one-third of the US\$127 billion payments business in the United States (Daruvala and Stephenson, 1996).

Control over information also permits a customer to determine his or her desired level of privacy across various activities. Respecting a customer’s right to privacy is a powerful stimulant to building trust. This includes the non-release to a third party of information yielded by one party unless with explicit consent. As Samarajiva (forthcoming) points out, privacy is contextual and relation-specific. Individuals, in some situations, disclose very personal information and do not consider it a loss of privacy, whilst in other situations, even mundane information is regarded as private. Samarajiva shows through his case study of UBI in Canada, that once this trust is established in the information practices of a system, it may enable a provider to gather more profitable data on the customer through consensual surveillance. Coercive surveillance on the other hand may lead to distrust by the customer and ultimately the loss of the customer and adverse publicity.

3.2 Comfort

Comfort and reassurance about future outcomes strengthens trust and is at the centre of the relationship between customers and providers. The consumer feels comfortable about the future when there is routine, familiarity and previous experience; reputation and predicability; trusted facilitators; a capping of liability; and/or certification and warranting structures. Our data show that residential customers feel comfortable with forms of money when some of the following conditions are fulfilled:

- They have previously had a positive experience using a form of money;
- They know of the service provider and/or the person or firm receiving the payments;
- A new form of money has been introduced to them by trusted facilitators in a safe environment;
- The risk of loss is minimised, capped and known;
- Warranting structures are in place to vouch for the quality of the goods and services;

3.2.1 Routine, Reputation and Previous Experience

Comfort with a form of money is directly linked to previous use, familiarity and reputation. This is why the traditional forms of money - that is paying by cash or cheque over the counter - elicit so little mistrust. The older forms of electronic money, such as credit cards, the ATMs and EFTPOS also have had one to two decades to establish familiarity and comfort.

At times this comfort stems from the family's ways of doing things. Friends and family are important in making the new feel familiar. Goldie first used the Internet to plan and book a holiday in France, only after her son, Gary had shown her how to access the Internet. Arnold, who is in his 20s, and working professionally with the Internet described how he showed his parents to use the ATM. They had previously never used an ATM or a plastic card. There was, of course, the trigger of the immediate need. Goldie was frustrated at not getting what she wanted from the travel agents and Arnold's parents were going overseas for a holiday.

When a person first uses new forms of money, representatives of the provider of payments services or the merchant can be most useful. It was the supermarket and petrol sales staff who were often the first persons to show customers how to use EFTPOS in Australia.

A bad experience with any form of money will jeopardise a person's trust in its future use. The person may become wary of or may totally avoid the particular form of money. Abraham, a farmer, relates why they no longer rely on direct debit and credit, even to transfer money from their farm account to their personal account within the same bank branch. He says:

We tried doing it as an electronic transaction, you know within the bank a couple of years ago. And a couple of times it didn't go through and we bounced cheques. And I thought I'm not doing that again. So we haven't bothered to do it again.

Their experience was buttressed by that of their friends. Abraham says, "Through no fault of their own, they got threatening letters from people... Yeah, for the cost of a cheque it's just as easy to know you've done it."

Familiarity with service providers in a physical environment in the past is a powerful factor in determining whether users will trust them in an online environment. Bob is comfortable ordering books online from bookshops he had personally visited before. Claire, a farmer's wife says, she will *only* deal with firms she has known and dealt with in the physical environment. When speaking of paying over the telephone, Claire says:

I buy Myer Direct that way. But I'm not very keen on using credit card numbers over the phone if it's perhaps some sort of firm that I've never heard of before.

Victor, a teenager, says, the hesitation is that "...you don't know how honest these people online would be". Similarly Gary states:

I've faxed orders away for things and said this is my Visa Card number. But in each case it's been somebody (with whom) I had dealt with before and found them to be no problem to deal within the transaction.

3.2.2 Warranting Structures and Capped Liability

Trust can take a long time to build and may need a variety of "warranting structures" to vouch for the reliability of payments mechanisms. There was little in our data about warranting structures, partly because there are presently few such mechanisms in place for electronic money. Trust in the older payments instruments and transaction modes is closely linked to trust in the regulation of financial institutions and the monitoring of the payments system. It is so well established that there is little discussion of it by consumers when talking of their payments choices. The discussion of warranting structures for electronic money is taking place mainly among providers and regulators of payments services.

At the providers' level, there are initiatives such as the eTrust programme which attempt to set up a logo system of "Trustmarks" that would assure consumers that the providers are following acceptable privacy guidelines (The eTrust story, 1996). Visa and Mastercard have established agreed standards for secure electronic transactions (SET..., 1996). The setting up of certification authorities to ensure cryptography and digital signatures is also an essential part of the warranting exercise.

The discussions around liability and dispute resolution find a more immediate resonance in consumer concerns. In Australia, liability of credit cards over the Internet remains a grey area. and has not been tested in the courts as yet. The issue is one which is being considered by various government bodies. It is interesting to note that the five people in our sample who had paid by credit or debit card on the Internet believed that their liability was capped at \$A50 in accordance with the Electronic Funds Transfer Code or their credit card guidelines.

Bob, an academic in his late 40s, is typical of this group when he says he has "no concern" about using his card on the Net, for he considers his risk to be limited to \$A50. There has been no court case testing whether this in fact holds for the online environment. Financial institutions are loath to make a statement that it does not, for a capped liability, or the perception that there is a capped liability is a powerful source of comfort in the new online environment.

3.3 Caring and Communication

A constant thread in the literature on trust is that certification and technical expertise is often *not enough* to ensure trustworthiness. Blackston (1992) states:

Trust cannot be demanded or legislated. It has to be earned. Being credible and reliable is not the same as being trustworthy. Many corporations believe (or act as if they believe) that producing good-quality services, which give the corporation a "good image" for dependability and reliability, is sufficient to gain the consumer's trust. But our research has demonstrated that trust is crucially dependent on something that can best be termed intimacy. Intimacy is the "brand's attitude" which locks trust into the relationship (1992, p. 82).

Trust is strengthened if the customer feels that the provider of goods and services not only cares for his or her business at the point of transaction, but continues to support the customer with care and service after the sale. Ganeson (1994), who examines vendor/retailer relations from a marketing perspective, refers to this as 'benevolence', or "the extent to which the retailer believes the vendor has intentions and motives beneficial to the retailer when new conditions arise, conditions for which a commitment was not made" (p 3). This is easily transferable to the online environment as Bollier notes, when a seller is willing to rectify errors and provide service after a transaction is completed. This may also be displayed to the consumer through the provision of additional or cheap services.

The importance of benevolence, intimacy and communication in engendering trust was articulated by our respondents, particularly when it was marked by its absence. There is a strong current through our data that Australian banks are not benevolent and do not care for their customers. Brad, a farmer, says he prefers the credit union over the bank because they provide numerous extra services that banks do not supply. He says you can purchase things through them and they "can sort your holidays out. Solicitors, wills - that sort of thing".

Fred a self-employed person in small business, is particularly passionate about the failure of banks in this regard. He says, that service "comes down to thinking of the customer, rather than their own organisation". He thinks that much of the concern with security is the bank's concern for its own security rather than for the customers' security. The complicated procedure for telephone banking at his bank is a case in point. He says:

I think they really do have to lift their game in a customer service sense for electronic banking and they've got to stop thinking about themselves and the security of the bank and it's investors and start thinking about the humble users out there.

Caring and trust have not been important themes in banking literature. There is a greater focus on caring in the health services area. Semmes (1991) says:

Caring consisted of generating emotional commitment and included communication that conveyed empathy for the patient's condition... , respect for the patient's intelligence..., shared information and familiarity..., humanistic motivation..., and sincerity... Caring was also communicated by the length of the patient-practitioner encounter...." (pp. 458-459).

Guibert (1997) points out that in the literature on quality of care the dimensions/concepts of

technical quality and relational quality are well identified. Patients discriminate between both. It is possible to recognise that a doctor has poor technical qualities and trust the doctor for her or his relational qualities. "Relational caring" is more important in family medicine where the symptoms are frequently vague and not conducive to a specific diagnosis. Trust in the doctor as a person is as important as trust in his or her skills. The unfocused nature of the illness creates a situation of uncertainty which requires a greater need for trust. On the other hand in emergency situations or with a clear cut disease requiring a specific technological intervention, it is trust in the doctor's technical skills which is the primary need.

This relational caring is aided by the doctor and patient sharing common values. Semmes says

The practitioner's superior knowledge and command over diagnostic and therapeutic techniques are additional underlying sources of social control in the encounter but... do not insure trust. Common values and beliefs that become common goals are what support trust. Thus, without trust, we cannot assume patient acceptance or acquiescence to treatment, regardless of the superiority of practitioner knowledge or the practitioner's control over diagnostic and therapeutic techniques (1991, p. 466).

The examination of trust in our data and the related literatures now leads us to examine the business case for trust.

4. Providers' Strategy for Trust

There is no doubt about the importance of trust in business relationships. Trust is the non-contractual element of contract. It is an important component of exchange transactions.⁸ Trust reduces transaction costs (The eTrust story, 1996; Fukuyama 1995). As Granovetter (1992) points out, there is trust in business because business relationships are embedded in a network of social relationships. He cautions that although social relations are a necessary condition for trust, they are not sufficient to guarantee trust and trustworthy behaviour, for both "enormous trust and enormous malfeasance" may follow from personal relations (p 62).

Trust is at the centre of relationship marketing, where the emphasis is on establishing, maintaining and enhancing relationships with customers so that the service providers can achieve a profit and the customers receive value (Gronroos, 1996). Reichheld (1993) presents convincing evidence that companies that are based on loyalty increase their profits through customers' repeat purchases and referrals, decreasing transaction costs and costs of acquiring customers, and increased employee retention - which further increases customer loyalty and decreases staff hiring and training costs.

Trust in interpersonal and business relations is also strengthened by indications of commitment to the same goals. Handy (1995) who discusses trust in a virtual organisation, argues that this kind of bonding is manifest in some companies' mission statements, campaigns for total quality or excellence, and personal example by leaders. Employees can be thought of as members of a large family business, each of whom has clear responsibilities and expected outcomes but for whom there is a sense of belonging and collective pride.

Trust is important not only for individual business relationships, but trust is central to the creation of large commercial organisations. It is Fukuyama's (1995) thesis, that countries where people have a high degree of trust in groups and networks beyond their family, like the United States and Japan, are countries where large private corporations flourish. Many countries in Asia, like China, are low-trust societies, that is trust is bounded by the family. These low trust societies are characterised by family businesses and a large State presence in the economy.

4.1 Providers have Focused on Security rather than Trust

Providers of electronic money and commerce acknowledge the value of trust and consumer confidence. They have however concentrated on issues of security rather than trust, on "hard trust" rather than "soft trust".⁹ The emphasis on security is partly fuelled by the assumption that people would buy more goods and services online if electronic payments were more secure. Even some providers of electronic money do not think the system is secure enough to pay and receive electronic money via the Internet. Grant Thornton's survey of *Banking on the Internet*:

⁸ See Arrow 1975; Granovetter 1985, Semmes 1991; Sterling 1995;

⁹ An Internet search for "security" and for "trust" and its synonyms "confidence", "reliability", "faith", "safety" and "comfort" in the broad areas of "electronic commerce", "smart card", "e-cash" and "digital cash" on 20 February 1997 showed that the emphasis on security far outweighed that on trust. For instance, an Altavista search of electronic commerce brought up 80,000 hits. Of these, 5,000 had "electronic commerce near security" with only 162 coming up for "electronic commerce near trust". Of the 821 articles dealing with electronic commerce in the ABI Inform business catalogue, September 1995 to August 1996, 184 mentioned "security" and only eight mentioned "trust".

Experience vs Expectations (1996) based on a sample of 44 US banks showed that security of online transactions was of concern to 67 percent of the banks, compared with 47 percent of the customers.

This preoccupation with security issues has led to an exploration of technological and regulatory solutions - the importance of different encryption systems; the investigation of private and public keys; digital signatures; ways of combating fraud, counterfeit and money laundering; checking the invasion of privacy; issues of international law and liability; and the creation of authentication and certification structures.

Technological strategies also involve tamper-resistance devices (eg smartcards or merchant's secured device)¹⁰ using both logical (software) and physical (hardware) protection.¹¹ Furthermore, technological strategies involve traceability measures including numbering of transactions based on the card or note's serial number and verification by the issuer/central operator.¹²

The literature on regulatory standards includes a consideration of:

- The rights and obligations of the different parties involved in electronic commerce;
- The determination of these rights and obligations by Government, commercial organisations, and/or the legislature¹³;
- The issuing of electronic money and the role of central banks;
- Liability issues for electronic money¹⁴;
- International standards for security and privacy¹⁵;
- Formation of certification authorities and warranting structures¹⁶; and
- Setting up of an international regulatory body.

A complementary emphasis on the broader issues of use and "soft trust" leads providers of electronic money and commerce to also ask:

- What can I do to increase access?

¹⁰ This device might also be a smart card or what is sometimes referred to as a secure application module (SAM) , a secure computer component integrated into the merchant's payment-processing terminal (Bank for International Settlements, 1996, p. 13).

¹¹ Software protection involves codes, cryptography, and specific storage of data. Any data that will not be altered during the life of the card are stored in read-only memory (ROM) during the manufacturing process. Sensitive but alterable data are stored in electronically erasable programmable read-only memory (EEPROM) which can be changed by the chip's internal function. Physical protection involves physical barriers that prevent optical and electronic reading, such as heat sensors, external coating and layers of wiring size and size of information (Bank for International Settlements, 1996, p. 14).

¹² This involves verification of message authentication, codes, transaction sequence numbers, information about previous payment and load transactions and other information stored in transactions on devices (Bank for International Settlements, 1996, p.18).

¹³ Vaughan, Sowards and Kelso , 1997; The Warren Centre 1995.

¹⁴ Vaughan, Sowards and Kelso , 1997.

¹⁵ Vaughan, Sowards and Kelso , 1997

¹⁶ See Kirby and Walsh, 1996; Secure Electronic Transactions specification 1996, pp. 25,26; and Wenninger and Orlow, 1996, pp. 7,8.

- Does the payments transaction offer information appropriate to the activity and cultural meaning?
- Have I given control of information and the transaction to the customer?
- Have I increased the customer's feeling of comfort with the transaction?
- Have I shown the customer I care?

The weight placed on each question will change according to the activities, kinds of transactions and the social and cultural context.

4.2 A Strategy Emphasising a Profitable Customer Relationship

An emphasis on trust means a larger cultural change for providers, for engendering trust goes beyond a check list of solutions. As Reichheld (1993) says, "Building a highly loyal customer base cannot be done as an add-on. It must be integral to a company's basic business strategy" (p 64). The strategy places the customer at the centre, aiming for a profitable customer relationship rather than concentrating solely on the cost of single transactions. It moves from *transaction marketing* to *relationship marketing* (Gronroos, 1996).

A customer focused strategy is particularly necessary for providers of electronic commerce as the customer can access increasingly customised goods and services from a multiplicity of suppliers across traditional market and cultural boundaries. This strategy is also worth pursuing because the providers' perspective has failed to predict customers' use of forms of money in many directions. The most glaring failure has been the prediction that electronic payments would become the dominant payments mechanisms. The latest data from the United States shows that in the past 20 years, cheque transaction volume has increased more than all electronic services combined (Lipis, 1997). This data is in tandem with that presented by Daruvala and Stephenson (1996) who show that in 1995 electronic payments - ie. credit and debit cards, direct entry and EFTPOS - comprised only three percent of the number of payments transactions and 23 percent in terms of value. By 2000, electronic payments are expected to account for seven percent of the volume and 33 percent of the value of payments transactions.

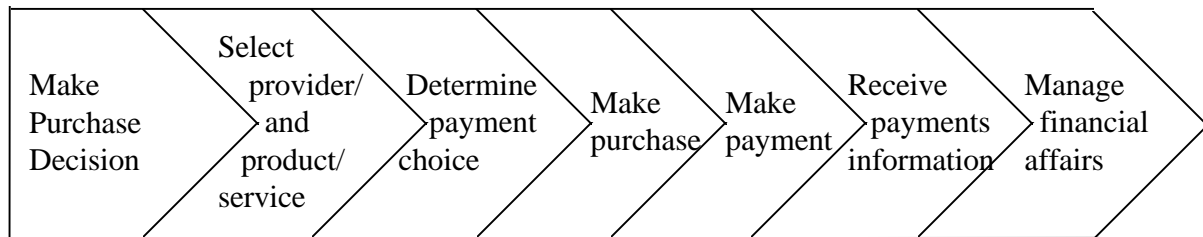
Providers intuitively know that customers are vitally important for profits. It is difficult, however, to translate this intuition into business strategy. A shift to the user's perspective not only changes the key questions, it alters the language of discourse. Many of the metaphors used by providers of electronic money and electronic commerce are from engineering and economics. Hence the talk of "tool kits", "drivers", "applications" on the one hand and emphasis of "demand", "price", "determinants" and "take-up" on the other. Providers who are used to speaking in terms of the "roll-out" of technologies, are telling a story where technology provides the solutions to modern problems.

The user's perspective is also partial, but it uses a different set of metaphors. Instead of talking of "demand", "take-up" and "price", the emphasis is on "use", "access" and "meaning". Instead of "applications", "tool-kits", "determinants" and "roll-outs", discussions centre on the process of "constructing meaning" the "mix and match" and the "fit". These metaphors are influenced by anthropology and sociology.

These metaphors dictate business strategy and influence the kind of data collected. As cash transactions are difficult to measure, most often these transactions are missing from provider dominated descriptions of payments systems. Since purchase is easier to measure than access and usage, the emphasis is on purchase. With an emphasis on technology and measurement, comes a

way of seeing the world where the relationship between different factors is linear and is depicted by value chains. Daruvala and Stephenson (1996) of McKinsey and Company in New York, present the payments value chain from the buyer's perspective, as depicted in Figure 3. This contrasts with the layered model of the use of multiple monies depicted in Figure 2. It means understanding a multidimensional process, whereby customers mix and match new and old technologies to fit with their activities and social and cultural frameworks.

Figure 3: The Payments Value Chain: The Providers' Perspective



Source: Daruvala and Stephenson, 1996

An important aspect of the change in metaphors is the recognition of the interrelatedness of the economy, social relations and cultural values. Electronic forms of money are not only changing the nature and cost of distribution networks, they are also changing the way people access, manage and control money at home and at work. Using different forms of money is not just a matter of cost and convenience. It is ensuring that money with the appropriate meanings is used for various activities.

4.3 Future Research

There is a need for further research in two directions:

- Trust and electronic money: A providers' perspective; and
- Trust and electronic money across cultures.

The empirical examination of trust and the use of electronic money in this paper is from the perspective of the retail customer. It is a partial story, which needs to be supplemented by case studies of the ways providers have engendered trust across cultures in online services. The important questions that arise are: How has this focus on trust influenced business strategy and profits? How have the means of engendering trust in online services differed from building trust in physical goods and services?

There is also a great need for the cross-cultural study of the use and meanings of money. Money has most often been studied as a wholly economic and universal phenomenon, linked to exchange and a store of value, rather than to cultural meaning and an idiom of communication. Much of the understanding of money is based on the Western experience. As we enter an age where global markets are possible, and where some of the markets with the greatest potential are in Asia, it becomes imperative to study how people in different cultures use money.

Trust is an important focal point, for it links the use of money to a profitable customer relationship for the providers, and to cultural values and meaning for the users. Some of the important questions are: Do people use money in similar ways across culture? How do the differences relate to historical developments of the banking and payments system? What lessons does the cross-cultural

study of money have for providers of online services and payments? In trying to link the study of money from the user's perspective with the interests of providers, the research will also aid the fashioning of a common language between users and providers, and between economics, the study of technologies, anthropology and sociology.

Appendix

**Table 1: Socio-economic characteristics of the sample
(N=47 persons, 23 households)**

Socio economic characteristics	Number	Percentage
PERSONS		
Age		
Teenagers	10	21
20-29	7	25
30-39	7	11
40-49	12	0
50-59	5	13
60+	0	
Not Available	6	
Gender		
Female	21	45
Male	26	55
Marital status		
Married	25	53
Defacto	6	13
Single	12	25.5
Separated/Divorced	4	8.5
HOUSEHOLDS		
Language		
English speaking background	20	87
Non-English speaking background	3	13
Household income		
Under 30000	3	13
30000--49999	5	22
50000-69999	5	22
70000-99999	4	17
100000+	3	13
Not Available	3	13
Household composition		
Single	2	8.7
Couple only	4	17.4
Couple with child/children	13	56.5
Single with child/children	4	17.4
Urban/Rural status		
Urban	20	87
Rural	3	13
Households with PCs	21	91
Households with modems	13	56.5
Households using financial management programmes	6	26

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