Designing for Money Across Borders

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Abstract

This paper translates the sociological findings of the use of domestic money across cultures, into scenarios for the design of electronic money and banking. A cross-cultural perspective on money as a social phenomenon is significant because there is an increased global transfer of funds in electronic commerce and as personal remittances. Without this cross-cultural perspective, the Western experience of money gets universalized. The social and cultural dimensions of money are also important to increase the cultural appropriateness of new forms of electronic money. This paper draws on qualitative studies in the sociology and anthropology of money, and international payments literature that show people use money differently across cultures in four main ways. Firstly, there is a cultural difference in the preference of payments instruments. Secondly, the cultural boundaries of domestic money vary. In some cultures, the marital couple is the financial unit, while in others, it is the extended family or clan. Thirdly, there are differences in the management of domestic money, even within the same culture. And lastly, gift money is central in some cultures as a medium of caring, whereas in other cultures, money is seldom gifted. These cultural insights into the use and nature of money are translated into scenarios of money transfers in diasporas, group authentication and the use of a mix of traditional and electronic channels for engendering trust.

1 Introduction

Money has been seen as a social phenomenon since the mid-1980s. This is a departure from the study of money in economics and classical sociology. In economics, money is defined in terms of its three basic functions - as a medium of exchange, a store of value, and a unit of account. Classical sociologists such as Karl Marx ([from 1927]1971) (Marx, [from 1927] 1971), Georg Simmel ([1900] 1990) (Simmel, 1990)and Max Weber (1947, 1978) (Weber, 1947) identified money and the market. This meant there was only one kind of money, distinguished only by quantity. One set of ten dollars can always be substituted by another set of ten dollars. The classical sociologists saw money as being individually owned. Money was impersonal and depersonalising. They emphasised different effects of money on society and culture, but did not consider the social and cultural shaping of money. It is the economists' and classical sociologists' concept of money that underlies attempts at designing forms of electronic money.

Since the mid-1980s a social theory of money has been more clearly articulated. Dodd (1994) (Dodd, 1994) argued that money is not necessarily always a store of value, a unit of account or a medium of exchange. It is a person's use and perception of money that distinguishes the nature of money, rather than function or the inherent characteristics of payment instruments. Zelizer's work (1994) (Zelizer, 1994) showed that money shapes, and is shaped by, social relations and cultural values. Money is not a homogenous phenomenon. There are different kinds of money – market money differs from domestic money. These different kinds of money are separated and earmarked and cannot substitute for each other. Singh's work (1997) (Singh, 1997) shows that the nature of money not only differs between the domestic arena and the market, but that even in banking, the meanings of money differ from the ideal type of market money described by the classical sociologists.

The social theory and design of money most often assumes money to be Western money. Firstly, money in modern societies is more often studied as a medium for payments and transfers rather than gifts. Gift money is seen as a 'special' kind of money, usually most often studied by anthropologists studying non-Western and traditional societies. Secondly, the design of global payments takes for granted a Western computerised banking system with trusted paperless payments instruments and transaction channels that do not depend on face-to-face interaction. And thirdly, money is seen to be individually owned. This is the assumption behind electronic authentication systems.

1.1 Money across borders

Cross-cultural understandings of money are imperative because money is increasingly crossing borders through personal remittances and the migration of peoples. There is also an increased transfer of money across borders because of electronic commerce.

World Bank estimates that remittances received by developing countries total $US93 billion in 2003. Remittances flowing to developed countries are more than double the size of net official finance and second only to foreign direct investment (Global Development Finance, 2004). Formal remittances are already big business for financial institutions. Increasingly post offices have given way to standing instructions with banks and bank drafts to online transfers (See FedFast to speed up Gulf NRI remittances, 2002; ICICI bank offers fast NRI remittances, 2002; Now online money transfer in Australia, 2004).

E-commerce cross border trade has grown slower than expected, partly because of cultural and institutional barriers. However the growth of cross border e-commerce has grown sufficiently to lead to international attempts to regulate and harmonise e-commerce systems. It still is a small part of e-commerce in general. Celent estimates that cross-border C2B e-commerce in 2003 accounted for 10 per cent in Western Europe, six per cent of total online sales in the United States, and less than one per cent in Japan. Card-centric payments were the major barrier in cross-border e-commerce (Celent, 2003).

1.2 Designing money

The link between the cross-cultural study of money and the designs of electronic money are being forged in the Smart Internet Technologies Cooperative Research Centre (SITCRC) in Australia. The Centre brings together researchers from 12 Australian universities and three major corporate partners. The aim is to design smart Internet technologies which people will find useful. To this end SITCRC has adopted a user-centred design approach. The emphasis is on combining user experience with technology breakthroughs and business strategy. We are still at an early stage with designing money. The foundation has been set by the qualitative and quantitative study of how people control personal information in Australia in the areas of money and health (Singh & Cassar-Bartolo, 2004). This work brought to the fore the importance of user control in ensuring trust, security, privacy and identity. We are now pursuing these strands of inquiry in a qualitative and quantitative study of banking, personal information and decision making in Australia.

The work is multi-disciplinary bringing together anthropologists, computer scientists and bankers. Drawing on previous experience (Singh, Zic et al., 2004) we are focusing our attention on translating user insights into design and strategy, in a timely and rigorous way. We are modifying our interview structures, so that the focus is not only on understanding current use, but also overtly addresses expected social changes and the subsequent changes in the use of technologies. We will also be putting our preliminary scenarios before the participants, seeking their feedback so that the scenarios can be more grounded in users' experience.

We are still at the early stages of design. The extensive qualitative and quantitative user study initiated for this project is yet to be completed. We have learnt though, that unlike traditional anthropological and sociological studies, we not only have to articulate problems, but have to be part of the solutions (Singh, Cassar-Bartolo, & Satchell, 2004; Sommerville, Rodden, & Sawyer, 1992).

Our project differs from those usually described in the User Centered Design (UCD) literature. We are working outside a single organizational context, with our members drawn from academia and industry in three Australian cities. This makes possible a more extensive user study than is usually found in strictly commercial projects. However, because the UCD, technology and business parts of the team are situated in different cities, there will be a sharper division of labour than we would have liked. We aim to counter this as far as possible with periodic face-to-face meetings and fortnightly teleconferences.

In section 2, I present the findings from the cross cultural study of money and the payments literature. In section 3, these understandings are translated into preliminary scenarios. The process of checking these scenarios in further qualitative study will be shared with technologists and bankers in the design team.

2 Money Across Cultures

This paper draws on qualitative studies in the sociology and anthropology of money and quantitative international comparative data on the use of electronic money. These studies show that people use money differently across cultures in four main ways. Firstly, in many countries there is a cultural preference for one payments instrument over another. People's use of electronic money varies depending on the banking and telecommunication infrastructures and literacy and numeracy levels. Secondly the domestic boundary of money varies from the marital couple to the extended family and clan. Thirdly, the management and control of money is changing with electronic money and so shifting cultural meanings. And lastly, money is more than payments. Personal remittances to family are major national economic drivers and gift money is at times the preferred way of marking births, weddings, deaths and festivals.

2.1 Cultural preference for payments instruments

In the mid-90s, there was the expectation that various forms of digital money would revolutionise the way we pay. It has become clear that though the use of electronic payments instruments and channels has increased, consumers have not embraced electronic wallets, digital cash or e-cheques. Though the volume of electronic transactions has increased, people continue to use a mix of payments instruments. Cash and cheques remain important retail payments instruments in the United States, Canada, Hong Kong SAR, France, Italy, United Kingdom, Singapore and Australia (Bank for International Settlements, 2003). In many Asia Pacific countries, it is cash rather than the cheque which is the main retail payments instrument (EMEAP Working Group on Payment and Settlement Systems, 2002).

There is an unspoken assumption that electronic money has become important across cultures. However, banking and telecommunication infrastructures vary, together with literacy and numeracy levels, influencing people's access and use of banks in general and electronic transaction channels in particular. The differences are particularly great between countries like the United States and Australia with near universal access to electronic banking on the one hand and countries like India where electronic banking is not universally available. These differences of access are important within the same country over rural and urban areas.

The preference for one payments instrument over another is not just a matter of banking infrastructure. Cultural meanings of money are also important. In Japan for instance, there is a cultural preference for cash. This has a direct impact on the design of electronic commerce systems in Japan, where the payments are in cash after physical receipt of the goods. It is the same for China, where the post office is most often used for the delivery of goods. E-commerce then follows the widely accepted practice of cash on delivery.

The changing cultural meanings of money are equally important across activity areas. In Australia in the early 1990s, credit cards were seldom used for paying for groceries. Cash was the preferred way as it was familiar, "real" and physical. It was easier to budget for it was immediately evident how much money had been spent and how much money remained. Paying for groceries on credit was seen as the beginning of a slippery slope to debt and a loss of control over the budget. This is why when a form of electronic money was chosen, it was more likely to be direct debit via EFTPOS than a credit card (S. Singh, 1997, 2004; Wilson, 1999).

This strong association of cash and grocery shopping in Australia has now been overturned. In 1996 in Australia only 10 per cent of consumers paid for supermarket groceries with a card. But in 2000, the comparable figure is 34 per cent. There has been an even greater rise in the use of credit cards for council rates, school fees, insurance payments and car registrations (KPMG Consulting, 2001). This increased use signals a greater trust in the record of a credit card transaction over the last four years. Australian banks have encouraged the use of the credit card with loyalty programmes, and by providing increased channels by which credit card payments can be made. It could also mean that some domestic transactions such as those for food, are no longer invested with the same personal meanings within the household.

2.2 The family boundary of domestic money

Some of the most distinctive cultural differences lie in the boundaries of domestic money (Singh, 1997). The boundary of domestic money varies across cultures, impacting on the privacy and flows of money. They are also directly relevant to the way people bank, seek information and make decisions about money.

In middle-income Anglo-Celtic society in Australia, the marital unit is the primary domestic financial unit. Marriage money, that is money in marriage, is the most important kind of domestic money. Its boundaries are marked most visibly by the marital joint account and joint marital home ownership. There is little flow of money outside the marital unit to parents. The intergenerational flows are more often from the grandparents to grandchildren. This pattern exists within the safety net of the old age pension, which ensures a minimum survival income. Parents also take pride in their ability to manage on their own, without having to call on their children for financial help.

The boundaries of marriage money in middle-income Anglo-Celtic Australia are also marked by an intense privacy about domestic money. There is little discussion of money between parents and adult children, and even less between siblings and friends. It is as if the privacy of money draws a circle around the couple.

In many other cultures in Asia and Africa, it is the family or clan that is ideally the more pertinent boundary of domestic money. This is related to the ideological dominance of the discourse of the family rather than marriage. In India, the Hindu Undivided Family is a legal construct which is officially recognised as a financial unit for tax purposes. This emphasis on the family is accompanied by the lack of clear and enforceable rights of the woman to marital property during marriage, divorce or widowhood. Within marriage, it is important to recognise that the 'separate pot' system of money management is more common in the world than the 'common purse'. This is especially true where polygamy is prevalent and/or marriages are unstable (Blumberg, 1991, p. 122).

The ideological emphasis on the family supported by a code of filial care also encourages a flow of money from children to parents. Stivens (1987) (Stivens, 1987) describes how the flow of money in Negri Sembilan in Malaysia is from single and married children to parents. Parents and older kin reciprocate through help with child care. This flow of money and care is supported by the moral code that kin should help each other and by the matrilineal ideology making for female solidarity. This notion of kin helping each other is also promoted by the state as being a virtue of the Asian family. This fills the gap left by a rudimentary welfare system.

Differences in the boundaries, meanings and management of domestic money are illustrated in a study of *Pakeha* (the majority group of New Zealanders of British and European descent), Maori and Islander families in New Zealand (Fleming, Taiapa, Pasikale, & Easting, 1997). For the *pakeha*, family money is household money. Money does not routinely flow out of the household to kin outside the household. But in Maori families, monetary obligations to the *whãnau*, the clan, at times take precedence over household obligations. And in Islander families, the extended family is the financial unit, for money flowing in and out.

It is important for policy makers and designers to be aware of the different boundaries of domestic money across cultures. During a workshop in Papua Guinea, an APEC task force became aware that cultural differences are critical for the effectiveness of electronic authentication. They said

> … the task group has become aware of a number of cultural differences within the APEC region that can affect the way electronic authentication is implemented. The first difference noted involves various concepts of community property concept can cover extended families or clan, village or tribal groupings. In many cases no single individual is given authority to act on behalf of the community. Many electronic authentication techniques have as central themes the concepts of binding an electronic authenticator to an individual and for the authenticator to be under the control of that individual. It is difficult to translate electronic authentication techniques that rely on the concept of individuals to cultures whose basic concepts are communal. These community property concepts are present in a number of APEC member economies (pp. 44-45) (eSecurity Task Group, 2002).

The task force reinforced the importance of cultural awareness by saying,

> These cultural differences have the potential to impact on technical, legal and policy aspects of electronic authentication. Often cultural differences are not addressed in these aspects through ignorance rather than intent. There is a need to raise awareness of both cultural differences and their possible impact (p. 45) (eSecurity Task Group, 2002).

2.3 Managing money

The management and control of money differs within the same culture, depending on cultural and socio-economic factors. The use of electronic money is changing the ways in which money is being managed. Early studies from the United Kingdom and Australia show that it is often the women who are disadvantaged with the greater use of electronic money management. Focusing on the management and control of money in the household is an important corrective to discussions of electronic money and electronic commerce that only emphasise the volume and dollar value of electronic transactions and the numbers of users.

Studies in the United Kingdom and Australia have linked different socio-economic factors with the dominance of the wife or the husband over money decisions. Traditionally, money management has been spoken off in four different ways – the whole wage system; the household allowance; pooled or shared management and independent management. These are associated in different ways with wife control, husband control, joint control or independent control. Middle-income households are more likely to have joint management whereas the higher income groups may have independent management systems. These management systems are in transition with the differential use of the new technologies within the household.

Pahl's study of family finances in the electronic economy in the United Kingdom (1999) (Pahl, 1999), shows clear patterns of exclusion from the electronic economy – between households and within households. One of the most significant variables is education. Access to the electronic economy involves being confident about gaining the necessary knowledge to make the best use of all the new forms of money. Pahl also finds that gender is significant as men make more use of new forms of money than women. Men tend to dominate the use of new technologies such as Internet banking. She says this dominance is "changing the gender balance of financial power within families" (p. 5). Singh and Ryan's (1999) work on gender, money and electronic commerce also arrived at the same conclusions (Singh & Ryan, 1999).

2.4 Gift money

The use of gift money is one of the most visible differences across cultures. In Anglo-Celtic society in Australia, the United Kingdom and the United States, there is a deep-rooted opposition between cash and gifts. Cash is seen as impersonal and tied to the market and therefore an unsuitable medium for the expression of personal, spontaneous feelings. In Anglo-Celtic society gifts of cash are accepted from grandparents and sometimes from parents. But in other cases, cash is only acceptable if it is transformed into gift certificates.

In other societies, cash is the mandatory gift for occasions to signify relationship at marriages, births and deaths. This is true of the *ang-pow* gift at Chinese New Year for younger unmarried girls and boys, where crisp, new currency notes are gifted in red packets with appropriate characters and symbols on them. In Malaysia, banks not only distribute the traditional red envelopes for the *ang-pow* but also ensure they have a supply of crisp new notes during Chinese New Year. In Japan, the preference for clean notes has also migrated to the electronic world where some ATMs deodorise and clean the notes before delivering them.

In New Delhi, it is possible to buy gift envelopes with a rupee coin stuck on the outside so that the *shagan* – the ritual presentation for weddings and births – can be made in auspicious denominations, such as Rs. 11, 21, 51 or 101. Amongst the Simunul Bajaus of Sabah, Malaysia, cash is the most appropriate gift from most of the guests at a wedding or funeral. Gifts of cash are taken into account when planing the expenditure. This cash is most often presented in envelopes with the giver's name on the outside for purposes of record. Sometimes, the cash is elaborately transformed, as with the payment of bride-price. At one particularly ostentatious wedding in the late 1970s, the MR 3,000 was arranged in the shape of the National Mosque. At another wedding, the money was arranged in floral designs with the red of ten ringgit notes and the green of the fifty ringgit notes being carefully matched

For Maoris, the ritual cash payments at funerals symbolically make evident the closeness and caring within the larger descent and affinal group, the *whãnau* (Fleming et al., 1997).

3 Designing Money for Trust and Cultural Meaning

The limited success to date of the new digital monies has brought "trust" to the centre of the policy and business debate on electronic commerce and money. There is nothing inherent in a piece of paper, a plastic card or electronic information that converts it into money. Money is money only when it is trusted that it will be honoured in your networks of use and exchange.

Cultural meanings of money still have not gained the same kind of attention. However, in order for money to be trusted, the new digital money needs to replicate some of the cultural meanings associated with different kinds of money in the domestic and market areas. Digital money also has to be embedded in the ritual meanings of gifts and exchange. It is in these areas, that the sociology of money can be of key help to the designers of electronic money.

3.1 Translating social understandings to design

Scenarios and scenario prototypes have the power of stories, but also suggest a design prototype that helps keep the user at the centre of design (Carroll, 2000; Cooper, 1999; Satchell, 2003). The scenario prototype captures only one part of the user study and its conclusions. But in capturing the specifics of one persona and activity, elucidating the user problem, and suggesting an acceptable design solution – the user study becomes relevant for designers and businesses. In constructing the scenario prototype, we sketch the person in his or her social context, dealing with a "web of activities". We articulate the user problem, making clear the connections with the user insights gained from the anthropological and sociological studies. We then suggest possible solutions, keeping in mind the need for trust and a fit of cultural meanings.

The notion of a web of activities is important, for the success of a payments technology often depends on its success for money management. We also keep in mind that people like to use a mix of channels, depending on different aspects of the activity. So often the telephone is more powerful when used in conjunction with e-mail, or the Web with the telephone. We choose channels and technologies that are pertinent to our technological and business partners.

At present, these scenarios draw on the knowledge of the team and previous sociological and banking literature. These scenarios are still to be tested in our further qualitative work and discussions with the technologists and bankers in the design team. But they bring together crucial user insights and suggest ways of designing services that are more useful, trustworthy and fit with accepted cultural meanings of money.

3.1.1 Joe Sits by the phone paying his bills and managing his money

Joe, 65, is now retired. He lives in Melbourne with his wife. Their children live inter-state. Joe used to work as an accountant, and has taken charge of paying the bills. His wife Anna, 60, used to pay the bills before, but is happy to have Joe deal with it now. He feels he is technologically savvy, but is uncertain about the security on the Internet. His IT friends tell him that the Internet is safer than handing the credit card to the waiter, but he still has a wait and see attitude to paying over the Internet.

He doesn't go to the bank or post office to pay his bills, for it seems to take up too much time. It is also another chore to remember. Moreover, he has never done it that way in the past as Anna used to pay the bills. He only offered to manage the money when the electronic options became available.

Like 50 per cent of Australian adults, he uses the phone to pay his bills, for he sees it as a secure personal device. On the phone he prefers to speak to a person, but is reconciled to having an automated response system. Every now and again, he does not respond to the system and so gets a human.

User Problem: Joe's problem is that paying by phone – especially if he has a number of bills to pay at the same time – takes up too much time and is repetitive. It does not address his need to have a physical record of the payment and up-to-date financial information. He still has to manually put in the amounts in his Quicken personal management program. His problem also takes note of changing money management arrangements within the family because of life stages and comfort with technology.

Design solution: When Joe strikes an automated response system, he wants to be able to automate his stored customer number and his credit card number for certain merchants. He does want to check that the automated process has worked by listening to the confirmation. If it hasn't, he has the possibility of cancelling the transaction. He then wants the receipt number and details to be e-mailed to him, so that he has a record for his files. "The written word is better evidence", he says. It would be better still, he says, for "the company to send me the receipt in a way that I can input it straight into Quicken, so that I know the state of our accounts to-the-minute".

3.1.2 A digital angpow

Eng Lin, 23, from Kuala Lumpur in Malaysia is studying at a university in Melbourne. She is supported by her parents and gets a monthly remittance for her living expenses. This year, she is feeling particularly homesick as she is unable to go home for Chinese New Year. She is going to miss the New Year Eve dinner with her extended family, with her grandmother saying "Man, man cher" – eat slowly. She will miss the dragon dances and the sound of fireworks. And she won't get the red *ang-pows* with cash that ritually symbolise the love and caring of family relationships. At the same time, they re-affirm the traditional Chinese family structures, where it is the older people who give to the younger.

Eng Lin knows her family is thinking of her. On her mobile phone, she receives a text message from the bank wishing her *Kong Hee Fatt Choy*, a prosperous New Year. With the message are three red *ang-pows*. Her parents had sent her an ang-pow; her Uncle No. 1 had sent her another ang-pow and her grandmother had also remembered her. Her eyes misted.

The next day she goes to her bank branch to the Gift Money counter. The teller wishes her a Happy Chinese New Year and hands her three *ang-pows,* each with a personalized message. She does not open the ang-pows. For the moment, it is enough to hold them, and think of her family.

Later, in her room, she opens the *ang-pows.* Her parents and Uncle No 1 have sent her $A100. Her grandmother sent her $50. This was special ang-pow money. She puts the money back in the ang-pow packets. She wants to keep the money separate so that it does not get mixed up with her living expenses. Later, she will decide how to spend it in a way which will remind her of Chinese New Year in Melbourne.

Eng Lin called her parents and Uncle No. 1 and her grandmother wishing them Kong Hee Fatt Choy. "How did you send me the ang-pows?" she asked. "It was easy," her father said. "We went on the Internet and asked the bank to send you the ang-pows at your branch with our messages. We didn't just want to send you money through a money order or money transfer. We wanted to send you an ang-pow. Were you surprised?" he asked.

"I have never had a bank teller wish me Happy Chinese New Year," she replied. "And when I looked inside, the notes were crisp and new, just like at home."

"I heard of it from your Uncle in Penang," her father said. "You know he has never bothered with the Internet. He just went to the Post Office and told them to send a money order to your cousin's bank in Melbourne. The bank then made sure your cousin received the ang-pows at her branch."

Eng Lin began planning to send an ang-pow through the bank to her nephew on his birthday next month.

User problem: Money cannot be electronically wrapped in a culturally appropriate manner to act as a medium of family relationships. The electronic transmission of money by direct credit lacks the cultural markers that separate the money as emotionally significant.

Design solution: Use a mix of technologies – in this case the mobile phone and the bank branch to deliver appropriately wrapped money.

3.1.3 Banking, gender and joint accounts: A case for PRM

Tom and Helen are highly paid professionals in their late 50s. Their children have moved out and their mortgage has been paid. They have a relationship with three banks – their salaries and main payments are with one; savings go into the second and financial investment is done through the third.

Over the years, their mix of individual and joint bank accounts has changed, as has their individual financial status. However their banks continue to see Helen as subsidiary to Tom. She says,

> I went to borrow money for a holiday house and I was aghast that the bank sent the information to Tom. He had had nothing to do with it. It is not that I did not want him to know, but it was my loan application, not his.

There are some accounts, where Tom is the only account holder. Helen wanted to inform the bank about a change in their address, but they would not accept it from her, as she was not named on that particular account. Helen says, "We would like to tell the bank how it should deal with our financial information, rather than them assuming that all the decisions are made by Tom."

User Problem: The bank is keeping to old stereotypes about money and gender built into banking products and not keeping up-to-date with changes in social norms and within Tom and Helen's family. However, the bank is also obliged to ensure that privacy guidelines are met. If there are special needs, then the couple should be able to tell the bank how they want the bank to deal with their financial information.

Design Solution: When Tom and Helen open accounts, the bank asks them to specify how they want their personal information treated through the Privacy Rights Management (PRM) system. The default choices are the traditional ones. The information goes to the first (often male) person on the joint account. Information for an individual account is given only to the named individual. Information will be sent by mail to specified addresses. If Tom and Helen want to have their financial information differently communicated, they can design their own PRM specifying whether the joint account holders want their information separately delivered to them; whether individual account transactions can be communicated to the marital partner; whether e-mail or the Web can be used to deliver personal financial information.

This is also an approach that can be taken to deliver information when it is a community, rather than an individual that owns the money and/or property.

4 Conclusion

In this paper I have linked the sociological study of money with the need to design money keeping in mind the cultural differences of money. The sociological and anthropological literature, combined with an international comparison of the use of payments leads us to recognize four main differences in the way money is used and understood. The first is the need to understand that people prefer different kinds of payments instruments because they fit the cultural meanings associated with money and with different payments activities. The second difference relates to recognizing that money is not always an individual phenomenon, or private to the marital couple. In many cultures it is the extended family or clan that forms the domestic boundary of money. Thirdly, there are differences within a culture as to how money is managed and controlled. Electronic money, in its early stages, is increasing the male management of money. And lastly, money in many cultures is the only appropriate gift demonstrating the caring within a family and community. These insights have been taken into account when presenting initial scenarios for discussion with technologists and bankers. The awareness of cross cultural differences in relation to money can only become more significant with the increase in personal remittances and cross-border electronic commerce.

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