



The Nature of Consumer Trust in B2C Electronic Commerce: A Multi-Dimensional Conceptualism

Paul Sutherland

The University of Auckland, Email: psutherland@inspire.net.nz

Felix B Tan

School of Computer and Information Sciences, Auckland University of Technology, Tel: + 649 9179487 · Fax: + 649 917 9944,
Email: felix.tan@aut.ac.nz

ABSTRACT

Consumer trust is widely heralded as an essential element for the success of electronic commerce, yet the concept itself is still clouded in confusion by the numerous definitions and points of view held across multiple disciplines. It is the aim of this paper to synthesise the viewpoints from across the disciplines and bring them together in a multi-dimensional trust model. It is hoped that in doing so, these broad assortment of views will highlight the true underlying nature of trust in the online environment. From these multiple disciplines, three dimensions of trust emerged: Dispositional Trust, Institutional Trust and Interpersonal Trust, each bringing their own influencing factors into the overall intention to trust. From this model emerged the idea that the consumer as an individual is central to the understanding of trust, and in turn that the individual's personality and culture form the foundation for the development of trust.

INTRODUCTION

There is increasing acceptance that consumer trust is a key foundation for electronic commerce success. If the consumer can not develop some sense of confidence in the vendor's competence, predictability, benevolence and integrity, then they are likely to abort the purchase and simply look elsewhere for a more trustworthy alternative (McKnight & Chervany, 2002; McKnight, Cummings, & Chervany, 1998; Tan & Theon, 2001).

Much of the literature surrounding trust in electronic commerce looks to substitute trust by focusing solely on the aspects of consumer privacy and security (Belanger, Hiller, & Smith, 2002; Benassi, 1999; Dekleva, 2000; Huberman, Franklin, & Hogg, 1999). The literature also tends to lack a firm definition of trust and therefore often causes further confusion by presenting the belief that trust is a simple factor that can be explained by addressing these vendor specific factors. This does not however address the issue of trust as a whole and simply serves to look to deal with addressing the symptoms rather than the underlying issue.

To further research in the field of electronic commerce, it is necessary to widen the research scope and bring in additional perspectives from outside of the Information Systems literature. Webster and Watson (2002) highlighted the need for Information Systems literature for this widened scope, when they commented that "you often must look not only within the IS discipline when reviewing and developing theory but also outside the field". This viewpoint is highly relevant in addressing the issue of trust, as it has long been theorised and argued across many disciplines. Borrowing from the fields of psychology, sociology, marketing and management as well as information systems we can help to create a better understanding of the true nature of trust online.

The purpose of this paper is therefore to present a multi-dimensional insight into the nature of consumer trust online. We will firstly look to synthesise a broad literature base surrounding trust in relation to electronic commerce and then look to identify gaps and inconsistencies in the current literature. These gaps will then be addressed through

the development of a multi-dimensional trust model that can be applied to gain an insight into this commonly misunderstood construct and provide a better understanding of the true nature of trust.

Although the formation of trust holds similarities across differing business forms, this papers scope has been narrowed to focus primarily on the B2C (Business-to-Consumer) environment.

LITERATURE REVIEW

Defining Trust

The most commonly accepted definition amongst the recent research on trust has taken a similar view to that of Mayer, Davis et al. (1995), incorporating vulnerability into their central definition of trust (Gefen, 2002; Lee & Turban, 2001; Rousseau, Sitkin, Burt, & Camerer, 1998; Tan et al., 2001). This definition holds that trust is a "willingness to be vulnerable", as when the consumer allows themselves to be vulnerable, they are taking a risk (Mayer et al., 1995). Rousseau, Sitkin et al. (1998) builds on this central idea of vulnerability, presenting that "trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another". The centrality of vulnerability in trust definitions can be traced back to Deutsch (1958), where it was presented that the consumer "perceives that he will be worse off if he trusts and his trust is not fulfilled than if he does not trust". The consumer therefore would be allowing himself to be vulnerable while holding the hope that the other party will deliver on their promise.

Putting Trust in perspective

In identifying vulnerability as the central situational feature of trust, we can see the importance this holds in the electronic commerce setting. This vulnerability is magnified in the online situation due to the nature of the internet. In the traditional physical environment consumers attitudes and behaviours are often affected by intrinsic cues gathered from the physical surroundings such as lighting, colour, music and store layout (Bitner, 1992). When the consumer is faced with risk, they look to make a trust based assessment of the other party by looking to gather further information. This information search can take numerous forms, be it gathering intrinsic cues from situational surroundings, recalling past experiences in similar situations or looking for other external sources like personal recommendations from others (Koernig, 2003).

As a product offering moves from being a highly tangible to an intangible offering such as a "pure service", the greater the degree of associated consumer risk. The more intangible the product, the greater the influence the cues hold on the consumers purchase decision as there are fewer physical aspects for consideration (Bitner, 1992; Zeithaml, 1988).

As the internet does not allow the consumer to gather the same range of intrinsic cues as traditional physical shopping does, the perceived risk is magnified and therefore an assessment of trustworthi-

ness needs to be made by the consumer. It is the dimensions involved within this assessment of trust that is the focus of this research, as the true underlying nature of the subject is still unclear and the point of much confusion. To try and provide a clearer picture of trust, it is necessary to look across the disciplines and look at the differing dimensions of trust.

The Dimensionality of Trust

As mentioned earlier, trust has been addressed across numerous fields and different conclusions have been reached. The field of psychology holds the view that trust is a personality based trait, which is a deep rooted feeling or belief that is shaped by the individual's life experiences. These life experiences mould the individual's disposition to form trust in general (as seen in McKnight and Chervany (2002)) and is commonly referred to as Dispositional Trust.

In stark contrast, sociology holds the view that trust is a social structure which is situationally constructed. Lewis and Weigert (1985) describes trust as being "applicable to the relations among people rather than to their psychological states taken individually" and therefore theorise that trust does not exist in the individual, but rather is the collective property of the groups involved. In the electronic commerce context this dimension has been labelled as Institutional Trust.

The social psychology perspective offers another view, which presents trust in terms of the expectations and willingness of one party in regards to another, as well as the associated risks this brings along with it (Lee et al., 2001). This perspective focuses on forming trust in another specific party and is often referred to as Interpersonal Trust.

The differing views currently evident within trust research are illustrated in Table 1. The literature has been categorized along the dimensions of trust covered, be it directly or indirectly. It also indicates the field the research originates from, with the information systems literature grouped further into broad and focused categories. Broad IS

Table 1: Dimensional Concepts Identified in Literature

Author	Concepts Identified			Field of Research
	Dispositional Trust	Institutional Trust	Interpersonal Trust	
(Belanger et al., 2002)			X	IS focused
(Cardholm, Karlsson, & Karvonen, 2000)			X	IS focused
(Cheung & Lee, 2001)	X	X	X	IS broad
(Dekleva, 2000)			X	IS focused
(Doney & Cannon, 1997)	*	X	X	Marketing
(Earp, Antón, & Jarvinen, 2002)			X	IS focused
(Gefen, 2002)			X	IS broad
(Hosmer, 1995)	X	X	X	Management
(Huberman et al., 1999)			X	IS focused
(Lee et al., 2001)	X	X	X	IS broad
(Lewis et al., 1985)		X		Sociology
(Malhotra & Murnighan, 2002)			X	Management/ Psychology
(Mayer et al., 1995)	X		X	Management
(McKnight et al., 2002)	X	X	X	IS broad
(Naquin & Paulson, 2003)		X	X	Psychology
(Nöteberg, Christiaanse, & Wallace, 2003)			X	IS focused
(Ratnasingham & Pavlou, 2003)		X	X	IS focused
(Rousseau et al., 1998)	X	X	X	Management
(Tan et al., 2001)	*	X	X	IS focused
(Van Den Berg & Van Lieshout, 2001)			X	IS/ Accounting
(Wang, Lee, & Wang, 1998)			X	IS focused
(Yoon, 2002)	*	*	X	IS focused

* Concept indirectly addressed and/or acknowledged

literature borrows ideas from diverse fields whereas focused IS literature does not look far outside of its own discipline and tends to hold a narrow scope. From Table 1 we can see that only five (out of 22) papers covered directly addressed all three dimensions of trust.

From the literature covered, only six articles directly (and three indirectly) addressed the individuals Disposition to Trust. This indicates a large gap in the research into trust, as the consumers themselves are being overlooked. The disposition to trust is fundamental in the formation of trust, as if the individual holds a low disposition to trust, they find it hard to develop a sense of trust in general and therefore would likely find it difficult to trust an online retailer.

CONCEPTUAL TRUST MODEL

Now that a trust has been defined and explained, we can look to integrate the construct further into the electronic commerce arena to offer additional insights into the nature of trust online.

From the review of the literature, B2C Consumer Trust can be looked at as a three dimensional construct that encompasses the consumer (dispositional trust), the vendor (interpersonal trust) and the internet (institutional trust). These dimensions help explain the forces at work in electronic commerce, thereby illustrating that the consumer, the internet and the vendor all bring their own issues into the overall assessment of trust. However within these dimensions themselves, there are additional inter-relationships which are indicated by the proposed model shown in Figure 1. From this we can form the view that dispositional trust is the primary foundation to the development of trust and the associated outcomes.

Dispositional Trust

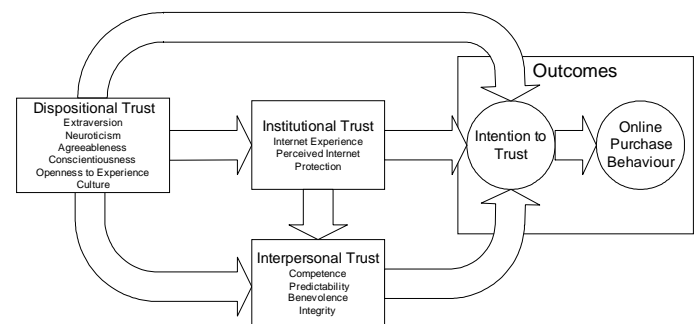
Dispositional trust refers to an individual's ability and willingness to form trust in general. The field of psychology, which describes dispositional trust primarily as a personality trait, drives this dimension. The concept of the personality is the subject of much debate amongst psychologists, but the five factor trait theory is one of the most accepted models (Costa, McCrae, & Dye, 1991; Goldberg, 1990, 1992; Olson & Suls, 2000). This model contends that an individual's personality can be described through five factors, those being: Extraversion, Neuroticism, Agreeableness, Conscientiousness and the Openness to experience.

Extraversion refers to the individual's level of focus on the outside world. Extraverted personalities are said to be socially outgoing and are generally more careless and quick to change views. From this personality trait we propose that extraversion leads to a higher disposition to trust.

Neuroticism is described as encompassing emotional instability, pessimism, fear and low self-esteem (Olson et al., 2000). An individual holding a neurotic personality is likely to hold high levels of anxiousness and view themselves as vulnerable (Costa et al., 1991). From this research we take the view that a neurotic individual would likely find it difficult to trust in general, and form the proposition that neuroticism leads to a lower disposition to trust.

Conscientious personalities are said to be dutiful and responsible, always carefully deliberating situations and usually siding on the side of cautiousness. From this cautious deliberation we propose that conscientiousness leads to a lower disposition to trust.

Figure 1: Multi-Dimensional Trust Model



Openness to experience is characterised by open-mindedness as opposed to conservatism and traditionalism (Costa et al., 1991; Olson et al., 2000). This open-mindedness leads individuals to accept new experiences. We therefore propose that openness to experience leads to a high disposition to trust.

From these five factors that are said to encompass an individual's personality, agreeableness is of particular importance as it is this aspect of the personality which is said to "influence the self-image and help to shape social attitudes and philosophy of life" (Costa et al., 1991). Agreeable personalities are said to hold an optimistic view of human nature and generally believe people to be honest, decent, and trustworthy.

It could also be suggested that culture also plays a part in the disposition to trust, as some cultures may be more trusting in general and therefore hold a higher disposition to trust. Research into the issue of culture is quite widespread, yet there is very little that addresses the issue in relation to the formation of trust. Much of the literature on culture builds on the work done by Hofstede (1980), which groups culture into two broad categories: those that are thought to be individualistic versus those that are seen as collectivistic cultures. These two groups are thought to act differently, think differently and most importantly in relation to work on trust, make judgements differently. It is therefore proposed that culture has an impact on the individual's disposition to trust, where collectivist cultures hold a lower disposition to trust and individualistic cultures is the opposite.

Institutional Trust

Institutional trust takes into account the sociology viewpoint that trust is a social structure that is situationally constructed. This dimension draws on the idea of forming trust in the Internet as a whole, and therefore trusting the technology. If a consumer holds a fear of technology or the internet, they are likely to not look towards the internet as a shopping medium. It is therefore necessary to consider this viewpoint if we want to look to understand trust.

It is at this institutional level that the individual's perception of the regulatory, legal and technical environment comes to fruition (McKnight et al., 2002). If the individual does not believe the internet offers adequate regulatory, legal or technical protection, they are unlikely to hold a high level of institutional trust in the internet as a shopping medium. It is therefore proposed that perceived Internet Protection increases the level of Institutional Trust.

The institutional dimension also needs to take into account the individual's Internet Experience as previous experiences carry considerable weight when making judgements about a situation. These experiences carry more significance than any assumptions an individual could make about a situation without experiencing it personally beforehand (McKnight et al., 1998). If an individual is familiar with the internet and has used it on a regular basis, they are likely to hold a higher level of Institutional Trust in the medium than a person that has never used the internet before. It is therefore proposed that the Internet Experience increases the level of Institutional Trust.

As shown in Figure 1, it is proposed that Institutional Trust is reliant on Dispositional Trust, as if the individual has difficulty in forming trust in general it is likely they will also have difficulty in developing trust in the internet as a shopping medium.

Interpersonal Trust

Interpersonal Trust focuses on the trust formed in another specific party. In this case, it is the assessment by the consumer in regards to the trustworthiness of the electronic vendor.

The literature presents the attributes of competence, predictability, benevolence and integrity as the cornerstones of developing trust in another party. We therefore need to address these issues at the Interpersonal level. In addressing competence, the consumer assesses the whether the vendor has the appropriate abilities, skills and expertise to satisfy their needs. Predictability takes into account the vendor's perceived reputation for providing a consistent service. Integrity is the belief that the internet vendor will act in an honest fashion and adhere to an accepted set of principles or standards. When looking at benevo-

lence, the consumer makes a judgement on whether the vendor is focused on making a fast profit or has the customer's best interests in mind.

Each of these attributes of Interpersonal Trust are measured by the consumer's impression of the internet vendor, drawn from previous experience or gathered from outside sources of information. These outside sources can take the form of friends and family that have shopped at the site before and relay their experiences, therefore transferring their assessment of trustworthiness to the consumer. It can also take the form of third party sites whereby internet users post feedback about particular vendors and shopping experiences. These third party assessments can prove a valuable trust builder in the online environment, as it provides the consumer with additional information that can help foster trust at this interpersonal level.

Online privacy and security issues are also evident in this Interpersonal dimension. The effectiveness of third party privacy and security seals of approval have been widely commented on (Belanger et al., 2002; Benassi, 1999; Dekleva, 2000). Such policies and third party endorsements have been found to have a positive effect on trust within this dimension enhancing the vendor's trustworthiness, particularly the attributes of integrity and competence. However, it is also important to note that the third party themselves must also be trusted by the individual before the trustworthiness endorsement can be transferable.

As seen in Figure 1, Interpersonal Trust relies on other dimensions of trust. Firstly, Dispositional Trust is necessary foundation; as if the individual has trouble forming trust in general they are also likely to find it hard developing trust in a specific party. It is therefore proposed that Interpersonal Trust is reliant on Dispositional Trust.

In turn, Institutional Trust is also thought to have an impact on Interpersonal Trust online. If the individual is inexperienced with the internet or does not believe there are adequate regulations protecting them online, their Interpersonal Trust assessment of the online vendor will also be affected. It is therefore proposed that Institutional Trust has a positive effect on the degree of Interpersonal Trust.

Overall Intention to Trust

The concept of Overall Intention to Trust is the outcome of the consumers online trust assessment, which takes into account the levels of Dispositional, Institutional and Interpersonal Trust. We can view this intention to trust as the construct of trust in its fullest form, as it encompasses the multiple dimensions that are evident in the development of trust.

This overall intention is the willingness of the consumer to depend on the vendor. Relating this back to the definition of trust developed earlier, it is the willingness for the consumer to make themselves vulnerable to a particular internet vendor after they have taken into account the various aspects attributed within each dimension. It is proposed that this overall intention to trust is influenced by Dispositional Trust, Institutional Trust and Interpersonal Trust.

Online Purchase Behaviour

Online purchase behaviour is the anticipated result of the Overall Intention to Trust. This behaviour however is not the sole result of the intention to trust, it also takes into account other factors such as relative price, speed of delivery and product availability which are all outside the scope of this paper.

In the context of electronic commerce transactions, this purchase behaviour depends on the consumer holding an Overall Intention to Trust the particular vendor, as if this overall level of trust is not evident, the consumer will likely shop elsewhere with a vendor they hold a greater degree of trust in. It is therefore proposed that online purchase behaviour depends on the consumer holding a level of overall trust (intention to trust) in the vendor.

CONCLUSION

The aim of this paper was to synthesise the current literature on trust from a broad range of disciplines and develop a model to better explain the underlying nature of the construct of trust. It is hoped that from this conceptualisation Information Systems researchers will recognise that trust in electronic commerce is not a simple single

dimensional issue, but rather a broad and complex construct that operates on multiple dimensions.

This consumer centric viewpoint does not mean that this research holds no value for ecommerce practitioners, as it is first necessary to comprehend the issue before we can look to adequately address it. Once this underlying nature of trust is fully understood, the focus can be shifted to developing methods for practitioners to address the aspects of consumer trust that are found to be influential.

REFERENCES

Please contact Dr. Felix B Tan for full references.

0 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/proceeding-paper/nature-consumer-trust-b2c-electronic/32438

Related Content

Integrating the Balanced Scorecard and Software Measurement Frameworks

Nancy Eickelmann (2001). *Information Technology Evaluation Methods and Management* (pp. 240-252).

www.irma-international.org/chapter/integrating-balanced-scorecard-software-measurement/23680

The Extend Customer Requirement Factors Based Service Level Evaluation for Manufacturing Enterprises: Service Level Evaluation for Manufacturing Enterprise

Qing Liu, Shanshan Yu, Gang Huang and Xinsheng Xu (2019). *International Journal of Information Technologies and Systems Approach* (pp. 22-42).

www.irma-international.org/article/the-extend-customer-requirement-factors-based-service-level-evaluation-for-manufacturing-enterprises/230303

Fuzzy Decision Support System for Coronary Artery Disease Diagnosis Based on Rough Set Theory

Noor Akhmad Setiawan (2014). *International Journal of Rough Sets and Data Analysis* (pp. 65-80).

www.irma-international.org/article/fuzzy-decision-support-system-for-coronary-artery-disease-diagnosis-based-on-rough-set-theory/111313

Artificial Intelligence

Steven Walczak (2018). *Encyclopedia of Information Science and Technology, Fourth Edition* (pp. 98-105).

www.irma-international.org/chapter/artificial-intelligence/183725

Integrated Design of Building Environment Based on Image Segmentation and Retrieval Technology

Zhou Li and Hanan Aljuaid (2024). *International Journal of Information Technologies and Systems Approach* (pp. 1-14).

www.irma-international.org/article/integrated-design-of-building-environment-based-on-image-segmentation-and-retrieval-technology/340774