

# **Cue-based Trust in an Online Shopping Environment: Conceptualization and Propositions**

*Sijun Wang, University of Alabama*

## **Abstract**

Although numerous studies on trust have been conducted in several fields, current knowledge of trust is still limited when explaining and predicting consumer trust in an online shopping environment. This paper proposes a new concept---cue-based trust in an e-retailer and defines it as the feeling and belief of a consumer that this e-retailer will not exploit his or her vulnerabilities based on outward symbols and perceptions existing prior to the purchase. Drawing on Berkowitz 's (1993) affective-cognitive reactions theory, this study investigates the proposed two dimensions of cue-based trust and compares them with those of traditional experience-based trust. Based on extensive trust literature, cognitive computing, and perceived risk literature, five main antecedents of cue-based trust are proposed

## **Introduction**

The exponential increases in online shopping and the unprecedented rate of growth in the number of retailers selling online have created an extremely competitive market place (Szymanski & Hise, 2000), but most e-retailers have yet to turn a profit (Szymanski & Hise, 2000; Hoffman et al., 1999). The reason online consumers have yet to shop online in large numbers is that consumers simply do not trust most web providers enough to engage in "relational exchanges" involving money and personal information (Hoffman et al., 1999). Initiating consumer trust and developing stable relationships with online shoppers is therefore the key to exploiting the potential of e-commerce and improving profitability of online stores. Therefore, understanding the nature and antecedents of trust in e-commerce context is badly needed (Warrington et al., 2000).

Review of the trust literature indicates that traditional trust theory treats trust development as an evolutionary process. Thus, trust is treated as an experience-based attribute of relationships. However, in the e-commerce context, most e-retailers must face the challenges of initiating consumer trust prior to online transactions, because online shoppers perceive more risks than in traditional channel of distribution (Van den Poel, and Leunis, 1999). Thus, they are less likely to enter into initial transactions. Failing to overcome the initial trust barriers, all other efforts of online retailers will be in vain. Using experience-based variables to explain and predict consumer trust may not be reasonable for Internet marketers (Warrington et al., 2000).

The purpose of this study is to: (1) introduce a new concept of cue-based trust; (2) provide new insights into how consumers develop trust based on various cues; (3) suggest what e-retailers can do to initiate consumer trust. As such, this study will first discuss the nature of cue-based trust, then compare the dimensionality of cue-based trust with that of experience-based trust. Based on the conceptualization of cue-based trust, five main antecedents of cue-based trust will be proposed.

### **Conceptualization of cue-based trust**

Trust has long been the focal construct in social psychology (e.g., Deutsch 1960; Lindskold 1978), sociology (e.g., Lewis and Weigert 1985), economics (e.g., Vinacke 1969), as well as relationship marketing (e.g., Doney and Cannon, 1997; Morgan and Hunt, 1994; Ganesan 1994). Therefore trust has been conceptualized in numerous ways. According to Swan et al. (1999), the numerous trust conceptualizations can be classified into three levels of abstraction. The first level of trust is based on specific behaviors of trustee, such as "keep promises"(e.g., Crosby et al., 1990). The second level of trust is based on attributes that are broader than a specific behavior, such as "dependable"(Busch and Wilson, 1976), "credibility and integrity"(Morgan and Hunt, 1994). The third level of trust does not refer to either specific behaviors or attributes, but refers to general trust measures, such as "trustworthy" (e.g., Morgan and Hunt, 1994).

### **The nature of cue-based trust**

Since mentioned above, most online shoppers need to initiate their trust prior to purchase, it is reasonable to conceptualize the cue-based trust at the first, lower level of abstraction (Swan et al., 1999). That means that consumers will just hold the predication that the e-retailer will not exploit their vulnerabilities. This lower level definition of trust has already been recognized by some researchers. For example, Sabel (1993) defined trust as the mutual confidence that no party to an exchange will exploit another's vulnerabilities. The definition of a cue or indicator of trust was first proposed by Warrington et al.(2000). They argue that a trust cue would include any outward symbols and perceptions existing prior to the exchange.

Following the definition of indicators of trust as proposed by Warrington et al.(2000), a review of levels of trust proposed by Swan et al.(1999) and the definition of lower level of trust as proposed by Sabel (1993), cue-based trust in an e-retailer can be defined as the feeling and belief of a consumer that this e-retailer will not exploit his or her vulnerabilities based on outward symbol and perceptions existing prior to the purchase This definition captures two main differences between cue-based trust and traditional experience-based trust. One is that cue-based trust is based on information cues (i.e. outward symbol and perception) provided by the one who wishes to be trusted while experience-based trust is based on repeated interactions with the target of trust. Another difference is that cue-based trust is a lower level of trust compared with experience-based trust, because trustors holding cue-based trust can rely simply on some specific expected behaviors of trustee (i.e., the e-retailer will not exploit his or her vulnerabilities). In contrast, trustors holding experience-based trust have evidence or experience to believe in such attributes of the trustee as credibility and integrity (Morgan and Hunt, 1994), which are broader and deeper than specific behaviors.

## **Dimensions of cue-based trust**

Trust as a cognitive process (e.g., Doney and Cannon, 1997) has been frequently addressed in the literature (Swan et al., 1999). Recent research indicates that trust should be treated as both affect and cognition. McAllister (1995) provides empirical evidence for the discriminant validity of affective and cognitive dimensions of trust. Again, since these studies treat trust as the result of interactions between trustor and trustee, they may not be applicable for our understanding of cue-based trust. In order to investigate the dimensions of cue-based trust, Berkowitz's (1993) theory of affective-cognitive reactions needs to be introduced.

According to Berkowitz (1993), three types of processes are likely to occur on exposure to a stimulus event. The first type of processes is subject to "relatively basic and automatic associative processes", which occur before cognitive processes, hence resulting in lower-order affective reactions and action tendencies (approach or avoidance). Second, the information related to the stimulus will be processed in a more deliberative and cognitive way. The outcome of this process may serve to strengthen or weaken the action tendencies arising from the lower-order affective reactions. Finally, the affective significance of the outcome of the high-order processing may result in higher-order affective reactions and action tendencies (Shiv & Fedorikhin, 1999). These affective reactions are engendered slowly compared to lower-order affective reactions since the information is subject to more deliberative processes before these reactions can occur.

Following Berkowitz (1993), we can conclude that experience-based trust is derived from the high-order cognitive and affective reactions towards the trustee, because the action intentions resulting from the first, lower-order affective reaction will be adapted to higher order affects after more deliberative cognitive process if repeated interactions exist. But in an e-commerce context, when a consumer first visits the website of an e-retailer, he or she will first process the information cues based on automatic and basic affective reactions towards the web site, then the high-order cognitive reactions will strengthen or weaken the lower-order affective reactions. Before the actual purchasing happens, there is not enough processing resources (time and experience) for the consumer to develop the lower order affects and high order cognition into high order affects. Therefore, cue-based trust will be based on lower order affects and high order cognition, rather than on high order cognition and high order affects in the experience-based trust building process. The resulting two dimensions are the affective feeling and cognitive belief. The affective feeling dimension is derived from the lower order affective reactions while cognitive belief is derived from higher order cognitive reactions.

## **Antecedents of cue-based trust**

Based on the conceptualization and dimensions of cue-based trust in the e-commerce context, we believe that online consumers will depend on both their direct, immediate feelings and cognitive analysis to develop their trust in e-retailers. The affective feeling dimension of cue-based trust suggests that the design of web site of e-retailer, including presentation and navigation, will influence the initial trust level. The feeling dimension also suggests that the newly emerging field of cognitive computing (e.g., Szymanski and Hise, 2000) may provide additional insights into antecedents of cue-based trust.

The cognitive belief dimension suggests that consumers will use a cognitive process to analyze various cues provided by the e-retailer. In order to understand the relationship between certain information cues and trust level, the perceived risk literature need to be drawn upon. Hence in the following section, the extensive studies on perceived risk and risk reduction are used to identify several antecedents of cue-based trust. The linkage between trust and perceived risk has both theoretical and empirical support. Deutsch (1958) argued that risk-taking and trusting behavior are really different sides of the same coin. Recent empirical studies on online shopping also indicate that perceived risk is closely related to trust level (Jarvenpaa et al., 1999; Hoffman et al., 1998).

Drawing on extensive trust literature, cognitive computing and perceived risk literature, the following cues are identified as important antecedents of cue-based trust. These antecedents can be classified into two groups: characteristics of the e-retailer and characteristic of the web design.

### **Characteristics of the e-retailer**

#### **Online or Offline Reputation**

Reputation is the amount of trust an agent has created for himself through interactions with other agents (Reagle, 2000). Reputation has been most frequently suggested as a main factor that contributes to customer trust in an industrial marketing setting (Doney and Cannon, 1997; Ganesan, 1994). Dasgupta (1998) argues that "all trust is based on reputation". More recently, Internet marketing research suggests that the reputation of the online store will influence shoppers' perceptions of its trustworthiness (e.g., Jarvenpaa and Todd, 1997; Quelch and Klein 1996).

In the online shopping context, some e-retailers may have a good reputation in their offline business. Because trust can be established by a transference mechanism (Doney and Cannon, 1997), the online consumer may transfer his or her trust in the offline business of the e-retailer to the online business. Therefore, higher offline reputation of the e-retailer should result in higher perceived trustworthiness from the consumer's perspective. From an economics perspective, a merchant would not cheat online consumers unless it can make excess immediate revenue from the exchange of the reputation. If the web merchant has good reputation in its offline reputation, it will be less likely to cheat online consumers, because it will potentially lose more in its offline business.

Recently, some pure online stores have established a strong reputation. For example, Amazon.com has established a reputable image in most consumers' minds. Because this kind of online stores can expect high operating value of their reputation in the rapidly emerging e-market, they will be less likely to cheat online consumers. So online consumers may use their perception of online reputation as a cue to base their trust.

Based on above discussion, it is possible to propose the following.

**Proposition 1: The consumer's cue-based trust in an e-retailer is positively related to both its online and offline reputation if an offline reputation exists.**

Perceived size of the e-retailer

The size of the e-retailer encompasses the overall number of items and scope of its business perceived by online shoppers (Cheskin Research, 2000). This operationalization of size focuses on the perception of online consumers, rather than the actual size (e.g., sales volume or market share). Overall size indicates that many other consumers trust this store enough to do business with it. Consumers draw on the experience of others to infer trustworthiness from the supplier (Doney and Cannon, 1997). A perception of a large size also implies that the merchant has significant resources invested in the business and has much to lose by acting in an untrustworthy way. Doney and Cannon (1997) provide evidence of the positive relationship between trust and size in the industrial marketing context. Jarvenpaa et al (1999) also provided empirical support for this positive relationship between consumers and Web merchants.

Therefore, the more one e-retailer provides information to signal its size the greater the likelihood it will be seen as trustworthy. In the online context, this information may include the number of web visitors, the number of items available, and the variety of products available. Formally stated,

**Proposition 2: The consumer's cue-based trust in an e-retailer is positively related to its perceived size.**

### ***Characteristics of the web site***

Presentation of the web site

Presentation refers to ways in which the look of the site, in and of itself, communicates meaningful information to visitors (Cheskin Research, 2000). In industrial marketing, a buyer's trust in a supplier firm is based, in part, on encounters with the supplier's salesperson (Doney and Cannon, 1997; Swan and Nolan, 1985). Similarly, retailing literature also suggests that certain attributes of sales associates are required to establish consumer trust. For example, Beatty, et al. (1996) found that the sales associates developed trust by exhibiting extensive product knowledge and availability (i.e., expertise), and by selecting merchandise to meet customer needs (i.e., honesty).

In the Internet context, the salesperson is replaced by a web site. Like the attributes (e.g., expertise, honesty or likeability) of trustworthy salesperson, a trustworthy web site should at least have two features: professional appearance and likeability. Professional appearance implies the expertise of the web site (Warrington et al., 2000; Cheskin Research, 2000). According to Swan and Nolan (1985). Trust is related to liking because the buyer is more confident of his or her prediction concerning someone who is liked. In addition, based on the principal of cognitive consistency, liking (positive evaluation) and trusting (positive feeling) are consistent. Therefore, if presentation of the web site increases the liking, it will increase the trustworthiness of the web merchant. Furthermore, presentation of the web site creates the ambience associated with the direct feeling dimension of the cue-based trust. Manes (1997) reported that uncluttered screens, simple search paths and fast presentations will provide a more pleasurable shopping experience. Pastrick (1997) also made similar arguments. Therefore, the ambience of web site resulting from the presentation will increase the perception of the likeability of the e-retailer, resulting in high perception of trustworthiness, leading to the following proposition.

**Proposition 3: The consumer's cue-based trust in an e-retailer is positively related to the professional appearance and the likeability of its website presentation.**

**Navigation**

Navigation helps consumers find what they seek. Smooth, easy-to-use navigation makes searching, shopping and comparing a pleasure (Urban, et al, 2000). Pleasant navigation will increase the feeling of likeability of the web site and hence higher level of trust. On the other hand, effective navigation serves as the cue to infer the competence and expertise of the web merchant, hence increasing the perception of the credibility of the web merchant. In a (Cheskin research (2000) survey, it was reported that effective navigation as perceived by consumers is the minimum requirement to trust the web site. Weinberg (2000) stated that waiting time for navigation can have a significant impact on web site evaluation. Furthermore, Urban et al (2000) suggested that trust-based web sites should provide consumers with accurate, up-to-date, complete and unbiased information, not only on their own products, but also on all the competitive products available in the market. So honest, altruist navigation will increase the perceived honesty of the web merchant.

Just as the expertise and honesty of salespersons (Doney and Cannon, 1997) and sales associates (Beatty, et al., 1996) will increase customer perceptions of trustworthiness, pleasant, effective and honest navigation will increase consumers' feelings and beliefs that the e-retailer will be less likely to take advantage of their vulnerabilities. Furthermore, cognitive computing research shows that pleasant and effective navigation may provide consumers a state of flow (Csikszentmihalyi, 1977), which is characterized by a feeling of a loss of selfconsciousness, and intrinsic enjoyment (Phau and Joo Seng, 2000). Since this state of arousal (positive emotional state) is a strong and positive affect, this affect will increase the perceived likeability of the web site. This discussion leads to the following proposition:

**Proposition 4: The consumer's cue-based trust in an e-retailer is positively related to the pleasant, effective and honest navigation of its web site.**

Seals of approval and credit card symbols

In addition to the six risk types (financial, performance, physical, social, psychological, and time risk) existing in the traditional consumer decision context, security and privacy risks perceived by online consumers also serve as main trust barriers (Hoffman et al., 1998). An e-retailer needs to communicate the safety of personal information and payments with its consumers in order to build trust. Prestigious third-party seals of approval help to assure consumers that their online payments and personal information are secure and can be executed only with proper authorization (Urban et al, 2000). For example, TRUSTe grants its seal to sites that adopt its standards for privacy and comply with its audits. Similarly, VeriSign grants its seal of approval to sites that use its encryption and authentication services.

Reputable credit card symbols also offer a sense of security and protection in online financial transactions. For example, American Express offer guarantees when using their credit card during any online purchase (Warrington, et al., 2000). This kind of credit card signs should assure the consumer of safety in purchasing online. Cheskin research (2000) reported that many respondents feel that credit card symbols and seals of approval can lower financial risk. Therefore, consumers may draw seals of approval and credit card symbols as important cues to build their beliefs in the trustworthiness of the e-retailer prior to the exchange. The following proposition draws from the proceeding discussion.

**Proposition 5: The consumer's cue-based trust in an e-retailer is positively related to the prestigious seals of approval and credit card symbols in its web site.**

**Conclusions and implications**

Lack of trust is one of the main barriers preventing consumers from purchasing at an e-retailer. Traditional trust research cannot provide us with enough knowledge to explain and predict consumer trust in an online shopping context. This study proposes a new concept --cue-based trust and suggests its nature, dimensionality and antecedents. I hope that this initial conceptualization will encourage empirical research as to the validity of propositions.

**References**

Beatty, Sharon E., Mayer, Morris, Coleman, James E. Reynolds, Kristy Elis, and Lee, Junki: Customer-Sales Associate Retail Relationships. *Journal of Retailing* 3 (1996): 23-247.

Berkowitz, Leonard: Towards a General Theory of Anger and Emotional Aggression: Implications of the Cognitive Neoassociationistic Perceptives for the Analysis of Anger and Other

Emotions, In *Advances in Social Cognition*(6), Robert S. Wyer and Thomas K. Srull eds., , Hillsdale, 1993. pp. 1 -46.

Busch, Paul and Wilson, David T.: An experimental Analysis of a Salesman's Expert and Referent Bases of Social Power in the Buyer-Seller Dyad. *Journal of Marketing Research* 8 (February 1976): 3-11.

Cheskin Research: Trust in the Wired Americas, July 2000. Available at [www.cheskin.com/think/studies/trust2.html](http://www.cheskin.com/think/studies/trust2.html)

Crosby, Lawrence A., Evans, Kenneth R., and Cowles Deborah: Relationship Quality in Service Selling: An Interpersonal Influence Perspective. *Journal of Marketing* (July 1990): 68-81.

Csikszentmihalyi, Mihaly: *Beyond Boredom and Anxiety*, Second Printing, Jossey-Bass, San Francisco. 1977.

Dasgupta, P.: Trust as a commodity, In Trust, D.G. Gambetta, eds., Basil, New York. 1988.pp. 49-72.

Deutsch, Morton: Trust and Suspicion. *Journal of Conflict Resolution* 4 (1958): 265-279.

Doney, Patricia and Cannon, Joseph P.: An Examination of the Nature of Trust in Buyer-Seller Relationships. *Journal of Marketing* (April 1997): 35-51.

Ganesan, Shenker: Determinants of Long-Term Orientation in', Buyer-Seller Relationships. *Journal of Marketing* (April 1994): 1-19.

Hoffman, Donna L., Novak, Thomas P., and Peralta, Marcos: Building consumer trust online. *Communications of the ACM* 4 (1999): 80-85.

Jarvenpaa, S.L., and Todd, P.A.: Consumer reactions to electronic shopping on the World Wide Web. *Journal of Electronic Commerce* 2(1997): 59-88.

Jarvenpaa, Sirkka L., and Tractinsky, Noam: Consumer Trust in an Internet Store: A Cross-Cultural Validation, "JCMC 2(1999) [www.ascusc.org/jcmc/vol5/issue2/jarvenpaa.html](http://www.ascusc.org/jcmc/vol5/issue2/jarvenpaa.html).

Lewis, J. David, and Weigert, Andrew: Trust as a Social Reality. *Social Forces* 4(1985): 967-985.

Lindskold, Svenn: Trust Development, the GRIT Proposal, and the Effects of Conciliatory Acts on Conflict and Cooperation. *Psychological Bulletin* 4 (1978): 772-93.

Manes, Stephen: Web Sites: Slow by Design? *Information Week* ( August 1997): 124.

McAllister, Daniel J.: Affect and Cognition-based Trust as Foundations for Interpersonal Relationships. *Academy of Management Journal* 1(1995): 24-48.

- Morgan, Robert M ' and Hunt Shelby D: They Commitment-Trust Theory of Relationship Marketing. *Journal of Marketing* (July 1994): 20-38.
- Pastrick, Greg.: Secrets of Great Site Design. *Internet User* (Fall 1997): 80-87.
- Phau, Ian, and Joo Seng, Gan: Effects of Technological and Individual Characteristics on Flow Experience. ANZMAC (conference 2000).
- Quelch, J.A., Klein, L.R.: The Internet and International Marketing. *Sloan Management Review* 3 (1996): 60-75.
- Sabel, C.F.: Studied Trust: Building New Forms of Cooperation in a Volatile Economy. *Human Relations* 9(1993): 1133-1170.
- Shiv, Baba and Fedorikhin, Alexander: Heart and Mind in Conflict: The Interplay of Affect and Cognition in Consumer Decision Making. *Journal of Consumer Research* 3(1999): 278-292.
- Swan, John E. And Nolan, Johannah Jonnes: Gaining Customer Trust: A Conceptual Guide for the Salesperson. *Journal of Personal Selling & Sales Management* (November 1985): 39-48.
- Swan, John E., Bowers, Michael R. and Richardson, Lynne D.: Customer Trust in the Slaesperson: An Integrative Review and Meta-Analysis of the Empirical Literature. *Journal of Business Research* (1999): 93-107.
- Szymanski, David M., and Hise, Richard T.: E-Satisfaction: An Initial Examination. *Journal of Retailing* 3 (2000): 309-322.
- Urban, Glen L., Sultan, Fareena, and Qualls, William J.: Placing Trust at the Center of Your Internet Strategy. *Sloan Management Review* 1 (2000): 39-48.
- Van den Poe], Dirk, and Leunis, Joseph: Consumer Acceptance of the Internet as a Channel of Distribution. *Journal of Business Research* (1999): 249-25 6.
- Vinacke, W.E.: Variables in experimental games: Toward a field theory. *Psychological Bulletin* (1969): 293-318.
- Warrington, Traci B, Abgrab Nadia J., and Caldwell, Helen M.: Building trust to develop competitive advantage in e-business relationships. *Competitiveness Review* 2 (2000): 160-168.
- Weinberg, Bruce D.: Do not keep your Internet customers waiting too long at the (virtual) front door. *Journal of Interactive Marketing* 1(2000): 30-37.