Dispositional Trust and Distrust Distinctions in Predicting High- and Low-Risk Internet Expert Advice Site Perceptions

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ABSTRACT

This study examines whether some types of dispositional trust/distrust concepts are better than other types at inducing consumers to trust a Web advice provider. We propose and test a model in which dispositional trust and distrust concepts are given separate roles. This unique approach is based on the growing, but untested theoretical consensus that trust and distrust are separate concepts that co-exist yet differ in terms of their emotional makeup. While trust concepts tend to be calm and collected, distrust concepts embody significant levels of fear and insecurity. Based on this difference, we propose that dispositional distrust concepts will be better predictors of high-risk Internet legal advice site perceptions, while the corresponding trust concepts will be better predictors of low-risk Internet legal advice site perceptions. As proposed, the study finds that dispositional trust better predicts low-risk perceptions, while dispositional distrust better predicts high-risk perceptions. For e-commerce advice site research, the findings of

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this article suggest that perhaps scholars should not only study dispositional trust but also dispositional distrust.

Keywords: Trust, distrust, disposition, risk, Internet perceptions

“Now, it seems that trust – or rather, distrust – is the highest barrier to implementing advanced e-business applications…” (Kehoe, 2002)

INTRODUCTION

The full potential of business-to-consumer e-commerce can only be realized if consumers are willing to transact business with unseen and often unknown Web vendors (Wang, Lee and Wang, 1998). However, many consumers have concerns about whether Web vendors will fulfill their transactional obligations and safeguard the privacy of personal information or disappear into cyberspace, making recourse impossible (Schmitt, 2001). Hence, they are hesitant to transact with Web vendors. Several scholars, therefore, remark that trust is critical to the success of online vending (Jarvenpaa and Tractinsky, 1999; Keen, 1997; Ratnasingham, 1998).

Virtually all of the current research on trust in B2C e-commerce has addressed online retailing vendors. However, a different genre of Web sites is emerging that introduces an additional element of trust. These are providers of expert advice on such topics as medicine, law, and personal finance. Well-known examples include WebMD.com and The Motley Fool (fool.com). Operators of these sites must convince users that the information provided is credible and trustworthy enough for users to feel comfortable acting on it, even in high stakes areas such as law and medicine. For example, is a user willing to trust the information on Motley Fool enough to change his/her investment portfolio?

Moreover, the implications of one’s individual disposition to trust (defined below) on e-commerce have not yet been examined in depth. In fact, several types of trust are important in e-commerce. Interpersonal trust refers to beliefs about a specific other vendor’s attributes accompanied by a willingness to become vulnerable to that vendor (Rousseau, Sitkin, Burt and Camerer, 1998). Institutional trust (e.g., structural assurance) is the set of beliefs an individual holds about a specific context (e.g., the Internet or Web vendors in general). This paper focuses on the effects of different types of disposition to trust on interpersonal trust towards the Web vendor. Disposition to trust is a propensity or tendency to believe in the positive attributes of others in general. Disposition to trust is especially important in the initial stages of a relationship. In the early stages, people rely on their disposition to trust others because they have little or no specific information by which to judge the other party (Mayer, Davis and Schoorman, 1995; McKnight, Cummings and Chervany, 1998). This describes the situation when a consumer explores an unfamiliar Web site; trusting relationships are just beginning to be established, and so
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dispositional trust is important to study in the e-commerce context. In fact, recent work finds that disposition to trust plays an important role in establishing interpersonal trust in a Web vendor (Gefen, 2000; McKnight, Choudhury and Kacmar, 2002a).²

Some recent literature in trust theory either argues or presumes that trust and distrust are not just two ends of a single bipolar construct, but are distinct constructs, with differential effects on behavior (Kramer, 1999; Lewicki, McAllister and Bies, 1998). For instance, McKnight and Chervany (2001) argue that distrust is based on different emotions than trust. That is, distrust is based on fear and worry, while trust is based on feelings of calm and security. Fear or being wary or nervous often describe people’s feelings about transacting on the Web in general and, perhaps even more so, about acting on advice from Web providers on sensitive subjects like health and the law. For example, one consumer said, “It is a little frightening to think that there is a possibility that the medicines that you order are not pure” (Parker-Pope, 2001). Hence, it seems reasonable that distrust would be important in risk³-laden Web relationships because distrust embodies these paranoid feelings (Kramer, 1996). Yet few have examined distrust explicitly in the e-commerce context. Some e-commerce researchers discuss aspects of both trust and distrust in their studies but do not always delineate these concepts clearly. For example, Grazioli and Jarvenpaa (2000) and Grazioli and Wang (2001) use trust as a construct in their models, but also include “perceived deception,” a construct with distrust implications that they describe using the term “suspicion,” a synonym of distrust (e.g., Deutsch, 1958; Kee and Knox, 1970). Gefen (2002) refers to consumers who doubt or question the integrity, benevolence or competence of a Web vendor. Yet he relates doubt and questioning to the trust concept rather than to the distrust concept. Hoffman, Novak and Peralta (1999) use the term “mistrust” once and the term “lack of trust” three times to highlight Web problems, but do not talk about distrust as a concept separate from trust.

If dispositional trust and distrust are indeed distinct constructs, then focusing solely on disposition to trust may only explain part of the e-commerce consumer trust story. The primary objective of this paper, therefore, is to determine the extent to which dispositional trust and distrust are divergent and thus matter in distinct ways within the B2C e-commerce setting. Specifically, we draw on the differences in the psychological

². This is consistent with other work on the importance of individual difference variables like personal innovativeness and computer anxiety in predicting, for instance, an individual’s willingness to adopt technological innovations (e.g., Agarwal and Prasad, 1998; Compeau, Higgins and Huff, 1999; House, Shane and Herold, 1996).

³. Risk means perceptions that a non-zero probability of loss or negative consequences exists, or simply “the likelihood of negative outcomes” (McLain and Hackman, 1999: 155). Trust and distrust concepts differ from risk in that trust and distrust reflect what one perceives towards the trustee in the face of risk. While trust has been shown to relate to risk (Koller, 1988; McLain and Hackman, 1999), how distrust relates to risk has not been researched, to our knowledge.
underpinnings of the two constructs. While trust is based on feelings of calm and assurance, distrust is based on fears and worries. Feelings of fear and worry are more likely to prevail when an individual is in a situation that he/she perceives to be high risk. Hence, we justify a model that predicts dispositional trust will have a greater effect on Web perceptions perceived as low risk (e.g., willingness to explore a web vendor's site without buying), whereas dispositional distrust will have a stronger influence on Web situations perceived as high risk (e.g., a decision to change medical treatment based on advice offered in WebMD.com). The next section briefly reviews the literature related to the proposed model.

TRUST AND DISTRUST

Perhaps the broadest definition of trust is to willingly and securely become vulnerable to the trustee (e.g., another person, institution, or people generally) having taken into consideration the characteristics (e.g., benevolence, integrity, competence) of the trustee (Mishra, 1996; Rousseau, et al., 1998; Zand, 1972). Applying this definition to three types of trustees, trust means to be willing to become vulnerable to: 1) another person (interpersonal trust); 2) a context, such as the Internet (institutional trust); and 3) general others (dispositional trust). Furthermore, being vulnerable to another means one has to depend on the other party (Lewis and Weigert, 1985; Riker, 1971).

Recently, a few researchers have begun to address distrust issues (Bigley and Pearce, 1998; Burt and Knez, 1996; Kramer, 1996, 1999), though usually not in the same study in which they address trust issues. Some early scholars viewed distrust as merely the opposite of high trust (Rotter, 1967) on a single bipolar scale, but more recent literature views distrust as independent from trust (Jones and George, 1998; Sitkin and Roth, 1993). These arguments are made in terms of interpersonal trust/distrust rather than in terms of dispositional trust/distrust. However, we think the arguments apply because interpersonal and dispositional trust concepts have similar conceptual meanings. They differ primarily in terms of the object of trust (i.e., a specific other in the case of interpersonal trust, and general others in the case of dispositional trust).

The case against the "old view" that trust and distrust form one bipolar construct is argued extensively in Lewicki et al. (1998). They state categorically that "high distrust is not the same thing as low trust" (p. 444), and they offer three reasons for this assertion. First, they cite evidence from empirical studies that dispositional items factor separately into trust and distrust (Clark and Payne, 1997; Constantinople, 1969; Wrightsman, 1974) and Erikson (1968), who suggested that trust was reliance on the trustee's integrity, but that distrust involves a sense of readiness for danger or an anticipation of discomfort. These reflect large conceptual differences. Luhmann (1979) argues that trust and distrust are distinct functional equivalents that address uncertainty in different ways.
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Second, Lewicki et al. argue that trust and distrust have different consequences. They argue this not through direct empirical evidence, but by analogy with other constructs, presenting empirical evidence from studies of the differential impacts of positive/negative affectivity. Finally, and perhaps most critically, they present a 2X2 chart (Figure 1) to illustrate that combinations of high/low trust and distrust can co-exist. To support this contention, they review literature showing that other pairs of opposite mental constructs often exist in a person simultaneously (e.g., positive and negative affectivity, love and hate).

For example, they show that when trust is high, distrust may also be high (quadrant 4), causing parties to take a “trust but verify” stance. In the e-commerce context, this may represent a consumer who experiences significant fears and worries about Web-based interaction but is also cognizant of the structural safeguards that seem to mollify these fears. When parties have no reason to be suspicious of the other, high trust and low distrust may appear simultaneously (quadrant 2). This may be like an e-commerce consumer who not only perceives little inherent threat in Web-based interaction but is further reassured by the presence of the structural safeguards. Parties may also have low trust and low distrust (quadrant 1), which Lewicki et al. describe as a relationship with low or simple interdependencies. This would be like a consumer who perceives little worry or fear about the Internet and so is not concerned about the presence of institutional safeguards. On the other hand, quadrant 3 would be represented by consumers with high levels of fear and worry about the Internet who believe that any safeguards are

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insufficient. Lewicki and associates provide no empirical evidence of their own for the co-existence of distrust and trust; thus, these ideas should be tested.

Assuming, therefore, that distrust is the distinct opposite of trust, distrust means to not willingly become vulnerable to the trustee, having taken into consideration the characteristics of the trustee. The word not can convey significant emotion, such as in the taunt, “You're NOT going to win.” However, this definition does not adequately capture the important fact that trust and distrust embody different emotional compositions (McKnight and Chervany, 2001). Scholars define trust in terms of feelings of security (e.g., Lewis and Weigert, 1985; Rempel, Holmes and Zanna, 1985) or comfort (Eayrs, 1993). One who trusts is calm and rests assured things will be okay because doubts and fears have been put aside (Holmes, 1991). But distrust is about suspicion, doubt, or wariness (Deutsch, 1958). McKnight and Chervany argue, based on Luhmann (1979), that a more frantic or emotionally aroused state lies behind distrust than trust. Distrust is charged with negative emotions such as fear, doubt, worry, panic, paranoia, and anger (Kramer, 1996; Lewicki et al., 1998), which give the distrustor an urgent, wary, self-protective, defense-minded posture. Distrust reflects “the emotion-charged human survival instinct” (McKnight and Chervany, 2001: 884) which enables people to address challenging or risky situations, such as when one feels threatened. One who distrusts needs tactics like stringent controls or preemptive strikes (Lewicki et al., 1998) in order to feel secure. For example, the early period of the war on terror reflects this aspect of distrust.

McKnight and Chervany (2001) compare trust and distrust to two elephants. Trust is like the docile zoo elephant munching on hay, while distrust is like the “raging wild bull elephant” protecting the herd from attack (McKnight and Chervany, 2001: 885). The emotional intensity of distrust distinguishes it from trust. This approach is distinct from that of McAllister (1995), who proposes that trust is either cognitive or affective. Our approach assumes that trust and distrust each have cognitive and affective components, but that the emotional components differ. Thus, in our definition, we incorporate the idea that distrust is accompanied by feelings of worry, fear, or concern, in contrast to the secure feelings that accompany trust.

**RESEARCH MODEL**

**Concept Definitions**

The general terms trust and distrust can be decomposed into more specific constructs, in keeping with existing trust definitions (Mayer et al., 1995; McKnight and Chervany, 2001–2002).

**Dispositional Trust and Distrust.** Disposition to trust, meaning a tendency to be willing to depend on or become vulnerable to general other people (Rotter, 1971), accompanied by feelings of security, is an individual difference factor that should affect interpersonal trust.
Disposition to distrust means a tendency to not be willing to depend on or become vulnerable to general others, accompanied by feelings of worry, fear, or concern. We adapted four dispositional trust/distrust subconstructs from McKnight et al. (1998) (please refer to the first four constructs defined in the Appendix).

Dispositional trust and distrust develop over a lifetime as people encounter other people in various situations. Beginning in childhood, the child comes to trust (and not distrust) its caregiver because the caregiver is responsive to the child’s needs (Erikson, 1968). Over time, one generalizes these trusting or distrusting thoughts/feelings about others and applies the thoughts/feelings to new relationships (Rotter, 1971). Though relatively stable because they reflect a lifetime of dealing with people, dispositions to trust and distrust are not entirely static (Mayer et al., 1995). Through a series of experiences, dispositions to trust and distrust may become more negative or more positive throughout a person’s lifetime. Thus, disposition to trust and distrust are the product of an entire life’s experiences. For example, a series of negative interactions with others can eventually sour a person, such that one comes to believe that “people are no damn good.”

Disposition to trust has its own nuances. For example, the literature distinguishes between faith in humanity and trusting stance. While faith in humanity has to do with assumptions about people in general (i.e., are most people trustworthy?), trusting stance is a personal strategy that one applies whether or not one assumes that people generally have positive attributes (McKnight et al., 1998; see Appendix). As a further nuance, one may have faith in a class of individuals, such as professionals, instead of faith in people in general (Barber, 1983). Thus, in this study, we evaluated three disposition to trust variables that correspond to the above nuances: faith in humanity–general, faith in humanity–professionals, and trusting stance.

**Specific Perception Constructs.** Specific Internet person-object perceptions are those beliefs and intentions that relate to specific Web providers, rather than people in general (as do dispositional concepts). We chose three dependent variables related to the trust concepts above because of their relevance for B2C commerce. First, willingness to explore the provider’s Web site is important because a consumer who is willing to explore is more likely to use/adopt the site. Second, perceived site quality is important in that consumers are more willing to use/adopt a high-quality site than a low-quality one. Third, trusting intention toward the Web provider (an interpersonal trust concept) is important because those who trust the Web provider are more likely to use the advice offered by the provider. These constructs are defined in the Appendix.

**Disposition to Trust and Distrust: Two Distinct Constructs**

Based on the preceding discussion, we propose that trust and distrust will factor separately because they embody different emotional content. Just as positive affect and negative affect
factor separately due to differences in emotional content, so should disposition to trust and distrust. We intentionally set up two variables as conceptual opposites: faith in humanity–general and suspicion of humanity–general. Trusting stance and faith in humanity–professionals should also be distinct from suspicion of humanity–general, but the most direct contrast is between faith in humanity–general and suspicion of humanity–general.

**Hypothesis 1:** Faith in humanity–general will form a separate construct from suspicion of humanity–general.

**Boundary Condition: Initial Stage of Specific Internet Perceptions**

Before we discuss the specific model linkages, we note one boundary condition for the model. We propose the model in the context of ‘swift trust’ or trust during an initial consumer-Web provider relationship (Jarvenpaa and Shaw, 1998; McKnight et al., 1998). That is, the dependent variables in the model (perceptions of the specific Web provider) focus on the early stages of trust formation. In initial relationships, the parties have low familiarity, so that the trustor has little or no first-hand information about the trustee (Bigley and Pearce, 1998). Yet trust can develop very quickly in initial relationships (Butler, 1995; Meyerson, Weick and Kramer, 1996). In the e-commerce context, this initial period is critical because the consumer chooses very quickly whether or not to explore the Web provider’s site, and forms an initial intent to be willing to depend on the provider. The initial period is also critical for a psychological reason: opinions and beliefs formed early tend to continue into the future, perpetuated by belief-maintaining mechanisms (Berscheid and Graziano, 1979; Boon and Holmes, 1991). Later perceptions are strongly affected by initial impressions (Darley and Fazio, 1980). Note that only the model’s dependent variables relate to initial perceptions. The independent dispositional variables are relatively stable variables that develop over a lifetime of experiences with others, as discussed above.

**Disposition to Trust and Distrust as Predictors of Internet Perceptions**

In general, in the initial relationship, disposition to trust and distrust will positively/negatively affect specific perceptions – Web site quality, willingness to explore the site, and willingness to depend on the Web provider – because people tend to keep initial impressions consistent. Similarly, McKnight et al. (1998) propose cognitive consistency as a reason that institution-based trust/distrust should positively/negatively influence specific person-object perceptions. Thus, people who trust legal protections covering the Internet are more likely to trust a provider who operates on the Internet. Similarly, those who generally trust others are more likely to trust an unknown Internet provider. While the arguments above are probably true in general, incorporating the role of risk serves to further refine the proposed linkages.
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The Role of Risk

Several researchers suggest that trust is usually associated with actor vulnerability or risk (Bigley and Pearce, 1998; Mayer et al., 1995; Zand, 1972). Risk and vulnerability are sometimes suggested as factors that distinguish trust from distrust. Kramer (1996) and McKnight and Chervany (2001) state that fear and feelings of paranoia permeate those with high distrust, causing them to feel exposed to the risk of potential betrayal.

As we compared such statements on the nature of trust/distrust with Lewicki et al.’s discussion of their 2 X 2 matrix on trust/distrust, it seemed clear that one issue that differentiates low and high distrust is the associated level of perceived risk. For example, Lewicki et al. describe the low trust/low distrust quadrant 1 (Figure 1) as situations in which the parties have “no reason to be wary and watchful” and do not interact in a way that involves complex interdependencies or risk assessments (1998: 446). This implies low risk. Similarly, in the high trust/low distrust quadrant 2, parties have no reason to suspect the other and experience pooled (simple) interdependence. Because low interdependence implies low risk, this quadrant 2 description reflects low perceived risk. Risk is higher under complex or intensive interdependencies because more things can go wrong. The descriptions of the high distrust quadrants show that parties use caution, controls, and have “multifaceted reciprocal interdependence” (Lewicki et al., 1998: 447), all of which indicates that perceived risk is high. Thus, distrust is associated with risk, while no such distinction is made for trust.

We propose that variations in the level of risk perceived in a Web-based activity will change the competing effects of trust and distrust on the activity. High-risk situations will increase the effect of distrust while lowering the impact of trust. This is because in high-risk situations, the trustor relies more on the wary, suspicious side to assess the situation and its consequences (McKnight and Chervany, 2001), thus reducing the importance of basic trust and optimism. Conversely, for Web-based activities where the perceived risk is minimal, an individual’s disposition to trust will dominate over distrust because optimism is increased and one’s need to exercise wariness and suspicion is diminished.

Designating High- and Low-Risk Dependent Variables

In the context of the Internet, it is proposed (Figure 2) that trusting intention involves high levels of risk, while the other dependent variables have low or no risk. To be willing to depend on a Web provider (trusting intention) puts the consumer at risk in terms of service delivery, personal information protection, and correctness of the advice. Trusting intention implies a leap of faith that takes one beyond exploring the relational possibilities to a readiness to put aside doubts and take the relationship to the next level (Holmes, 1991). This is risky because, for instance, the advice offered by the Web provider may not be accurate or appropriate, with poor consequences for someone who acts on it. Trust
takes place in an environment of risk (Luhmann, 1979; Rempel et al., 1985). By contrast, willingness to explore the site, which implies making no readiness for commitment, embodies little more risk than window-shopping at the mall. Perceived site quality is rated no risk because it embodies no consequences to the consumer, implying neither a commitment nor a relationship. Site quality is simply a judgment of the site’s level of excellence.

The arguments above are now integrated to postulate hypotheses. It was argued that distrust concepts relate more strongly to high-risk perceptions than do trust concepts. Trusting intention towards a Web site is a high-risk dependent variable. Therefore, suspicion of humanity should be a better predictor of trusting intention than is faith in humanity. Our risk-related theorizing makes us confident of this even though some have hypothesized or found links between disposition to trust and trust variables like trusting intention (e.g., Gefen, 2000; Mayer et al., 1995; McKnight et al., 1998). Even though

5. The vendor may gather information via a “cookie,” but this reveals little personal information.
using the term “better predictor” indicates a matter of degree, we will state the hypotheses in stronger language to set up a more rigorous test of the model.

**Hypothesis 2a:** Suspicion of humanity-general will have a significant negative influence on trusting intention towards the Web provider.

**Hypothesis 2b:** Suspicion of humanity-general will not affect the low-risk dependent variables – perceived site quality and willingness to explore.

By contrast, faith in humanity-general, faith in humanity-professionals, and trusting stance will affect the low/no risk dependent variables (i.e., perceived site quality and willingness to explore the Web site). Faith in humanity is a form of disposition to trust, which has been found to influence judgments about attributes of the Web vendor (e.g., Gefen, 2000). As an extension to the literature, faith in humanity will affect willingness to explore the site because the more one trusts others, the more optimistic or favorable one will be about exploring a Web site. The disposition to trust constructs will not be significantly related to the high-risk dependent variable (i.e., trusting intention).

**Hypothesis 3a:** Faith in humanity-general, faith in humanity-professionals, and trusting stance will positively affect perceived site quality.

**Hypothesis 3b:** Faith in humanity-general, faith in humanity-professionals, and trusting stance will positively affect willingness to explore the site.

**Hypothesis 3c:** Faith in humanity-general, faith in humanity-professionals, and trusting stance will not affect trusting intention.

**Other Relationships**

Perceived site quality should positively affect trusting intention towards the site because one who thinks the site is well done is more likely to be willing to rely on the provider (Cheskin, 1999). Site quality has previously been found to positively relate to trusting beliefs and trusting intention (McKnight et al., 2002a,b). It also stands to reason that if one is willing to explore the site, then one will be more willing to take the next step by relying on the provider (i.e., trusting intention). To illustrate, this is one effect car salespeople employ when they take a person for a test drive. Willingness to try out the car usually means one is more positive toward buying the car.

**Hypothesis 4:** Perceived site quality will positively affect trusting intention towards the Web provider.

**Hypothesis 5:** Willingness to explore the site will positively affect trusting intention towards the Web provider.
Co-Existence of Trust and Distrust

Lewicki and associates argue that trust and distrust will coexist in all four combinations shown in Figure 1. They note that principles of cognitive consistency suggest that trust and distrust should lie primarily in quadrants 2 and 3, in which trust and distrust are in intuitive balance. Arguing against this, Lewicki and associates propose that consistency is a temporary state and that "the more common state" of trust is "not one of balance but, rather, of imbalance [and] inconsistency" (Lewicki et al., 1998: 444). We agree with Lewicki and associates in that more than a nonsignificant proportion of trust and distrust combinations will exist in the imbalanced quadrants (i.e., 1 and 4). This will be true because people in real situations of risk need to balance high trust with high distrust, even though this seems contradictory on the surface. In fact, because dispositions to trust and distrust are relatively stable tendencies developed over a lifetime of experience in trusting or not trusting others, this is a good domain for testing whether people hold inconsistent trust and distrust combinations.

We recognize that this speculation can be challenged. Peoples’ desire to be internally consistent should persist over time rather than be temporary. Given that balance is a satisfying state, it should continue to satisfy over time. Not only is balance a satisfying state internally, but the desire to present oneself appropriately to others (Luhmann, 1980) makes consistency/balance persist as a desirable state. Self-presentation norms suggest that one has to reconcile whether one’s perceptions would make sense and be accepted in the social circle. For example, applied to dispositional trust and distrust, a person will be cautious about maintaining an inconsistent combination of beliefs in light of what others may think because a distrusting attitude and posture toward general others may convey contradictions and project negative affect. To our knowledge, no empirical test of the co-existence of trust/distrust variables has been published.

**Hypothesis 6:** Using the Lewicki et al. (1998) matrix shown in Figure 1 as a classification of subject disposition to trust/distrust, significant numbers (>0) of subjects are predicted to classify in quadrants 1 or 4.

**METHOD AND RESULTS**

**Subjects and Procedures**

The participants in the study were 1151 students from three large U. S. universities. After removing unusable responses, 1048 remained. We motivated respondents to participate through course credit; they received 1–2% of their course grade. The average respondent’s age was 20.6, and fifty-four percent were female. Although university students do not represent all Internet users, they represent a group likely to use the Internet. Online consumers are generally younger and better educated than conventional consumers,
making student samples close to the online consumer population (OECD, 1998). More importantly, the university student population is an important segment of Internet users.

The 1048 respondents had an average of 4.0 years of Internet experience. To control for the impact of several known trust factors and demographic variables on the dependent variables, structural assurance, perceived Web risk, age, gender, and Web experience were also entered in the structural model as predictors of each dependent variable in the study (see Figure 2). Structural assurance is the belief that legal or technological structures encourage Internet success (McKnight et al. 2002b). Perceived Web risk refers to beliefs that negative consequences may result during Web use. Both are included because they played roles in other trust studies (Gefen, Karahanna and Straub, 2003; McKnight et al., 2002b).
Items from McKnight et al. (2002a, b) were used for faith in humanity, trusting stance, structural assurance, perceived site quality, perceived Web risk, and Web experience. Items for willingness to explore the site were created for this study. The suspicion of humanity items were adapted from the faith in humanity-general items. All items were measured on a 7-point Likert scale, with end-point anchors of Strongly Disagree to Strongly Agree. Descriptive statistics for the model constructs are shown in Table 1. Although not used in this study, respondents also answered qualitative questions. Reading subjects’ diverse and interesting answers to these questions also gave assurance that the subjects took the study seriously.

Respondents first answered an online questionnaire that included disposition to trust/distrust, structural assurance, perceived Web risk, and the demographic variables. At this point, respondents were not taken to a Web site, but were told the Web site exists. Next, participants completed an online questionnaire that included the willingness to explore items. Finally, the participants were taken to the custom-created Web site called LegalAdvice.com that provided expert legal advice. The Web site used a frame-based design with the LegalAdvice.com banner across the top. The left frame had navigation buttons and the right frame displayed the information for the page, such as a list of legal topics to select, the search results, or a legal advice page. Participants then explored the site, and were asked questions online about their perceptions of site quality and their trusting intention. Use of this procedure, in which dependent variables were measured after independent variables, eliminates the possibility of reverse causality. On average, the entire single-session procedure required 31 minutes.

**Measurement Model**

The model was analyzed using techniques from Partial Least Squares (PLS), a structural equation modeling method. Researchers frequently use PLS for exploratory research, especially with complex models that emphasize predicting causality (Joreskog and Wold, 1982). Because no previous tests of this model have been done, we consider this study exploratory. In PLS, construct validity of the measurement model is first analyzed, followed by analysis of the structural model.

PLS model loadings/cross loadings in Table 1 indicate that the measurement model had acceptable reliability and convergent/discriminant validity. The internal composite reliability (ICR) figures (similar to Cronbach’s alphas) demonstrate the internal consistency of each construct, because all ICRs exceed the 0.70 standard (Fornell and Larcker, 1981).

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6. McKnight et al.’s (2002a) first six items (benevolence, integrity) were used for faith in humanity-general. Their next three (competence) items were used for faith in humanity-professionals, which was relabeled to better match the meaning of the items.

7. McKnight et al.’s (2002a) items 3 and 4 were used.
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1981), with the lowest figure at 0.86. The AVE (average variance extracted versus measurement error) figures are all above the minimum acceptable level of 0.50 (Chin, 1998), indicating convergent validity within construct. All latent variable intercorrelations are less than the square root of the corresponding AVEs, which assures that the constructs are discriminant from each other (Fornell and Larcker, 1981). In addition, the highest latent variable intercorrelation among the main constructs in the model is 0.48. From these consistent indications of convergent and discriminant validity, we considered the measurement model acceptable.

As evidence supporting Hypothesis 1 (suspicion and faith in humanity will form two separate constructs), Table 1 shows that they are correlated at -0.38. They are discriminant because the absolute value of the correlation is less than the corresponding AVE square roots (0.77 and 0.72) or even the AVEs (0.59 and 0.52). Suspicion of humanity correlates with the other two types of disposition to trust at -0.08.

Results—Structural Model

Results for H2–H5 are shown in Figure 2. Overall, six of the nine links in the model that were proposed to be significant (solid line arrows) are supported. Two of the three nonsignificant links were proposed to predict willingness to explore (H3b), which is only predicted by trusting stance. This may be because willingness to explore has so little risk involved that faith in humanity is not an issue. The other nonsignificant linkage is from faith in humanity-general to site quality. While the coefficients for the significant linkages are not particularly high, they are significant, as predicted. Their modest magnitude is not surprising because attitude theory suggests that factors such as dispositions, which are not formed by direct experience with the other party, are not as predictive as are experiential factors (Kraus, 1997).

To test Hypotheses 2b and 3c, it must be shown that the independent variables do not predict dependent variables they are proposed not to predict. To test this, we added the dotted-line links from the dispositional trust variables to trusting intention and links from suspicion of humanity to site quality and willingness to explore site. The amount of additional variance explained (R²) by the added linkages is negligible (site quality: 0.11 to 0.12; willingness to explore and trusting intention remained the same). Only one of the five additional links is significant (suspicion of humanity to site quality: coefficient = - 0.12**).

To test Hypothesis 6, we first contrast combinations of high and low suspicion of humanity-general versus faith in humanity-general using an SPSS 11.5 cross-tabs procedure. Each variable is split into high and low cases using the variable median score. Next, the cases are categorized into the quadrant splits of Figure 1 by examining the combinations of high and low dispositional trust/distrust for each case.
Table 2. Quadrant Combinations and Hypothesis 6 Testing

<table>
<thead>
<tr>
<th>Quadrant Combinations</th>
<th>Inconsistent Cognition</th>
<th>Consistent Cognition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 (Lo Trust – Lo Distrust)</td>
<td>4 (Hi Trust – Hi Distrust)</td>
</tr>
<tr>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Combinations of Faith in Humanity-General and Suspicion of Humanity-General</td>
<td>203</td>
<td>19.4</td>
</tr>
</tbody>
</table>

II. Hypothesis 6 Testing

H0: numbers in 1, 4 > 0; Difference test = p<.001 (based on a Z approximation)

Table 3. Summary of Hypothesis and Model Support

<table>
<thead>
<tr>
<th>Times Supported / Times Tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
</tr>
<tr>
<td>Support for model link hypothesized to exist</td>
</tr>
<tr>
<td>Support for links hypothesized not to exist</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Table 2 shows that 61.8% (648) of the cases fit the cognitively consistent quadrants 2 or 3 and a surprising 38.2% (400 cases) fit the inconsistent quadrants 1 or 4. Because the hypothesis expectation was that a significant number of the cases would fit in quadrants 1 and 4, we performed a test of the H6 hypothesis. The significant difference (p<0.001) between the 400 cases found and the 0 cases expected supports H6. Table 3 summarizes the findings.

**DISCUSSION**

This paper contributes to the growing body of literature on trust in B2C e-commerce in several significant ways. This study takes a strong first step towards empirically validating the contention in recent trust literature (e.g., Kramer, 1999; Lewicki, et al., 1998) that trust and distrust are not just two ends of a single bipolar construct but are, in fact, dis-
tinct constructs. Our findings provide initial support for all three of the criteria proposed by Lewicki et al. to demonstrate the distinct nature of trust and distrust. Specifically, we found that disposition to trust and distrust: (a) factor separately, (b) co-exist, and, in the context of Web providers of expert advice, (c) have differential consequences.

The first point is clear from the PLS measurement model which shows that disposition to distrust and trust form separate, discriminant factors, with a correlation of $r = -0.38$. Of course, our study examines trust and distrust in only its dispositional form, so similar discriminant factors will have to be tested for interpersonal and institutional trust before statements can be made about the distinctness of trust and distrust at a broader level.

The co-existence of disposition to trust and distrust can be shown by the fact that many respondents (38%) — significantly more than zero percent — took an inconsistent, unbalanced position of either high trust/high distrust or low trust/low distrust (Table 2). Based on this test, it seems reasonable to conclude that our findings make a good preliminary case for the idea that dispositional trust and distrust co-exist in some individuals.

Finally, our findings also show that disposition to trust and distrust have different influences on customer perceptions of Web providers of expert advice. Specifically, the study results (H2–H3) support the idea that disposition to trust affects low-risk Web perceptions more than does disposition to distrust, while disposition to distrust affects high-risk perceptions more than does disposition to trust.

Of the four dispositional variables, only suspicion of humanity predicted the high-risk dependent variable — trusting intention. Of course, future research should try to design studies to overcome some of the limitations of the current paper that are discussed below.

Caveats, Limitations, and Research Implications

The familiarity of respondents with this Web site was low by design, so these results may not hold when respondents are more familiar with a site and its vendor. However, the distinction between disposition to trust and distrust should hold, as these individual traits develop over a lifetime. This study used an advice site setting. This setting has the advantage of broadening the definition of trusting intention to include willingness to act on the information provided on such sites. However, the results may or may not generalize to the consumer sales domain. Studies should be done in various domains to see if these results hold. Further, this study used only a single construct to operationalize disposition to distrust — it would be useful to broaden the scope of this construct to see if it too has multiple constituent dimensions as is the case with disposition to trust. Finally, in this study, we categorized low and high-risk dependent variables based on theoretical justifications; we did not actually measure respondents’ perceptions of the riskiness of each dependent variable. Although we feel comfortable with the theoretical rationale, it would be useful to conduct future studies in which this categorization of risk is validated empirically.
Three other research implications follow. This paper depicts disposition to distrust as a construct that matters in risky situations. However, this may only be true within specific bounds of risk levels. Beyond a certain level of risk, users may require hard evidence before acting, rather than relying on any dispositional factors. Researchers need to test the efficacy of disposition to distrust in predicting variables with higher levels of risk, such as purchasing products or services and sharing personal information at the Web site. These effects should also be tested longitudinally rather than all in one session, as this study did. Other individual difference constructs may also be important to e-commerce outcomes. For example, computer anxiety or personal innovativeness may enhance perceptions of risk, thereby impacting levels of trust/distrust within the Web-based situation. Our results indicated that 38% of respondents held inconsistent trust/distrust combinations — either high trust/high distrust or low trust/low distrust. Future research needs to examine why this is so. It may be that this is due to individual differences, such as incidents of schizophrenia. However, it may be that perceived situational risk (or lack of risk) or other beliefs are at the root of these inconsistent cognitions.

**Implications for Practice**

The distinct nature of dispositional trust and distrust, along with their differential impacts on consumer perceptions, has some important implications for practitioners. For instance, it may indicate that the stage of the relationship with the consumer is important to consider in choosing an intervention strategy to enhance consumer trust and minimize consumer distrust. It appears that disposition to trust — in particular, trusting stance — is useful in predicting a consumer’s willingness to explore a Web provider’s site. But when the relationship progresses to the point where the consumer must make the decision of whether or not to rely on information provided by the Web provider, that is, when the consumer must form specific trusting intentions towards the Web provider, disposition to distrust becomes more influential than any of the disposition to trust variables.

Of course, this raises the important, and currently unanswered, question of which specific strategies are effective to address disposition to trust and which ones are better suited to overcoming disposition to distrust. Providing guarantees, customer reviews, and assurances at the point at which dispositional distrusters are most wary (e.g., at purchase) may help. On the other hand, it is possible that some widely used trust-building strategies may backfire with consumers with high disposition to distrust. For example, the use of 3rd party assurance seals such as TRUST-e or endorsements by professional organizations may not work to persuade consumers with a high disposition to distrust. Individuals with high disposition to distrust may view assurance seals as an indication that there are underlying security problems. This is, of course, an empirical question that deserves investigation.
Just as face-to-face salespeople try to get to know the potential customer so they can relate to them better, so can Web providers achieve a competitive advantage by understanding the individual consumer better — including knowledge of their dispositions to trust and distrust. We suggest that the trust/distrust 2 X 2 (Figure 1) is a potentially valuable trust disposition segmentation of the e-commerce population. One early indication of such market segmentation appeared in a 2000 online consumer behavior study by McKinsey and Media Matrix (Media Matrix, 2000). After dividing Web users into six categories, McKinsey’s John Forsyth warned “marketers who…approach [all six segments] as if they were all alike – do so at their peril.” We speculate, based on this study, that marketers who treat the four disposition to trust/distrust segments alike may have difficulty attracting and/or retaining one or more segments of the potential e-consumer population. By asking a few targeted questions, such as a selection of our items (Appendix), providers may be able to segment customers by the level or type of privacy or security concerns and by their levels of disposition to trust and distrust. Clearly, further work is needed on the specific approaches that are likely to be most successful for consumers in each segment. It would also be useful to see if sites can be designed to subtly capture distinctions in consumer dispositions to trust and distrust and then dynamically reconfigure themselves for each user type.

CONCLUSION

Risk is endemic to the e-commerce advice site phenomenon and needs to be addressed by both trust and distrust concepts, which is the primary contribution of this paper. Our study’s results provide preliminary evidence of distinct roles for disposition to trust versus disposition to distrust with respect to the risk level of Internet perceptions. Disposition to trust, a trust concept, tends to affect low-risk Internet perceptions like site quality perception and willingness to explore a site, while disposition to distrust, a distrust concept, affects the high-risk trusting intention toward the Web advice provider. The study also contributes to trust theory by finding that dispositional distrust differs from dispositional trust, which is key because of confusion about the distinction between trust/distrust (Mishra, 1996). The empirical distinction between trust and distrust concepts suggests that the widely neglected distrust concepts should be explored further in order to better address perceptions of risk, and consumer willingness to transact, on the Internet.

REFERENCES


Dispositional Trust and Distrust Distinctions


## Appendix: Measures Used in the Study

<table>
<thead>
<tr>
<th>Construct: Definition</th>
<th>Item</th>
</tr>
</thead>
</table>
| **Faith in Humanity-General**: one securely assumes that general other people are typically well meaning and reliable [Cronbach’s] Alpha: 0.87 | 1. In general, people really do care about the well-being of others.  
2. The typical person is sincerely concerned about the problems of others.  
3. Most of the time, people care enough to try to be helpful, rather than just looking out for themselves.  
4. In general, most folks keep their promises.  
5. I think people generally try to back up their words with their actions.  
6. Most people are honest in their dealings with others. |
| **Faith in Humanity-Professionals**: one securely assumes that professionals are task competent Alpha: 0.88 | 1. I believe that most professional people do a very good job at their work.  
2. Most professionals are very knowledgeable in their chosen field.  
3. A large majority of professional people are competent in their area of expertise. |
| **Trusting Stance**: one securely assumes better results occur by dealing with people as though they are well meaning Alpha: 0.88 | 1. I usually trust people until they give me a reason not to trust them.  
2. I generally give people the benefit of the doubt when I first meet them.  
3. My typical approach is to trust new acquaintances until they prove I should not trust them. |
| **Suspicion of Humanity-General**: one assumes general other people are not well meaning and reliable, associated with worry, fear, or concern Alpha: 0.86 | 1. People are usually out for their own good.  
2. People pretend to care more about one another than they really do.  
3. Most people inwardly dislike putting themselves out to help other people.  
4. Most people would tell a lie if they could gain by it.  
5. People don’t always hold to the standard of honesty they claim.  
6. Most people would cheat on their income tax if they thought they could get away with it. |
| **Perceived Site Quality**: perceptions of how well the website is built and works Alpha: 0.82 | 1. Overall, this site worked very well technically.  
2. Visually, this site resembled other sites I think highly of.  
3. This site was simple to navigate.  
4. On this site, it was easy to find the information I wanted.  
5. This site clearly showed how I can contact or communicate with LegalAdvice.com. |
| **Willingness to Explore Site**: readiness or eagerness to look at or to investigate use of a particular website Alpha: 0.90 | If I was faced with the scenario described earlier:  
1. I would visit LegalAdvice.com to try to determine my legal rights.  
2. I would be interested in seeing what LegalAdvice.com had to suggest.  
3. I would probably explore LegalAdvice.com before going to an attorney. |
### Trusting intention towards Web provider: willingness to depend on the provider
*Alpha: 0.92*

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When an important legal issue or problem arises, I would feel</td>
<td>comfortable depending on the information provided by LegalAdvice.com.</td>
</tr>
<tr>
<td>2. I can always rely on LegalAdvice.com in a tough legal situation.</td>
<td></td>
</tr>
<tr>
<td>3. I feel that I could count on LegalAdvice.com to help with a crucial</td>
<td>legal problem.</td>
</tr>
<tr>
<td>4. Faced with a difficult legal situation that required me to hire a</td>
<td>lawyer <em>(for a fee)</em>, I would use the firm backing LegalAdvice.com.</td>
</tr>
<tr>
<td>5. If I had a challenging legal problem, I would want to use LegalAdvice.com again.</td>
<td></td>
</tr>
<tr>
<td>1. When an important legal issue or problem arises, I would feel</td>
<td>comfortable depending on the information provided by LegalAdvice.com.</td>
</tr>
</tbody>
</table>

### Control Variables:

#### Structural Assurance: The belief that legal or technological structures encourage Internet success
*Alpha: 0.95*

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Internet has enough safeguards to make me feel comfortable using it</td>
<td>to transact personal business.</td>
</tr>
<tr>
<td>2. I feel assured that legal and technological structures adequately protect</td>
<td>me from problems on the Internet.</td>
</tr>
<tr>
<td>3. I feel confident that encryption and other technological advances on the</td>
<td>Internet make it safe for me to do business there.</td>
</tr>
<tr>
<td>4. In general, the Internet is now a robust and safe environment in which to</td>
<td>transact business.</td>
</tr>
</tbody>
</table>

#### Perceived Web Risk: The belief that negative consequences may result during Web use
*Alpha: 0.90*

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Entering credit card information over the Web is unsafe.</td>
<td></td>
</tr>
<tr>
<td>2. I think it is risky to provide one’s credit card information to Web-based vendors.</td>
<td></td>
</tr>
<tr>
<td>3. I hesitate to enter my credit card information on the Web.</td>
<td></td>
</tr>
<tr>
<td>4. Entering personal information over the Web is unsafe.</td>
<td></td>
</tr>
<tr>
<td>5. I think it is risky to provide one’s social security number to Web-based vendors.</td>
<td></td>
</tr>
<tr>
<td>6. I would hesitate to enter personal information like my name, address and phone number on the Web.</td>
<td></td>
</tr>
</tbody>
</table>

#### Web Experience: Frequency of Internet usage
*Alpha: 0.70*

<table>
<thead>
<tr>
<th>On average, how much time per week do you spend on each of the following</th>
<th>activities? <em>(None, 0-30 min., 30-60 min., 1-2 hrs., 2-4 hrs., 4-8 hrs., 8+ hrs.)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>…accessing information on the Web about products and services you may buy?</td>
<td></td>
</tr>
<tr>
<td>…shopping (i.e., actually purchasing something) on the Web?</td>
<td></td>
</tr>
</tbody>
</table>