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TRANSFERENCE AS A MEANS OF BUILDING TRUST IN WORLD WIDE WEB SITES[1]

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Abstract

This paper uses cognitive balance theory (Heider 1958) to develop the proposition that transference is a means by which initial trust in unknown organizations doing business on the World Wide Web (WWW) may be established. Trust transfer across hypertext links and from physical to virtual stores is explored. Hypotheses are developed to suggest that consumers' willingness to buy from a web site is an outcome of both trust in that web site and perceived systemic (i.e., WWW-related) risk. An experiment to test the hypotheses is described. Expected contributions, limitations, and possibilities for future research are noted.

1. INTRODUCTION

Trust has been identified as a key factor in the success of World Wide Web (WWW) sites (Jarvenpaa, Tractinsky, and Vitale 1998; Tweney 1998). This research focuses on transference as a mechanism by which consumers may come to trust companies' WWW sites. In keeping with previous research, *trust* is defined here as an individual's beliefs about the extent to which a target is likely to behave in a way that is "benevolent, competent, honest, or predictable in a situation" (McKnight, Cummings, and Chervany 1998, p. 474). *Transfer* is a process by which consumers' trust in an unknown target is influenced by trust in associated targets. Two questions are addressed. First, does trust transfer influence a consumer's initial trust in a web site, and if so how? Second, how do trust and perceptions of systemic risk influence the consumer's willingness to buy from the web site?

2. LITERATURE REVIEW AND HYPOTHESES

Trust transfer has been observed in diverse settings. Uzzi (1996) found that business in the apparel industry was often arranged based on a third party transferring trust between two business owners who were previously unknown to each other. Others have documented the transfer of trust to an individual from another social entity such as a firm (Millman and Fugate 1988) or a neighborhood (Henslin 1968). However, the mechanisms underlying transfer have not been closely examined. In general, studies seem to indicate that transfer occurs based on perceived associations. That is, the potential trustor sees that the unknown target is associated with a known individual, firm, or neighborhood, and bases trust in the target on trust in that known entity. Cognitive balance theory supports this proposition.

Balance theory (Heider 1958) is concerned with the valences of relations between actors. A triad is balanced when there exists "a harmonious state…in which the entities and the feelings about them fit together without stress" (Heider 1958, p. 180). When a person has dissimilar relationships with associated targets, the individual experiences dissonance. People are motivated to reduce such dissonance (Festinger 1954), and this may be done by bringing their relationships into balance either by changing the valence of their relationship to one of the objects or by changing their perception of the relationship between the objects.

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Given two positive relations (e.g., A trusts B and B is associated with C), balance theory predicts that the third relation will also be positive (i.e., A will trust C). It is in forming this third relation that I propose transfer occurs. When confronted with a new target, an individual bases trust in the new target on trust in associated targets such that balance exists.

2.1 Transfer of Trust from One Web Site to Another

Research on social categorization has shown that minimal stimuli may influence people's categorizations of others (Tajfel 1978). In the WWW context, a hypertext link between two web sites may increase the likelihood that a consumer will group two organizations into the same mental category. Thus they may be seen as "belonging together," establishing a positive relationship. Links may also imply a positive sentiment relation. Many organizations present links to their partners or to sites that they label as "recommended" or "the best." Even if this phrasing is not explicit, by sending the link the host may be assumed to have positive sentiments toward the linkee. If a person perceives that a trusted organization is positively associated with an unknown organization, then that person may judge the unknown target based on his trust in the known target. Doing so would form a positive third relation and thereby create a balanced triad.

H1: Initial trust in an unknown web site will be more strongly influenced by trust in a better known web site when there is evidence of a connection between the two than when there is not.

Differences in the ways that hypertext links are presented may cause differing levels of perceived association. Work in gestalt psychology has studied the grouping of objects and found that if two objects are surrounded by dissimilar objects the likelihood of their being grouped as a pair increases whereas if they are surrounded by similar objects that likelihood decreases (reviewed in Heider 1958). Research on categorization processes has shown similar effects in the grouping of both objects and people (Oakes 1987; Wilder 1981, 1986). Categories are made up of objects or people that share some commonalties, one of which could be proximity, or surroundings. Categories may be nested within one another such that high level categories such as "American" include members of several lower level categories such as "Texan" and "New Yorker" (Rosch 1978). Once an entity is categorized that entity tends to be perceived as exemplifying the properties of the category to a greater extent than it actually does. In other words, categorization tends to exaggerate the perception of within group similarities (Wilder 1986). Common category membership thus corresponds not only to positive unit formation, but may also imply positive sentiment insomuch as those who are similar may be assumed to feel more positively toward one another than those who are different.

Categories are formed based on commonalties and differences among objects such that the higher the level of the category (i.e., the more inclusive it is), the fewer and less specific the commonalties that are associated with membership. Thus members of small groups may be seen to have more in common with each other than members of large groups, increasing the positive valence of the perceived association between pairs of members. For example, all else equal, two members of a fraternity may be perceived by an outsider as more closely connected than two members of the student body at large because the fraternity represents a subset of the student body. Having fewer members, the members are seen to have more in common and be more closely related to one another. More generally, if two objects or individuals are surrounded by many similar objects, their connection to each other may be perceived as weaker than if they are alone or surrounded by dissimilar others.

When organizations present links on their web sites, they may present long lists (for example, some sites present a list of 100 or more best links) or they may present only one or a few links (for example, a link to the best site on some topic). Links presented alone or in small groups should provide stronger grounds for the perception of a positive relationship with the host than links presented as part of a larger set because they encourage categorization into smaller groups whose members may be assumed to have more in common than would members of larger groups.

H2: The fewer the number of similar links on a host web site, the more transfer will occur between the host and any one linked web site.

2.2 Transfer of Trust from a Physical Store to a Web Site

When a consumer first encounters an organization in the physical world, there are many potential bases of trust. Among the strongest of these may be institutional factors (McKnight, Cummings and Chervany 1998). Institutionally based trust has generally been viewed as stemming from the belief that impersonal structures are in place to facilitate and encourage trustworthy behavior in a given situation (e.g., Shapiro 1987; Zucker 1986). Zucker asserts that, over time, regulation and legislation have established general expectations and specific rules that have engendered trust in economic transactions between individuals and organizations in the United States. This is consistent with the arguments of Luhmann (1979) and of Lewis and Weigart (1985) that trust rests on perceptions of normalcy. Regulation and legislation have helped to define what "normal" is for retail transactions. Because there are no strong policing agencies recognized as responsible for overseeing the WWW and because the WWW itself is too new to have, for the population at large, a standard for what is "normal," institutionally based trust in newly encountered WWW sites may be expected to be lower than that in newly encountered physical stores.

However, web sites may tap into sources of institutionally generated trust by signaling an association outside the web context. Businesses that have physical stores in addition to their web sites may be able to transfer trust from the physical business to the web site. By associating the web site with a physical business, the organization signals that it is enmeshed in the more traditional economic and social systems with which most consumers are familiar and comfortable, even though those institutions do not necessarily hold sway over interaction on the WWW. Thus if a WWW site is associated with a physical business, trust in the physical business may be transferred to the web site. The possibility of transferring institutionally based trust was demonstrated in Henslin's study in which potential passengers who associated themselves with distrusted neighborhoods, even if they were not currently in those neighborhoods, were distrusted.

H3: The extent to which trust in a WWW site is affected by trust in a physical store will increase as the perceived association between the web site and the store increases.

2.3 Consequences of Trust

Several studies have found connections between trust and important outcomes such as satisfaction and performance (see review by Geyskens, Steenkamp, and Kumar 1998). Such findings are consistent with the basic premises of the Theory of Reasoned Action (TRA, Fishbein and Ajzen 1975), which states that actual behavior is predicted by behavioral intent which is in turn influenced by attitude toward the behavior. Attitude is influenced by relevant beliefs. These relationships have been widely supported in many contexts, including the usage of information systems (e.g., Davis, Bagozzi, and Warshaw 1989). Based on TRA, McKnight, Cummings and Chervany argue that trusting beliefs are likely to influence behavioral intentions involving the trust target.

In the web shopping context, trust may be important to eventual outcomes such as sales performance through its impact on consumer attitudes and intentions. In this case, I will examine the relationship between the consumer's trust in the target and his *willingness to buy* from the target's web site. A high level of trust in a company's web site indicates a belief that the company will act in good faith. Such a belief should lead the consumer to be more willing to buy from the web site because it alleviates potential risk stemming from target behavior (e.g., that the product may not be delivered, it may be defective, or the company may not provide good service after the purchase). Mayer, Davis and Schoorman (1995) argue that trust should have a positive influence on risk taking in a relationship because trust is likely to alleviate concerns regarding these types of possible negative consequences.

H4: Trust in the target WWW site will have a positive effect on consumers' willingness to buy from the WWW site.

While trust is expected to reduce the perception of risk posed by potential target misbehavior, there remains another source of risk that trust in the target does not ameliorate. This is what has been referred to above as systemic risk. Hypothesis four specifies the channel via which an individual is willing to make a purchase. There may be perceived risk associated with use of the WWW channel (e.g., third party observation of private information). Articles in the popular and practitioner oriented presses (e.g., Muyskens 1998; Tweney 1998) suggest systemic risk as another belief that may be salient in determining consumers' willingness to buy on the WWW.

Sitkin and Weingart (1995) argue that because people tend to associate risk with negative outcomes more than outcome variability, they will be less likely to take risky actions when perceived situational risk is high. The higher the perceived risk, the greater the perceived chance of experiencing a loss, therefore, the lower the consumer's expected value from the transaction. In this case, the situation may be viewed as having two components: the channel and the target. Having already hypothesized about effects of beliefs about the target (H4), I suggest that there is also a direct effect related to beliefs about the WWW channel in that perceived systemic risk may be expected to have a negative effect on willingness to buy from any WWW site, including the target's.

H5: Perceived risk of entering transactions on the WWW will have a negative influence on willingness to buy from the target WWW site.

The higher the perceived risk, the less the consumer will perceive the site owner to be fully in control and able to avoid negative outcomes from the transaction. For example, although a consumer may trust a company to do all it can to protect the consumer and to provide good products, the consumer may also believe that malicious users on the WWW can easily intercept credit card numbers. If the WWW environment itself is perceived as dangerous, the individual may be less willing to transact in that environment regardless of the trust he or she has in a particular site. In this case, beliefs about systemic risk may reduce the relevance of beliefs about target trustworthiness because trustworthiness only matters if the target is perceived as able to control outcomes.

H6: The greater the consumer's perceived risk of entering transactions on the WWW, the lesser will be the relationship between trust and willingness to buy from the site.

3. METHODOLOGY

The hypotheses will be tested in an experimental setting. The context is one that lends itself well to experimental methods because web sites may be constructed and controlled while maintaining a high degree of face validity. Subjects will be assigned a task of shopping for a laptop computer. Based on pretests, an organization that tends to elicit a high level of trust will be selected (e.g., *PC Magazine*). A subset of pages from that organization's web site will be mimicked and modified such that they contain some general information on laptops and zero links, one link, or several links to fictitious vendor sites created for the experiment. After reading the material on the known site, subjects will view one of two versions of a fictitious company site. The two versions will differ only in whether or not they indicate that the company has a non-web business (by showing a picture of a building).

At least 180 subjects will be recruited and randomly assigned to the six experimental groups that result from fully crossing the conditions described above. Subjects will be consumers who will be offered financial incentives to participate. Subjects will be directed to a web site that provides an explanation of the study purpose and procedures. After viewing this site, hypertext links will guide subjects through completion of the study.

All instruments will be completed on-line.[2] In addition to completing scale items for trust, willingness to buy, perceived risk, perceived association, and several control variables, subjects will be asked several open-ended questions in order to assist in interpreting results. A subset of subjects will also be asked to participate in post-experiment interviews.

Aside from those hypothesized, there are several other factors that may influence a consumer's initial trust in a company encountered on the WWW. These include both factors related to the company's web page (e.g., the appearance, content, and functionality), as well as individual differences among consumers (e.g., propensity to trust, age, occupation, and experience). The first set of factors will be experimentally controlled. The second set will be statistically controlled.

4. DISCUSSION

This study is expected to show that initial trust in unknown web sites may be generated by (1) transfer of trust across hypertext links and (2) transfer of trust from companies' non-web businesses. Further, it is expected to show that trust in a web site and perceived WWW-related risk have interactive effects in influencing consumers' willingness to buy from a web site. Results may clarify the manner in which some perceptions regarding the WWW and some characteristics of web pages may affect outcomes

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[2]Items are not included due to space constraints. They are available from the author upon request.

of interest to both researcher and practitioners. By separating effects related to the target from those related to the channel, we may better understand why success may not be attained even when trust is high. From a practical standpoint, results may help companies in considering the effects of their associations with others. There may be specific implications for designing web sites by providing ways to evaluate the presentation and structure of their links to others, the importance of providing institutional cues, and the need to make efforts to reduce perceived systemic risk.

4.1 Limitations

As is typical with an experiment, there is some constraint on external validity. The experiment uses moderately expensive products (laptop computers). Trust may be less important when there is less at stake, for example, when the product has lower cost (e.g., books or music CDs). Also, because actual behavior is not being observed, the effects of risk and the importance of trust may be weakened. The extent to which people report a willingness to buy could be somewhat inflated because they are not actually being faced with a purchase.

By implementing the control needed to ensure internal validity, the ability to examine other factors that may be important in determining trust such as graphics or functionality is sacrificed. Also, the basis of trust is not examined in this research. There are many potential reasons that a consumer may trust an organization and the reasons behind trust may influence whether or not that trust can be transferred. In other words, trust in B may be based on calculative, prediction, capability, or intentionality processes, and the extent to which it can be transferred to C may depend on which of these processes have influenced its development. For example, calculus based trust may be less easily transferred than other types of trust because it depends on a rational assessment of the benefits and costs to the target and those benefits and costs may not necessarily be seen as applicable to associates.

4.2 Future Research

This paper suggests cognitive balance theory as a framework for understanding how initial trust may be generated via transference. This framework may be fruitfully applied to understand in greater detail the effect that different kinds of connections and information may have on consumers' perceptions and subsequently on organizations' success on the WWW. The WWW context is rich and many more detailed hypotheses could be developed as to what kinds of ties will increase perceived association and therefore lead to transfer. For example, advertising links may be expected to cause lower levels of transfer than unpaid links because there may be a lower level of positive sentiment associated with them. Future efforts might test the effects of sending links versus receiving them, the effects of the manner in which links are presented (e.g., size, color, or location on the page), or other factors affecting the perceived association of linked companies (such as the similarities of their industries, size, or reputation). In addition, the methods employed here would be conducive to exploring other factors important to trust such as technical features of the web page, the presence of reputational cues, or the extent to which sites are personalized.

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