

December 2002

An Experimental Examination of the Effects of the Nature and Direction of Hypertext Links on Trust Transfer between Organizations

Katherine Stewart
University of Maryland

Yali Zhang
University of Maryland

Follow this and additional works at: <http://aisel.aisnet.org/icis2002>

Recommended Citation

Stewart, Katherine and Zhang, Yali, "An Experimental Examination of the Effects of the Nature and Direction of Hypertext Links on Trust Transfer between Organizations" (2002). *ICIS 2002 Proceedings*. 61.
<http://aisel.aisnet.org/icis2002/61>

This material is brought to you by the International Conference on Information Systems (ICIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICIS 2002 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

AN EXPERIMENTAL EXAMINATION OF THE EFFECTS OF THE NATURE AND DIRECTION OF HYPERTEXT LINKS ON TRUST TRANSFER BETWEEN ORGANIZATIONS

Katherine J. Stewart

R. H. Smith School of Business
University of Maryland
College Park, MD USA
kstewart@rhsmith.umd.edu

Yali Zhang

R. H. Smith School of Business
University of Maryland
College Park, MD USA
yzhang@rhsmith.umd.edu

Abstract

Trust transfer occurs when a person bases his or her initial trust in an unknown target (a person, group, or organization) on the relationship between that unknown target and another source of trust (e.g., a well known organization). This study examines how hypertext links between organizations on the World Wide Web influence this process. A hypertext link between a trusted organization and an unknown organization has been shown to increase the extent to which consumers perceive that there is a relationship between the two organizations. Perceptions regarding the relationship between organizations have been shown to influence trust in the unknown organization. In the current study, these past findings are extended by examining how the type of link (an advertising link versus a link sent to a partner) and the direction of the link (from a trusted organization to an unknown organization or vice versa) influence the trust transfer process.

Keywords: Trust transfer, hypertext links, entitativity

1 RESEARCH OVERVIEW AND QUESTIONS

How do relationships among organizations influence observers' assessments of the trustworthiness of those organizations? The increasing prevalence and variety of interorganizational relationships and the growing recognition of the importance of trust to organizational success (e.g., Geyskens et al. 1998) make this question one of interest to researchers and managers. This study focuses on trust transfer as a means by which relationships implied by hypertext links between Web sites may influence consumers' perceptions of the trustworthiness of organizations.

Trust transfer occurs when a person (the *trustor*) bases her initial trust in an entity (a person, group, or organization referred to as the *target*) on her trust in some other entity. This process may occur on the Web if a hypertext link from a trusted organization's Web site to an unknown organization's Web site influences observers' perceptions of the relationship between the organizations and those perceptions influence judgments about the trustworthiness of the organizations (Stewart 2003). Two questions not addressed in previous research are: (1) How does the direction of the link between organizations influence the trust transfer process? (2) How does the nature of a link influence that process? The goal of this study is to address these two questions. The study is expected to contribute to research by further testing and expanding our theoretical understanding of the trust transfer process. It is expected to contribute to practice by providing empirical evidence as to how different kinds of links may influence consumer's willingness to make purchases over the Web.

The remainder of this paper is organized as follows. The next section provides an overview of relevant literature on trust and social perceptions and develops a set of hypotheses regarding the transfer of trust across different kinds of hypertext links.

Following that, we discuss the experimental methodology used to test our hypotheses, the current status of the research, preliminary results, and conclusions.

2 THEORETICAL FOUNDATIONS AND HYPOTHESES

Our research model is rooted in the literatures on trust and entitativity. In keeping with this literature, we posit that a consumer holds *trusting beliefs* about an organization if he believes it to be competent, benevolent, honest, and predictable in a given situation; he holds trusting intentions if he is willing to make himself vulnerable to the organization (McKnight et al. 1998). As in previous studies in marketing contexts (e.g., Doney and Cannon 1997), the trusting intention of interest in this study is the *intention to buy*.

We expect trusting beliefs and intention to buy to be influenced by entitativity perceptions. Entitativity refers to the extent to which a collection of individual entities is perceived as forming a group (Campbell 1958). Entitativity is represented in our model by the perceived interaction and perceived similarity of the entities, which have been established as key entitativity indicators (Hamilton and Sherman 1996; Wilder and Simon 1998). The entities in this study are organizations with a presence on the WWW. Following Stewart (2003), we expect that when two organizations are perceived to interact with each other and to be similar, the way that consumers tend to process information about those organizations may result in trust being transferred from one to the other. McConnell et al. (1997) showed that when processing information about entitative groups, perceivers tend to form an impression quickly and to interpret new information in a way that is consistent with that impression. Thus, once a judgment is made about the trustworthiness of one group member, other group members are likely to be judged to have a similar level of trustworthiness, to the extent that the group is perceived as entitative (Stewart 2003). Stewart argued and empirically demonstrated that the presence of a hypertext link between two organizations' Web sites increased the extent to which they were perceived to interact and be similar.

Hypothesis 1 (H1): When one organization's Web site links to another organization's Web site, perceived interaction and perceived similarity between the organizations will be higher than when there is no link.

Hypothesis 2 (H2): When a trusted organization's Web site links to an unknown organization's Web site, perceived interaction and similarity of the sites will have a positive effect on trust in the unknown site.

An important question that has not been addressed in the literature on trust transfer concerns the direction of the link between the trusted and the unknown organizations. Does it make a difference if the link is sent from the unknown site to the trusted site rather than the reverse? *A priori*, there are at least two theoretical bases that may be employed to answer this question. The information processing logic discussed above implies that transfer occurs from the site encountered first to the one encountered second because after an initial impression of a group is formed, subsequent information is interpreted so as to be consistent with that impression (McConnell et al. 1997). If the unknown site is encountered first, the initial impression may be of relatively low trust rather than relatively high trust. So, when the link is sent from the unknown to the known site, trust in the known site might be expected to decrease.

Hypothesis 3a (H3a): When an unknown organization's Web site links to a known organization's Web site, perceived interaction and similarity of the sites will have a negative effect on trust in the known site.

A second view comes from the previous trust transfer literature, which has demonstrated that trust gets transferred from known to unknown targets. Several studies of transfer have shown such an effect (e.g., Milliman and Fugate 1988; Strub and Priest 1976; Uzzi 1996). Doney and Cannon found that a buyer's trust in a supplier firm could be influenced by trust in the salesperson associated with that firm or vice versa, and they argued that trust transfer occurs from the better known entity (which in their case could have been either the firm or the salesperson) to a less well known entity. They explained that the trust transfer process depended on "identification of trusted sources closely associated with the target" (Doney and Cannon 1997, p. 38). If this is the case, the direction of the link should not matter: trust in the unknown site should be increased as a result of entitativity regardless of link direction. Thus we offer the following hypothesis to compete with H3a.

Hypothesis 3b (H3b): When an unknown organization's Web site links to a trusted organization's Web site, perceived interaction and similarity of the sites will have a positive effect on trust in the unknown site.

Beyond considering link direction, this study seeks to extend our understanding of how trust transfer operates by examining qualitatively different kinds of links. Lickel et al. (2000) point out that any collection of individuals, ranging from those with seemingly little relation to one another (such as people in line at a bank or people in the audience at a movie) to those with seemingly strong relations to one another (such as members of a family), may be considered as a group. Different kinds of groups vary in the extent to which they are perceived as high in entitativity. Lickel et al. found that intimacy groups and task groups were perceived as highest in entitativity, followed by groups based on social categories and loose associations. Some factors that distinguished between these kinds of groups were their permeability (the ease with which members may enter and leave the group) and duration (the length of time over which the group exists). Higher entitativity groups were less permeable and had longer duration than lower entitativity groups.

The nature of the link between organizations, as an indicator of the type and degree of interaction they share, may be one influence on how the group of organizations is perceived. Organizations linked in alliances or partnerships might be considered as highly entitative because such associations may involve high levels of embeddedness (e.g., Uzzi 1996) or the sharing of resources (Gulati 1995). In contrast, an advertising link may be seen to represent a less entitative relationship because often any organization that has the resources to pay the fee can have an advertising link sent to them by a host. Such a relationship may, therefore, be more representative of a loose association—easily entered into and easily disbanded—while a partnership linkage may represent a task focused or intimacy based kind of grouping.

Hypothesis 4 (H4): Perceived interaction and similarity of linked organizations will be higher when the link represents a partnership than when it represents an advertisement.

3 METHODOLOGY, PRELIMINARY RESULTS, AND CURRENT STATUS

We are conducting experimental studies to test our hypotheses. The experiments follow closely the methodology outlined by Stewart (2003). Subjects are assigned the task of shopping for a laptop computer. This product category was chosen because it is one in which trust is expected to matter due to price, quality, and service concerns. Subjects visit two Websites. One is a computing magazine site that has been selected based on pretests that have shown subjects tend to have a high level of trust in this site. The other site is an unknown laptop vendor, which, because it is unknown, generally elicits lower trust than the magazine. The *direction* of the link between the sites is varied such that some subjects view the magazine first and it provides a link to the vendor. Others view the vendor first and it provides a link to the magazine. Regardless of which direction condition subjects are in, they are randomly assigned to a *link type* condition. On whichever site the subject views first, there is either no link, an advertising link, or a partnership link. Links employ the company logo of the linkee with a label above it stating it is a partner or an advertiser. There is no link on the site viewed second. Thus we have a 2 (link direction) \times 2 (link type) experiment, with two control conditions in which there is no link (one in which the magazine is viewed first; one in which the vendor is viewed first).

Subjects are consumers who are offered a 1 in 50 chance to win a \$100 lottery to participate. Subjects are directed to a Web site that provides an explanation of the study purpose and procedures. After viewing this site, hypertext links guide subjects through completion of the study. Instruments are drawn from previous research (Stewart 2003) and are completed on-line. After each site is viewed, trusting beliefs about the site are assessed. For the vendor site, intention to buy is also measured. Perceived interaction and perceived similarity are measured after the subject views both sites. 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, cultural and national background, and work experience). The first set of factors is experimentally controlled. Random assignment and statistical control are employed for the second set. Data on these variables is collected after all other instruments.

We have conducted a pretest in order to assess subjects' ability to differentiate between the link types and provide an initial test of H1, H2, and H4. Usable responses were obtained from 114 subjects. A MANCOVA indicated that those who saw a partnership link perceived greater interaction (difference = 1.80, $p < .05$) and similarity (difference = 2.30, $p < .01$) than those who saw an advertising link, and those who saw any link (i.e., the pooled partnership and advertising groups) perceived greater interaction (difference = 7.59, $p < .001$) but not greater similarity (difference = 0.82, n.s.) than those who saw no link. These results support H4 and partially support H1. A partial least squares (PLS) analysis (model not shown due to space constraints) indicated that perceived interaction (coefficient = 0.21, $p < .05$) had a positive influence on trusting beliefs regarding the unknown

target, but perceived similarity (coefficient = -0.05, n.s.) did not. These results partially support H2. As expected based on the trust literature (e.g., McKnight et al. 1998), trusting beliefs had a positive effect on intention to buy (coefficient = 0.29, $p < .01$).

4 CONCLUSION

Establishing trust on the WWW is a difficult task (Hoffman et al. 1999; Tweney 1998). From a practical standpoint, the results of this study may help shed light on one way that companies may attempt to increase their perceived trustworthiness by linking to others. In addition, the study will contribute to the literature on trust transfer by examining how the nature and direction of ties between organizations influence trustors' perceptions.

5 REFERENCES

- Campbell, D. T. "Common Fate, Similarity, and Other Indices of the Status of Aggregates of Persons as Social Entities," *Behavioral Science* (3), 1958, pp. 14-25.
- Doney, P. M., and Cannon, P. "An Examination of the Nature of Trust in Buyer-Seller Relationships," *Journal of Marketing* (61), 1997, pp. 61-35-51.
- Geyskens, I., Steenkamp, J., and Kumar, N. "Generalizations About Trust in Marketing Channel Relationships Using Meta-Analysis," *International Journal of Research in Marketing* (15), 1998, pp. 223-248.
- Gulati, R. "Does Familiarity Breed Trust? The Implications of Repeated Ties for Contractual Choice in Alliances," *Academy of Management Journal* (38), 1995, pp. 85-112.
- Hamilton, D. L., and Sherman, S. J. "Perceiving Persons and Groups," *Psychological Review* (103), 1996, pp. 336-55.
- Hoffman, D. L., Novak, T. P., and Peralta, M. "Building Consumer Trust Online," *Communications of the ACM* (42), 1999, pp. 80-85.
- Lickel, B., Hamilton, D. L., Wierzchowska, G., Lewis, A., Sherman, S. J., and Uhles, A. N. "Varieties of Groups and the Perception of Group Entitativity," *Journal of Personality and Social Psychology* (78), 2000, pp. 223-246.
- McConnell, A. R., Sherman, S. J., and Hamilton, D. L. "Target Entitativity: Implications for Information Processing About Individual and Group Targets," *Journal of Personality and Social Psychology* (72), 1997, pp. 750-762.
- McKnight, D. H., Cummings, L. L., and Chervany, N. L. "Initial Trust Formation in New Organizational Relationships," *Academy of Management Review* (23), 1998, pp. 473-490.
- Milliman, R. E., and Fugate, D. L. "Using Trust-Transference as a Persuasion Technique: An Empirical Field Investigation," *Journal of Personal Selling and Sales Management*, 1988, pp. 1-7.
- Stewart, K. J. "Trust Transfer on the World Wide Web," *Organization Science* Special Issue on Trust in an Organizational Context, 2003 (forthcoming).
- Strub, P. J., and Priest, T. B. "Two Patterns of Establishing Trust: The Marijuana User," *Sociological Focus*, 1976, pp. 399-411.
- Tweney, D. "Lack of Trust Hurts Consumer Commerce for Online Retailers," *Infoworld* (20), 1998, p. 77.
- Uzzi, B. "The Sources and Consequences of Embeddedness for the Economic Performance of Organizations: The Network Effect," *American Sociological Review* (61), 1996, pp. 674-698.
- Wilder, D., and Simon, A. F. "Categorical and Dynamic Groups: Implications for Social Perception and Intergroup Behavior. in C. Sedikides, J. Schopler, and C. A. Insko (eds.), *Intergroup Cognition and Intergroup Behavior*. Mahwah, NJ: Lawrence Erlbaum Associates, 1998, pp. 27-44.