

INVESTIGATING THE FORMATION OF TRUST IN E-COMMERCE RELATIONSHIPS [RESEARCH IN PROGRESS]

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ABSTRACT

As customer relationships constitute an important new asset category for the digital economy organization, the role of trust becomes vital for establishing and maintaining successful relational exchanges between the business and the consumer. Drawing from established theoretical work on trust and relationship marketing, a series of trust constructs and trust-building processes are synthesized to propose a framework for the formation of trust in customer-business relationships. The framework is conceptualized in the context of an electronic servicescape, where trust is formed through iterative interactions with promises being made, enabled and fulfilled. This research-in-progress paper concludes by describing the research approach for empirically validating the depicted relationships.

1. INTRODUCTION

In e-commerce, the role of customer relationship building becomes prominent with the formation of trust between any parties being the essential prerequisite. It must therefore be understood that in this context the absence of salespersons and the interpersonal face-to-face contact with the customer cannot be easily replaced. In addition, the unidirectional, one-to-many communication style that treats customers as passive recipients with mass undifferentiated advertising messages has to be replaced with a two-way, one-to-one, personalized interactive dialogue. As the control shifts from the company to the customer, novel approaches are needed for customer relationship building in e-commerce environments.

Wanninger *et al.*, (1997) suggest that building customer relationships in e-commerce involves meeting customer expectations of service encounters that take place in an electronic servicescape, one of the three primary components that comprise an information system specifically designed to support commercial transactions over the Internet. The other two are the supporting infrastructure plus the customer database and analytical tools to support the relationship marketing. The three components are interrelated enabling the close integration of the traditionally discrete functions of relationship marketing, advertising and fulfillment. These are represented by the separate but partially overlapping functions of making, enabling and keeping customer promises (Bitner, 1995), leading to customer satisfaction and relationship building. Based on the above conceptualization we suggest that e-commerce web sites should be transformed to customer-centric servicescapes offering a digital experience that can contribute towards the development of an indelible relationship between the business and the customer. The advanced level of interactivity of such an

environment should allow for an iterative reciprocal communication between the business and the potential customer resulting in the formation of trust based on the fulfillment of promises.

This research-in-progress paper reports the results of our work thus far. It synthesizes and theoretically interrelates a set of principles stemming from a series of trust and marketing related concepts and proposes a framework for building and infusing trust in business-to-consumer e-commerce relationships. A brief introduction to trust follows. Our framework is described in the next section while the approach adopted for its empirical validation is presented in the final section.

2. TRUST IN THE LITERATURE

Trust is a highly complex and multi-dimensional concept (Lewis and Weigert, 1995; Butler, 1991; Barber, 1983). Research on trust has been done under the lens of four disciplines: social psychology (Deutsch, 1960; Lindskold, 1978; Lewicki and Bunker, 1995), sociology (Lewis and Weigert, 1985; Strub and Priest, 1976), economics (Dasgupta, 1988; Williamson, 1991) and marketing (e.g., Anderson and Weitz, 1989; Dwyer *et al.*, 1987; Ganesan, 1994; Moorman *et al.*, 1993; Moorman *et al.*, 1992). A large stream of literature has emphasized the role of trust as being central to the success of customer relationship building, in all contexts of relational exchanges (Achrol, 1991; Becker, 1960; Dwyer *et al.*, 1987; Morgan and Hunt, 1994). Due to lack of space and in the context of this paper, the references mentioned are only indicative of the reviewed bibliography. A full list of references can be obtained from the first author.

Our attempt to understand the concept of trust has primarily been based on a typology of interrelated types of trust constructs proposed by McKnight and Chervany (1996), which helps to distinguish and capture the conceptual meanings of trust. Drawing on relationship marketing literature to understand the nature of trust and its development in commercial relationships, our effort has revolved around five trust-building processes as described by Doney and Cannon (1997). Building on Doney and Cannon’s work, we have defined another trust building process, the *credibility* process. The identified trust constructs and trust-building processes are depicted in the following table.

| Trust Constructs | Trust-building Processes |
|---|---|
| <ul style="list-style-type: none"> ▪ Dispositional trust ▪ Institution-based trust ▪ Trusting beliefs: <ul style="list-style-type: none"> - Benevolence, - Competence, - Honesty / Integrity, - Predictability, <i>CONFIDENCE IN BELIEFS</i> ▪ Trusting Intention ▪ Trusting Behavior | <ul style="list-style-type: none"> ▪ Intentionality ▪ Capability ▪ Prediction ▪ Transference ▪ Calculative ▪ <i>Credibility</i> |

Table 1: Trust constructs and building processes

In summary, customer trust in an e-commerce company is:

- The result of six trust building processes.
- Initially based on disposition to trust and institution-based trust
- A set of trusting beliefs about the business, including benevolence, competence, honesty/integrity and predictability.

- A trusting intention towards the business, and
- Demonstrated by the customer's trusting behavior

The above, representing trust constituents and development modes, have been synthesized and interrelated providing a framework with the objective to stimulate thinking and aid the formation of trust in e-commerce relationships.

3. A FRAMEWORK FOR TRUST FORMATION IN AN E-COMMERCE ENVIRONMENT

Having identified the structural elements of trust, our framework has been based on the assumption that building customer trust in an e-commerce business is built through repeated interactions with promises made, enabled and kept within the e-servicescape. Initially, a customer is enticed to engage in a relationship with the business through the servicescape based on a positive predisposition towards the business, which is the result of the combination of 3 constructs: disposition to trust, institution-based trust (McKnight and Chervany, 1996) and initial trusting beliefs. The customer has a general propensity to trust others stemming from personality and cultural factors (disposition to trust), enhanced by the perceived propriety of the conditions (institution-based trust), which involves legal aspects associated with e-commerce and perceptions regarding the security and privacy offered by the business. In addition, the customer has initial trusting beliefs that have been formed through the transference process (Doney and Cannon, 1997), with information conveyed from third parties regarding the business reputation and trustworthiness, including information from third party recognition bodies. The combination of these three constructs results in the customer being open to promises made by the business, which aim to augment the customer's trusting intention towards it. Provided that the customer is interested in the promise made, he expresses a willingness to depend on the business - a trusting intention (*ibid.*), and anticipates the promise to be enabled. Enabling the promise within the servicescape allows the trusting intention to be manifested and leads the customer to accept the risk inherent in the situation and actually depend on the promise, thus act in a trusting behavior (*ibid.*). Then, keeping the promise has a positive impact on the customer's perceptions and future expectations regarding the quality of the interaction with the business through the servicescape. This point, when all stages of promise fulfillment have been completed represents what Carlzon (1987) calls "moment of truth". The customer evaluates the service encounter and compares the service he expected according to the promise that was initially made to him with his perception of the service received. The degree to which the perceived service meets customer expectations, the service quality (Gronroos, 1984; Lewis and Booms, 1983; Parasuraman *et al.*, 1985), will determine customer satisfaction and will be reflected in the customer's trusting beliefs (McKnight and Chervany, 1996) in the business. These trusting beliefs will substitute the initial three trust bases and will serve as the launch pad for future interaction with the business with their effect on trusting intention and trusting behavior. Each repetition of the customer's contact with this environment will further enhance his trusting beliefs resulting in the continuation of the trusting relationship with the business via the repeated use of the servicescape (Figure 1).

During customer's interaction with each stage of promise fulfillment as well as the overall experience within the virtual servicescape, each one of the trust building processes is activated to strengthen customer's trusting beliefs about the business as well as customer's confidence in these beliefs. When a promise is made, the intentionality process (Doney and Cannon, 1997) is initiated to help the customer determine the business motives and intentions, influencing his trusting belief in the business benevolence. Enabling the promise invokes the capability process (*ibid.*), an assessment of the business ability to realize its promise, which affects the customer's trusting belief in the business competence. Keeping the promise triggers the credibility process by which the customer evaluates the extent to which the business has actually delivered on its promise and develops the trusting belief in the business integrity. The entire interaction with the servicescape results in the activation of the rest of the trust building processes. Relying on the prediction process (*ibid.*) the customer makes inferences about the business consistency in delivering the promises it makes, enhancing his trusting belief in the business predictability. Finally, with the calculative process (*ibid.*)

the customer assesses the costs and benefits of the business possibly acting in an untrustworthy behavior to increase his confidence in the trusting beliefs (Figure 2).

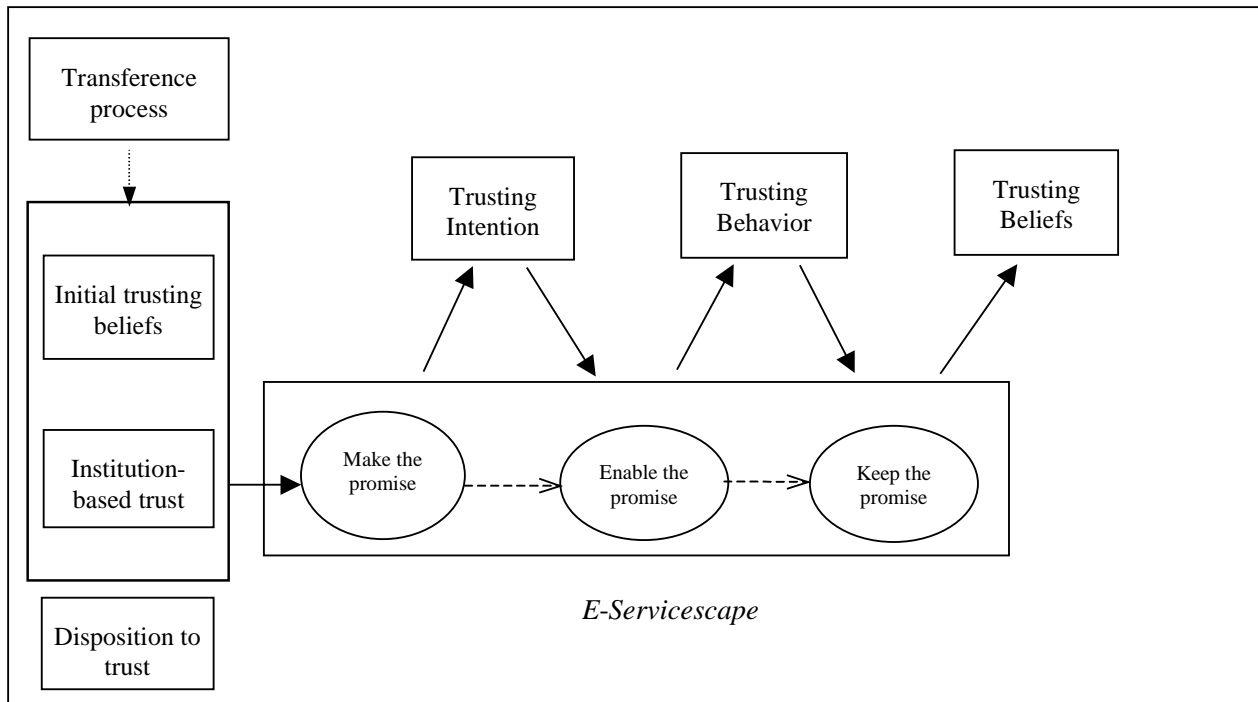


Figure 1: Trust formation through promise fulfillment within the e-servicescape

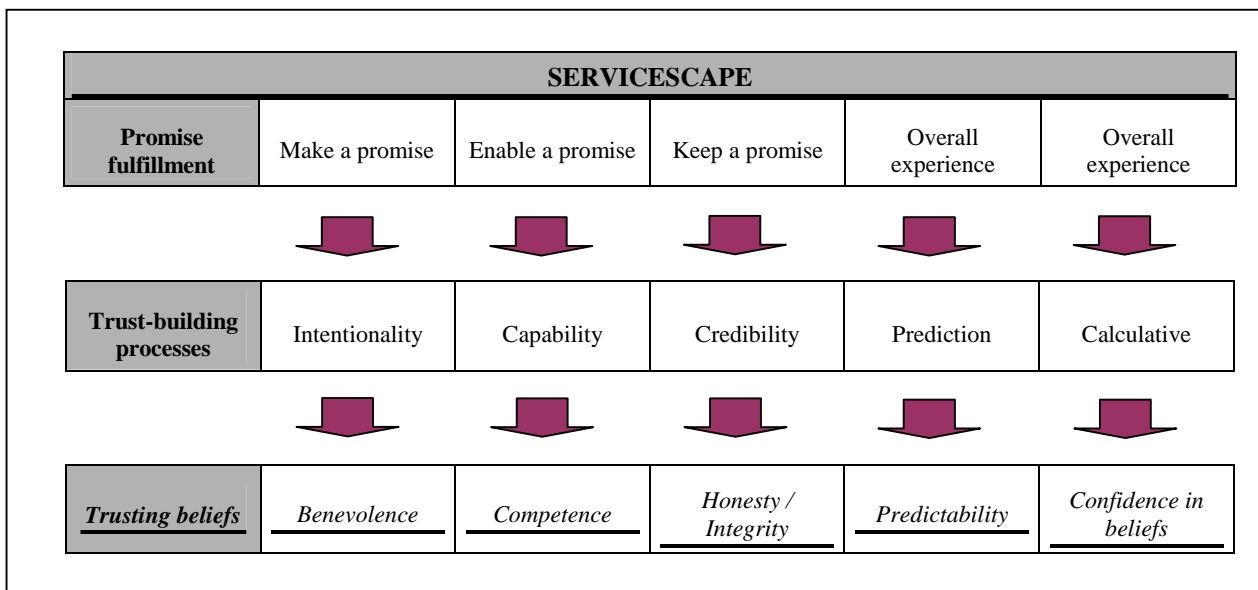


Figure 2: Activation of trust-building processes within the e-servicescape

Trust evolves over time as the customer engages in repeated interactions with promises being fulfilled within the servicescape. Each time a promise is made, enabled and kept, it is evaluated with the intentionality, the capability and the credibility process confirming customer’s trusting beliefs in the business benevolence, competence and credibility. The level of trust is further augmented with the experience that the customer gains within the servicescape. Customers perceive the length of the relational exchange as an investment

which is made by the business and is valued highly enough to deter it from acting opportunistically. The number of business-customer contacts also provides a basis for a thorough interpretation of the business behavior, which enables the customer to predict subsequent interaction.

4. FURTHER RESEARCH

The objective of this research is to add to our theoretical and practical understanding of how trust can be built in commercial relationships that are developed within electronic environments. With this in mind, we proposed a framework which theoretically interrelates key trust constructs and processes. Our continuing research efforts seek to empirically validate the depicted relationships by testing the proposed causal sequence. Data will be collected by distributing questionnaires to a sample of undergraduate and postgraduate students and academic staff within our University. The sample frame will comprise 1000 persons approximately to yield a satisfactory sample size and response rate. In order to maximize response rate, a three-stage procedure will be employed as suggested by Dillman (1978). First, the questionnaire will be mailed to the sample accompanied with a letter explaining the purpose of the study and requesting the participation of the recipient, a week later, a reminder will be mailed and three weeks later, the questionnaire and the letter will be sent again to non-respondents. In case the response rate is not adequate, the option of distributing questionnaires to a sample of Internet shoppers will be considered and data collection will thus involve another phase. A comparison between respondents and non-respondents will be made to assess potential non-response bias.

Our study will comprise two parts. In the first part, the focus will be on testing our model in the context of e-commerce as currently conducted in conventional web sites. In the second part, an experiment will test our model in the context of an e-servicescape. A virtual e-commerce environment using agent technology will be developed reflecting the functionality of a servicescape. The agent-mediated virtual servicescape will be hosted on a university web server and will be accessible by the sample over the Web, with 24x7 availability. The questionnaire will be used for both parts of the study, with the possibility of slight modifications and addition of measures to the questionnaire used in the second part, to further test the influence of agent and virtual reality technologies in trust formation. For this purpose, a measurement instrument has been developed, by identifying the constructs that need to be operationalized and the scales by which they will be measured. The measures for the constructs are developed as single or multi-item, formative and reflective scales, generated on the basis of a literature review, interviews and previous instruments for measuring trust, such as the Dyadic Trust Scale of Larzelere and Huston (1980), and scales developed and validated by Wrightsman (1991) and Doney and Cannon (1997). The measures developed have been evaluated through confirmatory factor analysis to assess the item and scale reliability, unidimensionality, convergent validity and discriminant validity.

We expect that the results of this study will confirm our hypothesis that customer trust in a company channeling its business over the Web can be developed through customer interaction with business promises fulfilled within a three-dimensional virtual environment. It is anticipated that our findings will provide the guidelines for designing electronic servicescapes that facilitate the expressiveness demanded for the establishment and support of lasting commercial relationships.

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