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# VALUES IN E-BUSINESS: TESTING VALUE COMPATIBILITY AND TRUST PRODUCTION IN E-COMMERCE

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## Abstract

*This paper explores the role of value compatibility and trust in the B2C e-commerce environment. Specifically, we explore how the perceived actions or lack of actions of organizations regarding moral, social, environmental and political issues affect e-commerce users in their trusting beliefs and their behavioral intentions toward those organizations. This is accomplished through having subjects rate the perceived value compatibility of different organizations along with testing their trusting beliefs and behavioral intentions. Trust is a complex construct and is analyzed along the dimensions of ability, benevolence and integrity proposed by Mayer et al. (1995), McKnight et al. (2002), and Bhattacharjee (2002). The data was then analyzed using Structural Equation Modeling (SEM) in LISREL. We conducted a survey and found support for value compatibility affecting trust strongly through the benevolence dimension and somewhat through the integrity dimension. We also found a significant direct link of value compatibility to behavioral intentions. This demonstrates that value compatibility plays an important role in trust production and also has an effect on e-commerce through other mechanisms. Organizations would benefit from a deeper understanding of the role played by value compatibility in e-commerce.*

**Keywords:** Trust, e-commerce, value compatibility, and value congruence.

## Introduction

*Concerns about privacy and lack of online trust were among the most important factors that lead customers to drop out of online business.*

- Lou (2002)

*Trust is a critical factor in stimulating purchases over the Internet, especially at this early stage of commercial development.*

- Quelch & Klein (1996)

Trust is one of the most important factors in the growth and development of electronic commerce. Without trust, little commerce or social exchange would take place. Jarvenpaa et al. (2000) propose that trust is a precursor to a potential customer's willingness to buy from an e-commerce site. Quelch & Klein (1996) argue that trust is a critical factor in stimulating Internet purchases. Lou (2002) asserts that lack of online trust is one of the most important factors leading people to drop out of online business. Ba and Pavlou (2002) found that high levels of trust lead to the ability of vendors to charge price premiums. Brynjolfsson and Smith (2000) found that the online retailers with lowest prices did not sale the most products and that trust was the primary source of the differences. Clearly trust has a profound impact on e-commerce. By better understanding the complexities of trust we can learn to alleviate some of the concerns that consumers have with doing business online. Currently, we are still lacking a full understanding of trust and how to create and maintain it in the online marketplace.

This paper looks at one of the little understood factors contributing to trust, the concept of value compatibility, or shared values in the production of trust. Value compatibility has been shown to build trust in e-commerce systems (Cazier et al, 2002) and can be an important piece in building (or destroying) trust with customers and potential customers. This study makes an important contribution to the literature by analyzing the relationship of value compatibility on factors of trust and by looking at its direct effect on behavioral intentions in addition to its effect on intentions through trust.

## Literature Review

### Trust

Trust is defined as *the willingness to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party* (Mayer et al., 1995). The willingness to be vulnerable is a key component of trust. In doing business online, customers are putting themselves in a vulnerable position. They are giving financial and personal information to the vendor, information that could potentially be used to commit identity theft or fraud. In order to engage in online transaction, clients need to trust vendors enough to be willing to put themselves in a vulnerable position.

It is important to realize that trust is not a unidimensional construct. McKnight et al. (2002) performed a rigorous study of trust where they found and demonstrated that trust is a multi dimensional construct. They found that people hold specific beliefs with respect to particular attributes (ability or competence, benevolence and integrity) rather than broadly trusting or not trusting. Trust in turn is found to have a significant impact on behavioral intentions. Mayer et al. (1995) had previously proposed the three dimensions of trust, based on a comprehensive literature review and theoretical development that McKnight later tested. Mayer et al. proposed three dimensions of trust, Ability, Benevolence and Integrity. *Ability*, also referred to as competence in some of the literature, is the group of skills, competencies and characteristics that enable a party to have influence within some specific domain. *Benevolence* is the extent to which a trustee is believed to want to do good to the trustor, aside from an egocentric profit motive. *Integrity* is trustor’s perception that the trustee adheres to a set of principles that the trustor finds acceptable.

Based on theory and prior research, we use the following model of the dimensions of perceived trustworthiness of the organization and how they affect the production of trust presented in figure 1. Trust, in turn, then directly affects the behavioral intentions of the individual.

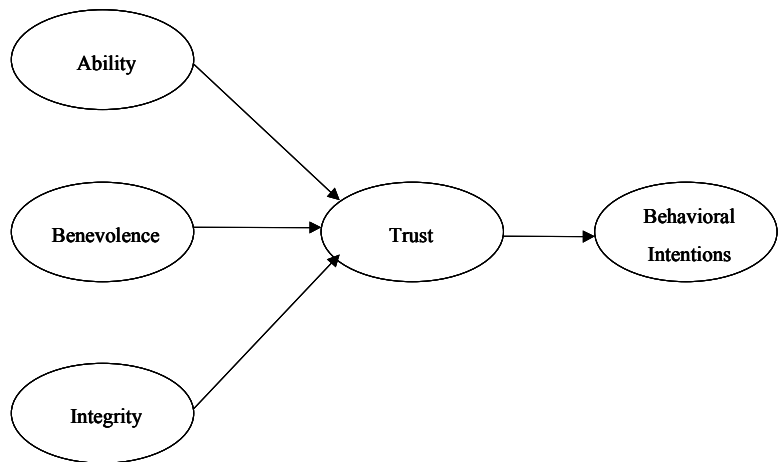


Figure 1. Model of Trust

### Values

Values are referred to as *desirable states, objects, goals or behaviors, transcending specific situations and applied as normative standards to judge and to choose among alternative modes of behavior* (Elizur and Saige, 1999). Thus a value is a principal or standard of an individual or group. Examples of values include the sanctity of life, equal rights in the workforce, ecological diversity, etc.

To put values in a business context, a few well-publicized examples of companies with perceived values are presented here to illustrate the impacts of a given set of values on trust and customer loyalty. The Body Shop was founded by Anita Roddick in 1976 in Brighton, England. It has been known for being environmentally responsible and has been promoting such values actively. The Body Shop produces biodegradable products and supports responsible care of communities in the third world, good environmental stewardship, and social responsibility. The company leverages these values to help grow its sales and build strong customer relations. Similarly, Ben & Jerry’s Ice Cream also promotes what it perceives as environmental stewardship. These and other companies have been able to build a niche market with a certain group of customers who are attracted to them because both parties share important values. This often results in greater customer loyalty and trust when they agree with the causes the companies support. The increase in trust from shared values thus may increase a customer’s willingness to disclose personal

information to these organizations. These and other companies try to appeal to clients by promoting shared values. These shared values nurture trust and loyalty.

The American Family Association (AFA), through its subsidiary websites [www.onemillionmoms.com](http://www.onemillionmoms.com) and [www.onemilliondads.com](http://www.onemilliondads.com) has launched attacks against Amazon.com, Yahoo.com and Juno.com for allegedly doing things offensive to the values that the AFA supports (OneMillionDads.com, 2003). They have also launched a campaign to support the US Post Office for doing things in alignment with AFA values. Disney and Kmart are other companies that recently have encountered a value conflict with the American Family Association. They called for a boycott for what they regarded as anti-family values (Vitagliano, 2001, OneMillionDads.com, 2003). This is another example of companies suffering and losing trust from a certain group when promoting values that the group considered offensive. It is hard to measure the financial impact the boycott has had on the companies, but it is clear that at least a certain group of people reacted negatively to the perceived values and practices they oppose.

Each person has a set of values based on their personal backgrounds and beliefs. Each organization also may have a set of values, which are perceived by the individual. In some cases, they will be perceived as neutral, or not having any significant incentives for or against the causes the individual is interested in. We call this case a *Value Neutral Organization* to that individual. If the organization’s perceived values and the individual’s values are highly correlated, this is called a *Value Positive Organization*, meaning that, to the individual, there is a high compatibility between the individual’s and the organization’s values. If the organization’s perceived values and the individual’s values are negatively correlated, we call this case a *Value Negative Organization*, meaning that, to the individual, there is a strong conflict between the individual’s and the organization’s values.

It is important to note that the organization’s values are based on the perceptions of the individual. Positive value compatibility is not an endorsement of that value but an indication that the company’s and the individual’s values match. It is thus not a judgment on the merits of those values. A company that is value positive for one individual may be value neutral or negative to another individual. It is the effect of the correlation of the organization’s values and the individual’s values that we intend to study.

**Table 1. Value Combinations**

Individual Values	Organizations Values		
	Match	Neutral	Conflict

Table 1 illustrates the possible combinations of values between organizations and individuals. If the organization supports a value that the individual supports, they will have a match in values and the organization is expected to receive some benefit from that trust match. If the organization is perceived to oppose the individual’s personal values, they are expected to conflict with each other and the organization is likely to lose trust due to the conflict. If the organization’s values neither match nor oppose the individual’s values, then there is no expected benefit or liability from this scenario.

Value compatibility is not a new concept. It has been interchangeably called value similarity in the marketing literature (e.g., Ang et al., 2000) and value congruence in the organizational science literature (e.g., Jung and Avolio, 2000). Value compatibility is a measure of how closely an individual’s personal values and the perceived values of an organization overlap. The more they have in common, the greater their similarity is in personal and organizational values. However, values do not have to be identical to be compatible. In order to be compatible, values only need to be similar enough to support common causes and avoid clash over issues important to the individual and the organization.

Siegrist et al. (2000) argue that shared values determine social trust in institutions and persons related to technology, and one has greater trust in those parties holding similar values. Jung and Avolio (2000) look at the level of congruence of values between leaders and followers and find that value congruence plays an important role in a leader’s success. Chen et al. (2002) found that compatibility, defined as an innovations compatibility with existing values and beliefs, was a significant indicator of person’s attitude toward using a new system.

Zucker (1986) indicates three types of trust commonly used to produce trust in organizations and facilitate social exchange; these are process-based trust, institution-based trust, and characteristic-based trust. Process-based trust stimulates trust through a process of social exchange and experience between organizations and customers. Successful experiences build trust in future exchanges. Institution-based trust is the production of trust through the actions or expected actions of a trusted third party. This could be a government, bank or other organization that assures the trustworthiness of the first organization. Examples of this type of trust

in e-commerce are organizations like Truste and BBBonline that put a trust or privacy seal on an e-commerce website to certify that certain practices or policies are in place. Characteristic-based trust promotes trust based on the characteristics of individuals or organizations. Trust is produced by a sense of communality with the other. This could be similar values, background, ethnicity or experiences. Trust is increased by either having something in common or possessing a characteristic the trustor finds desirable. In this study we look at one type of characteristic-based trust in which shared or conflicting values and beliefs between a potential customer and an organization have an effect on trust and the behavioral intentions of the potential customer.

### Hypothesis

Given Zucker’s (1986) findings that value similarity is a mechanism for producing trust based on characteristics of involved parties and also the work of Cazier et al. (2002) showing that shared values creates trust (see figure 2), we propose the following hypothesis.

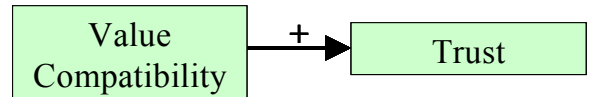


Figure 2. Value Compatibility and Trust

- H1:** *Individuals who perceive themselves as having a **positive** value compatibility with an organization will have a **greater** level of trust for that organization.*

Mayer et al. (1986) and McKnight et al. (2002) demonstrate that trust is a multi dimensional construct based on the factors of Ability, Benevolence and Integrity. While there is some evidence that value compatibility affects trust, it is uncertain which dimension or dimensions of trust value compatibility acts through. It is proposed that value compatibility affects trust through the identified dimensions of trust (see figure 3) and that the following hypothesis apply.

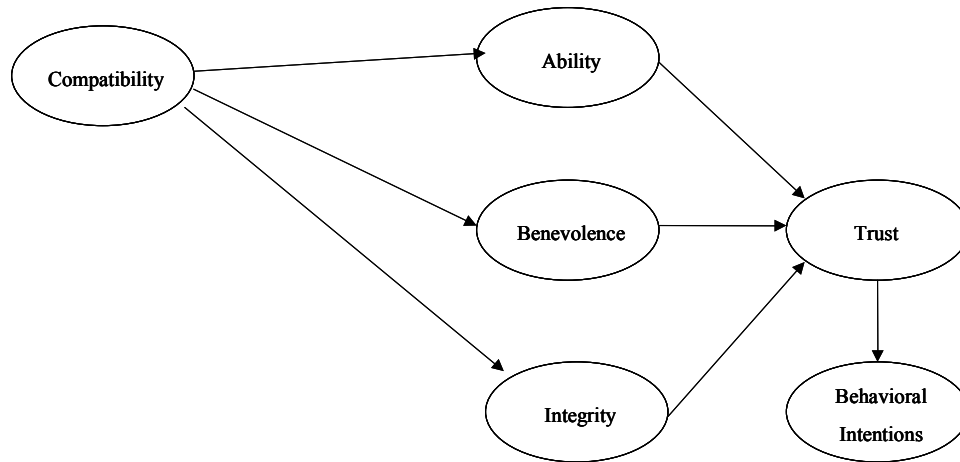
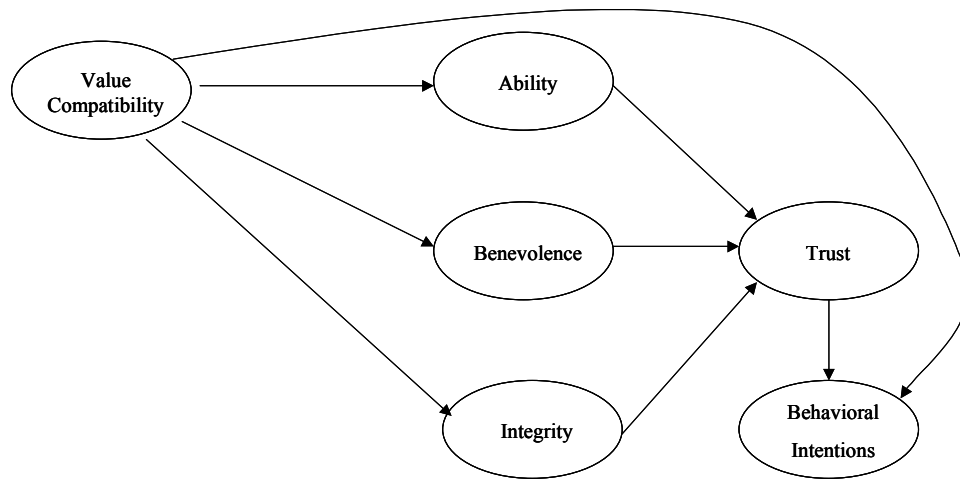


Figure 3. Value Compatibility Model

- H1a:** *Individuals who perceive themselves as having **positive** value compatibility with an organization will have a **greater** level of trust through the **Ability** factor for that organization.*
- H1b:** *Individuals who perceive themselves as having **positive** value compatibility with an organization will have a **greater** level of trust through the **Benevolence** factor for that organization.*
- H1c:** *Individuals who perceive themselves as having **positive** value compatibility with an organization will have a **greater** level of trust through the **Integrity** factor for that organization.*

In addition to the direct effect of value compatibility on the dimensions of trust, it is likely that value compatibility has a direct effect on behavioral intentions. While trust is an important factor in predicating consumer behavior, it is not the only factor. Having a shared set of values may create a desire to help the organization in the cause that they share. People may want to do business with an organization because they like them. Conversely, if there is a value conflict they may not want to interact with

the organization even if they trust them due to dislike or disagreement with their mission. This leads to the following hypothesis and model (see figure 4).



**Figure 4. Value Compatibility Trust Model**

- H2a:** *Individuals who perceive themselves as having **positive** value compatibility with an organization will be **more willing** to transact with that organization.*
- H2b:** *Individuals who perceive themselves, as having **negative** value compatibility with an organization will be **less willing** to transact with that organization.*

## Method

The focus of this work is with online non-profit organizations. Organizations that actively support a given set of causes are ideal for the initial investigation into the role of value compatibility and its effect on trust and behavioral intentions. The causes that these organizations support are usually apparent and easily identifiable to subjects. These organizations actively seek funding sources from donors who believe in their mission and are willing to help. Value compatibility likely plays a role in other types of online transactions. However, it is expected to be the strongest with non-profit organizations seeking funding online.

Data for this study was collected by use of a survey. The instrument used was constructed from several validated existing surveys. Modifications were made to some of the items used to operationalize the constructs in our model. Value Compatibility items came from Cazier et al. (2002) and required no change. The ability, benevolence and integrity items were modified from McKnight et al. (2002) and Bhattacharjee (2002). The questions dealing with overall trust and behavioral intentions are new and were created for this instrument. All items in the survey were measured on a 7-point Likert scale. Data collected for the study were analyzed with exploratory factor analysis. Based on the results of the factor analysis, the items were dropped that did not strongly support the constructs.

The survey was administrated to undergraduate students enrolled in prerequisite business courses. The students were given a series of background questions for the purpose of collecting demographic data and assessing the level of Internet competence. Then information was collected on their trust attitudes in general. The use of students in Information Systems research has been questioned previously (Gordon et al., 1986). In this case, we were not asking the students to act in a capacity that was outside the realm of their experience. Students make decisions regarding Internet transactions in many different B2C e-commerce situations. Further, by the time one reaches traditional college age, they have developed a set of values that guide them in their daily life. Students are often presented with options that conflict or agree with their value systems. One look at a typical student newspaper demonstrates that students have opinions on many issues. As the goal of this study is to explore the relationship between ones values and trust, this sample is appropriate. The context of the survey was consistent with both of these.

Next, the subjects were exposed to the mission statement and screen shots from the American Civil Liberties Union (ACLU) homepage. The ACLU is an organization that deals with many controversial issues such as the death penalty, drugs, national security and student rights. Selection of this site was purposeful. It is likely that not all students would feel the same way about the ACLU and we wanted to get a wide range of value compatibility reactions from our subjects, with some supporting it strongly and others strongly opposing the organization. Using this as the organization, they were then given the items developed in the survey above.

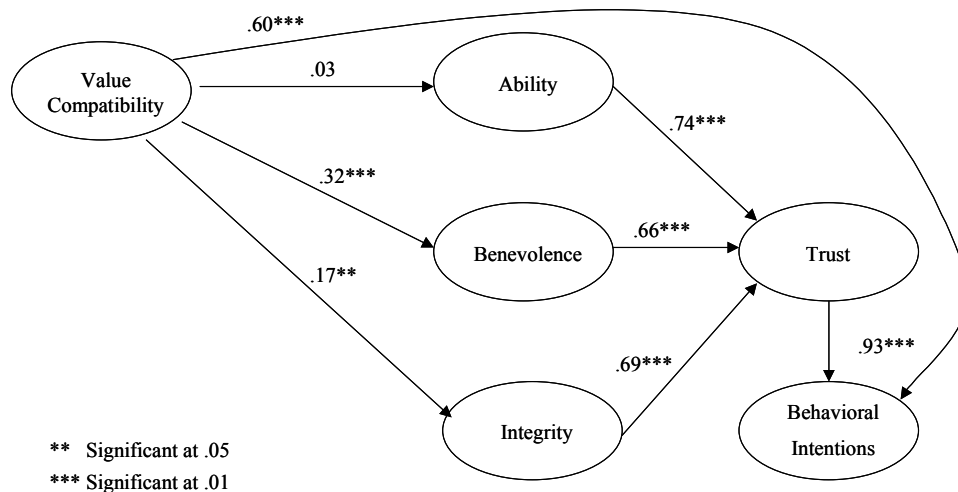
## Results

The survey was taken by 108 students. Of these, 86 produced complete and usable surveys. The data was analyzed using a latent variable path model. The model was built using LISREL 8.3. Each of the survey items loaded on only one latent construct. Based on the fit indices, the model was found to have a good fit (see table 2). Scores below .05 are considered good for the RMSEA and scores above .9 indicate a good fit of the model for the NFI, RFI and GFI.

**Table 2**

RMSEA	.04
NFI	.98
RFI	.98
GFI	.99
PGFI	.70

We found support for value compatibility having a strong impact on the Benevolence dimension of trust and a significant impact on the Integrity dimension (see figure 5). We found no significant impact of value compatibility on the Ability dimension. This gives us important insight into how trust is affected by value compatibility. Value compatibility increases (or decreases) trust very strongly through the benevolence factor. Since benevolence is the extent to which a trustee is believed to want to do good for the trustor, aside from an egocentric profit motive, the perception of shared values increases the perception that the organization has the trustor's best interest in mind.



**Figure 5. Value Compatibility Trust Model with Factor Loadings**

Value compatibility also has a significant positive effect on integrity, though lower in magnitude than its effect through benevolence. Integrity is the trustor's perception that the trustee adheres to a set of principles that the trustor finds acceptable. It is then reasonable that if the trustor and trustee have similar values that the trustor will find the trustee's values acceptable in most cases, which would have a positive effect on trust.

The ability dimension of trust was not significantly affected by perceptions of value compatibility. Indicating that value compatibility did not significantly influence the perception of the organization's skills, competencies and characteristics. Very

strong support was found for the impact of value compatibility directly on behavioral intentions, indicating that value compatibility may play more of a role in e-commerce than that suggested by its effect on trust alone.

## Managerial Implications

Several useful implications can be drawn from our findings. It is essential that an organization be aware of how its actions affect a customer's perception of trustworthiness. Value compatibility can help build trust in groups that have similar or matched values. Specifically, value compatibility is an important construct for environmental, charitable, or political organizations to target certain groups of people. If organizations can target a certain niche that cares deeply about a certain set of values that the organization also believes in, or can position itself to support and be perceived to support, they can benefit from the increased trust and goodwill with that group by collecting more information from them. They may also be able to use the increase in trust for other advantages like preference in purchasing from their site. Ba and Pavlou (2002) found that high levels of trust lead to the ability of vendors to charge price premiums and Brynjolfsson and Smith (2000) found that retailers that offer the lowest price do not necessarily receive the most sales and that trust was an important source of the differences in prices that websites were able to charge.

Depending on the type of organization and the breadth and diversity of their customer base, organizations may not be able to appeal to their entire customer base at once without offending others. When they cannot appeal to all groups at once, it may be more prudent to either avoid value conflicts by not supporting or opposing any values or by supporting generic values like fighting cancer or feeding the hungry that almost no one would be opposed to. However, though we do not investigate it directly in this study, it is possible that these types of generic values may not get the same type of passion and resonance that other controversial values may engender. If there seems to be an active battle over an issue, such as the environment, abortion, or equal rights, there seems to be an energy that may get better results from that group. However this also raises the issue of looking at the tradeoffs of possibly strongly offending the opposing group.

Value compatibility can be a critical part of an overall trust management strategy for an organization. By using these tools wisely they can create trust and avoid potentially costly clashes caused by value conflicts. It is worth noting that in some cases having a conflict intentionally with a certain group may gain publicity with could lead to greater recognition and maybe sales to a certain group. For example Abercrombie & Fitch, a clothing retail store that has a very risqué and suggestive catalog, has had many parents and conservative groups protest very strongly (Foxnews.com, 2002a), however this has gotten Abercrombie & Fitch a lot of media attention and seems to have made it cool for teens and young adults wear their products, possibly increasing sales (Foxnews.com, 2002b).

## Future Research

Future research should study the relationship of value compatibility and trust in more detail by exposing the subjects to a wider variety of websites and organizations to gage a more diverse reaction. The next step is to do a full-scale analysis of trust and value compatibility in a variety of context and compare and test different models for further analysis. It would also be useful to look at other issues in e-commerce that could be affected by value compatibility such as privacy concerns.

## Conclusions

This work makes a valuable contribution to the literature by exploring the effect of value compatibility on trust and on behavioral intentions. A greater understanding of trust and its antecedents is an important piece of the puzzle in understanding e-commerce in society and what encourages and discourages individuals to participate or not in this medium of exchange. This study demonstrates that values play an important role in the development of trust in the e-commerce environment and has an important effect on the behavioral intentions of customers and potential customers.

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