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Abstract

Collecting information is an important part of knowing the customers and growing a business. Understanding the factors that affect a person's willingness to disclose personal information is crucial for learning how to best collect and utilize that information. In this paper, a model is proposed in which the compatibility of the values of an individual and an organization affects the person's willingness to disclose personal information. A survey is conducted to empirically test if value compatibility affects the collection of personal information. Support is found for some of the hypotheses. Respondents are more willing to disclose personal information to groups that support their values, depending on the sensitivity of the information involved. Gender is also found to play a role in information disclosure, with males being more likely to disclose sensitive information than females.

Keywords: Privacy, trust, personal and organizational values

Introduction

"Privacy issues have now replaced credit card security issues as the number one impediment to building an online business" (Judson 1999, p125). In business, knowing your customer is central to meeting their needs. To know customers, you need to collect important, and sometimes personal, information about them. The current and potential customers may or may not be willing to knowingly share that information with the organization.

The factors that influence potential customers' decisions to share information are important for better understanding how to collect and treat information from them. The academic discipline of information systems (IS) is also concerned with how to use information technology (IT) to track and analyze information. The issue of how we collect, analyze, and process this information is central to the discipline.

Akerman et al. (1999) remind us of the progress that still needs to be made in trying to understand privacy preferences, indicating "it is critical to study the concern in detail, especially for the online environment." Hine and Eve (1998) also note "Despite this wide range of interest in privacy as a topic, we have little idea of the ways in which people in their ordinary lives conceive of privacy and their reactions to the collection and use of personal information."

This paper explores the factors that affect the willingness of a person to disclose his/her private information over the Internet in an e-commerce setting. It makes a contribution to the current literature by looking at the role of personal values in engendering or endangering trust and how value compatibility impacts a person's willingness to disclose personal information. The analysis of value compatibility will be useful to organizations trying to collect and use information from clients or potential clients, researchers trying to gather data from subjects, and individuals studying peoples' reactions to privacy concerns and how they are changed under different circumstances.

The paper proceeds as follows. First, an overview of the literature on privacy is given. We also discuss the role of personal values in business situations. A framework on values, trust, and their effects on willingness to disclose personal information is developed. We then discuss the surveys conducted, the methodology, and the results. The analysis, discussion, and implications for management are also presented.

Literature Review

Privacy

Privacy has been defined as "*The claim of individuals, groups, or institutions to determine for themselves when, how and to what extent information about themselves is communicated to others*" (Henderson 1999). This study focuses on discovering the underlying factors that affect an individual's willingness to disclose private personal information to a third party.

Many entities collect and analyze information on individuals. The US government collects information in the form of tax returns, criminal records, motor vehicle registration, social security, and other government databases. Corporations collect data on customers and potential customers. Supermarkets track purchases of shoppers and buying habits. Marketing companies buy and sell customer information to build profiles of people likely to buy or use their products in order to target them specifically. Identity thieves gather information on potential victims.

There are a few laws regulating the use and collection of information, including the Fair Credit Reporting Act (1970 – Attempts to assure accurate credit reports and prevent abuses by information brokers), Drivers Privacy Protection Act (1994 - Limits access to DMV records), and the Right to Financial Privacy Act of 1978 (Federal investigators must use legal channels to gather information and notify individuals) (Henderson 1999). Nonetheless, there is still a lot of information collected and used by the above-mentioned organizations and other entities.

Trust

Trust is defined as "*The willingness of a party to be vulnerable to the actions of another party based on the expectations that the other will perform particular actions important to the trustor, irrespective of the ability to monitor or control the other party*" (Mayer et al. 1995).

Jarvenpaa et al. (2000) propose that trust is a precursor to a potential customer's willingness to buy from an e-commerce site. Since information disclosure is a necessary part in the purchase process, it follows that trust is an antecedent to information disclosure. Without trust, little voluntary information exchange would take place, since people and organizations would be reluctant to disclose information if they do not trust the receiver to meet their expectations.

Smith et al. (1996) observe significant positive associations between individual information privacy concerns and their levels of trust, paranoia and social criticism. Reichheld and Schefter (2000) find that when customers trust an online vendor, they are much more likely to share personal information with them. Luo (2002) uses the social exchange theory to show that building trust can be a way to solve privacy concerns.
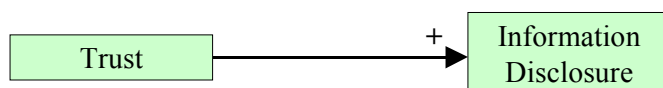
Fig 1. Trust and Information Disclosure

Culnan and Armstrong (1999) find support for the argument that increases in trust through procedural fairness alleviate concerns an individual has about being profiled through information collection. Based on prior research, it is believed that increases in trust will lead to an increase in one's willingness to disclose personal information about oneself to the trusted party. This leads to the first part of our model for information disclosure in Figure 1.

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 social or behavioral goal an individual desires as a societal norm and uses to judge alternative modes of behavior. A value may be a given political, personal or religious cause, a desired outcome for a societal debate or policy, or a working goal for society at large. Examples of values include individual's views on the environment, abortion, family life norms and others.

Values in Business

In this section, a few well-known examples of companies with visible values in the marketplace are presented to illustrate the impacts of a given set of values on trust and information disclosure. Anita Roddick founded the Body Shop in 1976 in Brighton, England. It went public in 1984 and has been known for being environmentally responsible and promoting their values aggressively. They use biodegradable products and support responsible care of communities in the third world, good environmental stewardship, and social responsibility (Hartman and Beck-Dudley 1999; Sillanpaa 1998). They used these values to aid in growth and in building customer relations. Another well-known example of a company promoting its values would be Ben & Jerry's Ice Cream that actively promoted what they perceived as environmental stewardship. These companies are able to build a niche with a certain group of customers that are attracted to them because they share values important to many of their customers. This often engenders greater customer loyalty and trust with that group as they identify with the causes the companies support. This increase in trust from shared values should increase the customer's willingness to disclose personal information to these organizations.

Disney is a company that has been in the news recently for a value conflict with the American Family Association and Southern Baptists. These groups called a boycott for what they called anti-family values (Vitagliano 2001). This is one example of a company suffering and losing trust from a certain group when promoting values that the group considered offensive. It is hard to measure the impact the boycott has had on the company, but it is clear that at least a small group of people reacted negatively to the values and practices they oppose.

These and other companies appeal to clients by sharing values with customers. These shared values promote trust and loyalty which, in turn, should increase the amount and quality of the information that people are willing to disclose because of the trust fostered by the common values they share.

Value Compatibility

Value compatibility is not a new construct. It has interchangeably been called v*alue similarity* in the marketing literature (Ang et al. 2000) and v*alue congruence* in the organizational science literature (Jung and Avolio 2000). Value compatibility is a measure of how well 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 need to be similar enough to support common causes and avoid clashing over issues important to the individual and the organization.
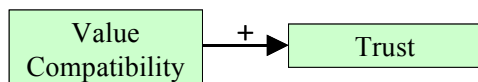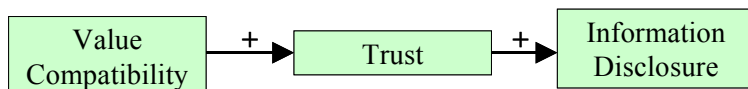

Figure 2. Value Compatibility and Trust

Siegrist et al. (2000) find 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. The second part of our model asserts that value compatibility promotes trust, as outline in figure 2.

## *Values Affecting Trust and Privacy*

Figure 3. Value Compatibility, Trust and Privacy

Milberg et al. (1995) propose that cultural values affect information privacy concerns. They argue that, depending on the culture and the degree of trust for others in that culture, those values affect the level of privacy regulation in a society. They did a quasi experiment and survey where they found support for their hypothesis in the amount of regulation of privacy issues. The current study extends their work by looking at personal values and how they interact with organizational values and affect information disclosure.

We propose, based on the items discussed above, that because value compatibility affects trust and trust affects information disclosure, value compatibility should also affect information disclosure. Specifically, an increase in value compatibility will lead

to an increase in trust and a corresponding increase in information disclosure. A decrease in value compatibility would have the opposite result.

Value Compatibility $\xrightarrow{\ +\ }$ Information Disclosure
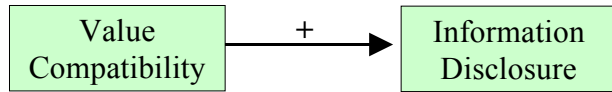
Figure 4. Value Compatibility on Information Disclosure

In this paper we are testing for the magnitude and importance of value compatibility on information disclosure. Though we believe, based on the literature that value compatibility works through trust, in this study we test the direct effect of value compatibility on information disclosure, to see if we can observe the magnitude and importance of the effect. This is the model we test in this research paper, as illustrated in Figure 4.

Organizational and Personal Values

Each person may have a set of values based on their personal backgrounds and beliefs. Each organization may have a set of values, which are perceived by the individual. In some cases, they will be perceived as being neutral, or not having any significant actions for or against the causes the individual is interested in. We call this case a *Value Neutral Organization* for 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, then 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 perception of the individual. Positive value compatibility is not an endorsement of that value by the authors, but an indication that the company's and the individual's values match. It is not a judgment on the merits of those values. Similarly, 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 and the individual's values that we intend to study in this paper.

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 in trust from that match. If the organization opposes an individual's given value, they are expected to conflict and the organization is predicted to lose trust from 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.

Research Questions

Prior research shows shared values will lead to a greater degree of trust between the individual and the organization. If the individual perceives that the organization supports and helps those causes that the individual holds dear, he/she will feel more comfortable doing business with the company and have more trust in it than another firm providing a similar product or service but not supporting those values important to the individual. This increase in trust will translate into a willingness to disclose more and clearer information about oneself to the organization.

H1: Individuals are more likely to share private information with organizations that support their personal values than with organizations with neutral values.

It is stated that a greater value compatibility between individuals and organizations leads to a higher level of trust. A higher level of trust in the individual then leads to more information disclosure by the individual to the organization. On the other hand, a conflict in values will lead to distrust, which leads to an unwillingness to put oneself in a vulnerable position by disclosing private

information and leads to a reduction in the amount and quality of the information disclosed. This prompts us to formulate our research question as follows.

H2: Individuals are more likely to share private information with organizations that support their personal values than with organizations that oppose their personal values.

Methodology

A survey was developed to see what information respondents would be willing to disclose. We asked for a variety of information items ranging from their favorite snack to their credit card number. Such a list has also been used in a survey by Ackerman et al. (1999). With such a grouping, we were able to see how value compatibility impacts a range of data that differed in the sensitivity level.

We collected and analyzed one of three possible scenarios from each respondent, who received the scenario at random. In each scenario, they were visiting a website that was taking a survey of their site visitors. Respondents would be entered in a drawing for a prize that they highly desired. We did not tell them what the prize was but told them to assume that it was one they would very much like to have. This was done in each case to give them motivation to fill out the online survey. They were also told that for each item of information they shared, their chances of winning the prize would proportionally increase. This was to motivate disclosure of more personal information for each scenario.

After providing them with motivations to fill out the online survey, they were given background information on the organization. One organization was said to support the personal values of the individual. That is, there was a high correlation between the values of the individual and the organization asking for the information. We did not state what the values were but indicated that they should envision themselves and the company matching values regardless of their specific values. They were then asked a series of questions about what information they would disclose to this site. The other versions had scenarios with an organization with neutral values or opposing values.

The survey was conducted in 4 undergraduate accounting courses. Students were given the option of receiving extra credit for taking the time to complete the survey and were assured that they would be anonymous and individual responses would be kept confidential. We collected and analyzed 151 surveys, with approximately 50 students in each group.

Data Analysis

Value Congruence

Table 2 contains a summary of the percentage of respondents that would be willing to share the information with the asking website. The symbol, % Opp, is for the organization perceived to have values in conflict with the respondent's personal values, % Neut is for the neutral organization with no known evidence of values for or against the respondent's own values, and % Supp is for the organization whose values are highly compatible with the respondent's values.

Table 2. Value Congruence Comparison

	%Opp	%Neut	%Supp	% Overall	Neut *p*-value	Opp *p*-value
Age	75%	88%	90%	84%	0.7496	**0.0487***
Comp info	35%	52%	54%	47%	0.8412	0.0602
Credit Card #	0%	0%	0%	0%	NA	NA
Email Address	33%	46%	62%	47%	0.1100	**0.0045****
Favorite Snack	63%	88%	78%	76%	0.1888	0.0964
Favorite TV show	63%	90%	76%	76%	0.0698	0.1512
Full Name	22%	26%	44%	30%	0.0614	**0.018***
Income	12%	30%	30%	24%	1.0000	**0.0285***
Medical Info	8%	18%	12%	13%	0.4036	0.4870
Phone Number	6%	8%	10%	8%	0.7270	0.4485
Postal Address	8%	14%	20%	14%	0.4265	0.0869
Social Security #	0%	0%	0%	0%	NA	NA

Also included in Table 2 is a summary of the test for significance. We did a logistic regression analysis on each of the groups for each data item, comparing it to the support group. Neut *p*-value stands for the likelihood that the neutral group is not different in their response than the support group. Opp *p*-value is the likelihood that the opposing group is not different from the support group.

Email address was our most significant item, going from 33% in the oppose category to 46% in the neutral and 62% in the support. Individuals were increasingly more willing to share their email information with companies that they shared values with than with those they did not. This is important because email is an item that organizations like to collect in e-commerce settings. Age, full name and income were also found to be significant.

The most sensitive items, including social security and credit card numbers, did not have any respondents willing to disclose them. Some of the other semi-sensitive items, like phone number and postal address, had a small number of individuals willing to disclose them. Even though there was a consistent rise from opposing to neutral and to supporting groups, the percentage differences were still too low to find statistical significance with this sample.

It is interesting to note that for medical information, favorite snack and favorite TV show, respondents were more willing to share with the neutral than the support group. Since this finding is not statistically significant, it may be due to random error. Figure 5 provides a graphical representation of the data discussed in this section.
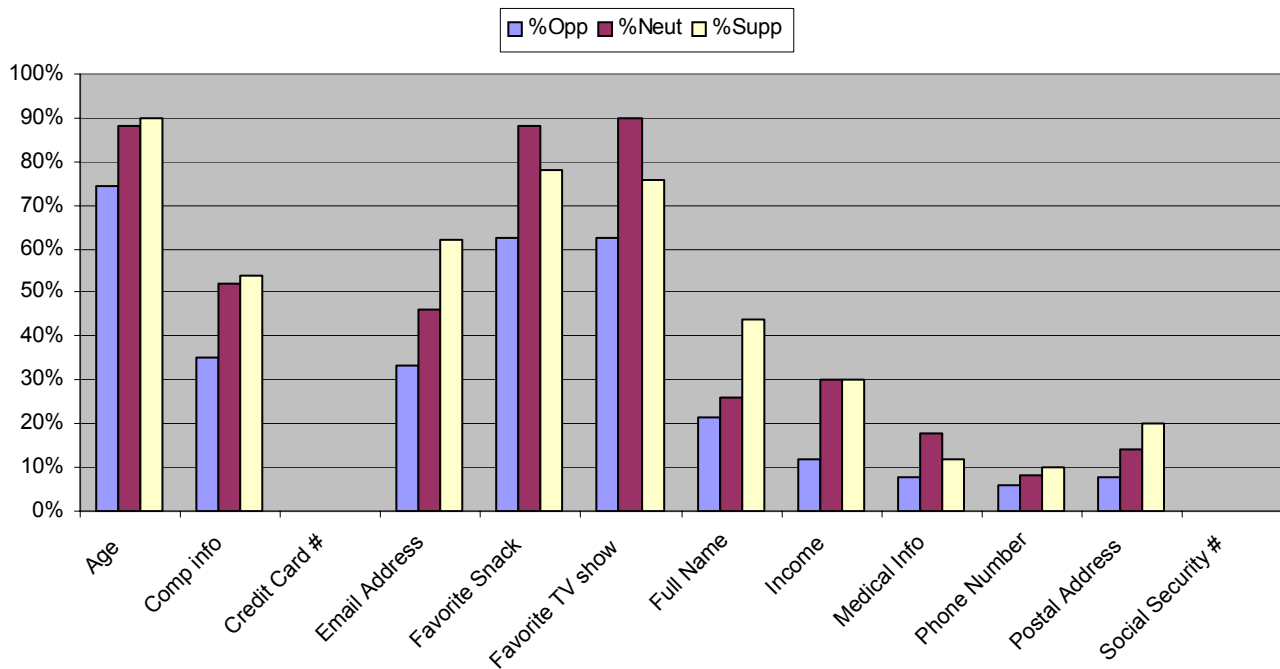

Figure 5 - Percent of Information Shared

Gender

Table 3 presents our key findings on gender and information disclosure. Of the 148 individuals that chose to reveal their gender, we had 63 females and 85 males. Gender was not a main focus of this paper, but we did collect some demographic data on the subjects. It is interesting to note that females in general were less willing to disclose information than males. There was a significant difference with full name, income and phone number, with none of the females sharing their phone number in our survey. Postal address was very close to significant. Notice that it is the more sensitive data where the bigger difference exists. There was little difference in less sensitive areas such as favorite TV show or favorite snack.

Table 3. Gender Effects

	Female	Overall Male	*p*-value
Age	81%	87%	0.311
Comp info	51%	46%	0.554
Credit Card #	0%	0%	NA
Email Address	44%	51%	0.459
Favorite Snack	78%	78%	0.985
Favorite TV show	78%	78%	0.985
Full Name	19%	39%	**0.010**
Income	16%	31%	**0.039**
Medical Info	8%	17%	0.125
Phone Number	0%	14%	**0.002**
Postal Address	8%	19%	0.061
Social Security #	0%	0%	NA
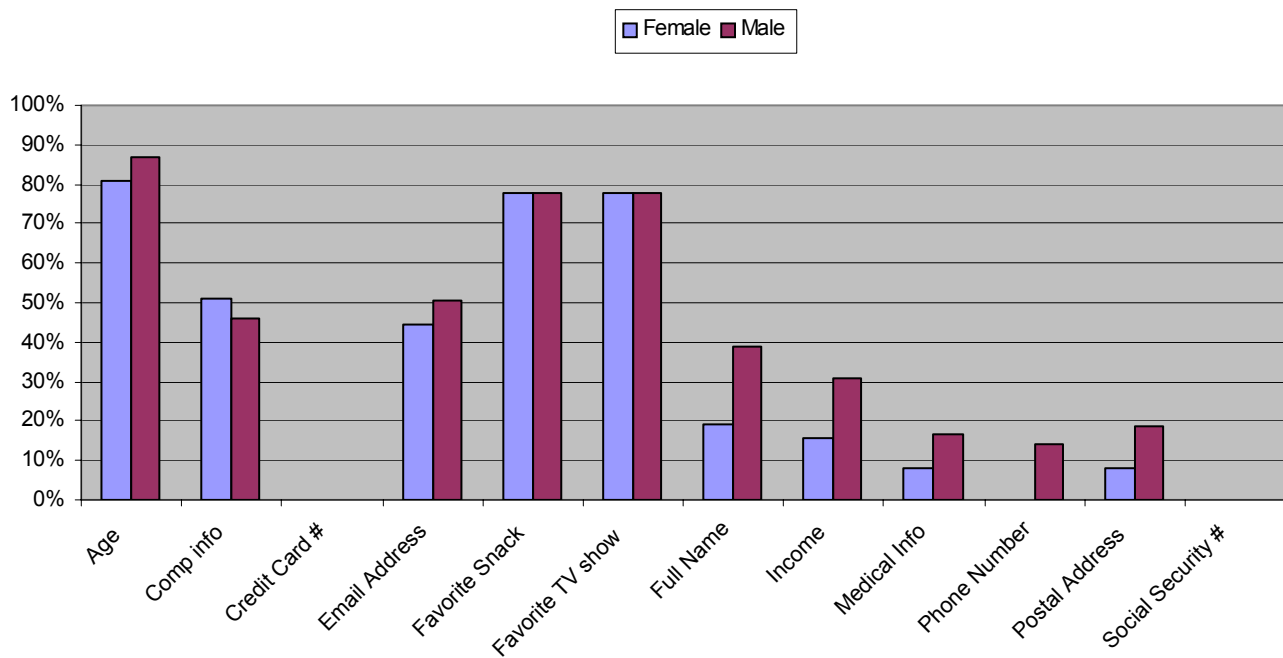
Figure 6 - Gender Differences in Information Disclosure

Threshold

There appears to be a threshold for information sensitivity. Most people are willing to disclose non-identifying and non-sensitive information such as their favorite snack and TV show. As noted earlier, a willingness to put oneself in a vulnerable position is an essential part of trust. It is clear that sharing one's favorite TV show or favorite snack is not likely to put oneself in a vulnerable position and, therefore, it takes only a relatively low level of trust to be willing to disclose this type of information. In this case, there is no significant difference between the supporting value organization and the neutral organization. It seems that they have a basic level of trust for a standard neutral value organization and are willing to share this non-sensitive information. They do not need the extra amount of trust that comes from shared values and the common bond of having similar goals.

On the other hand, respondents are significantly less likely to share information with the organization with opposing values. With this type of an organization, not only do they not benefit from the increase in trust brought about by value compatibility, but they actually suffer from a reduced amount of trust, where the normal level of individual trust is lessened by hostility toward the offending organizations that are against the values that they personally hold dear. Thus, value compatibility can have both a positive and a negative impact on trust depending on the degree of support or hostility toward those personal values.

While individuals may have an innate degree of trust that would depend on their background, worldview, culture and other factors, this trust can be raised or lowered by the level of trust they feel toward the asking organization based on shared values. They might normally share some information with a standard company, but value compatibility may further raise or lower this threshold. On the other side of the threshold, there appears to be another type of information, such as social security numbers and credit card numbers. This type of information is so sensitive that not even the trust enhanced by having shared values would be strong enough for most people to share this type of information in an online survey.

Significance was not found for difference in value compatibility in these cases, not because value compatibility did not increase trust, but because it was not strong enough to surpass the threshold required to share this type of information. Sharing this information would put one in a presumably vulnerable position. With the social security number, their identity could be easily stolen. With the credit card number, unauthorized charges could be made to their account, costing them time and inconvenience, on top of potential monetary losses.

Implications for Management

More Sensitive Information

Since respondents are more willing to share contact information like email and full name with those organizations that they share common values with and that work to support causes they believe in, management has a better chance of collecting information if they could identify those common values that they share with the niche market and promote those values and causes to these potential customers they are targeting. At the very least, they should be careful to avoid trampling the values that their clients hold dear.

This will be especially useful if they need to engender trust to collect sensitive information from them, if they do not have a history of working with those clients, or if they do not have trust through other ways such as a recognizable brand name.

Reliability of Information

One respondent in our study privately indicated that he would share information about himself with the site that opposed his values for a chance to win the prize, but he would not share the correct information. In other words, he indicated that he would want to hurt them and give them misleading information as to the questions asked. We did not test for this information reliability in our research, but it brings up the question of reliability of information collected.

It may do more harm than good to collect information that is false or misleading. Any collection effort may have incorrect data in it, but if the percentage is higher with the value conflict group, it could be a concern and may lead to wasted time and resources in terms of organizational efforts.

Future Research

An experiment can be done that goes beyond what we performed in the survey. The experiment can set up various situations and actually collect the information from the individuals in different situations with different value conflicts and degrees to see what effect would be present in a specific type of scenario. We also intend to modify our survey and gather more data for future analysis, looking at the interaction with value compatibility, gender and age.

IS researchers are encouraged to investigate purchase behaviors and how values affect willingness of individuals to purchase from companies with conflicting values. For example, an individual may be willing to pay more for a product from a company they have a high degree of value compatibility with than from one they have conflicts with. If that is the case, how much more are they

willing to pay to purchase from a value supporting organization? How much less would a value opposing organization have to give up in order to attract this type of individual? Specifically, we can look at the threshold in price points for different products purchased online from companies with different values as well as the dollar amount these values are worth in the online business world.

Conclusions

Value compatibility is an important factor for understanding privacy preference of individuals. The degree of overlap in the organizational and individual values is found to be significant in most cases. Apart from the sensitivity of the information, people are more willing to disclose personal identifying information.

The amount of information organizations are able to collect varies with the degree of their value compatibility with the individuals. This finding helps us better understand personal privacy preferences. Compatible values can build trust and enhance willingness to disclose information. More research is needed to explore the role of values in the Internet economy to see how they affect individual choices in terms of information disclosure and purchase behavior.

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