TRUST-RELATED ARGUMENTS IN INTERNET STORES:
A FRAMEWORK FOR EVALUATION

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ABSTRACT

This paper discusses the trust related issues and arguments (evidence) Internet stores need to provide in order to increase consumer trust. Based on a model of trust from academic literature, in addition to a model of the customer service life cycle, the paper develops a framework that identifies key trust-related issues and organizes them into four categories: personal information, product quality and price, customer service, and store presence. It is further validated by comparing the issues it raises to issues identified in a review of academic studies, and to issues of concern identified in two consumer surveys. The framework is also applied to ten well-known web sites to demonstrate its applicability. The proposed framework will benefit both practitioners and researchers by identifying important issues regarding trust, which need to be accounted for in Internet stores. For practitioners, it provides a guide to the issues Internet stores need to address in their use of arguments. For researchers, it can be used as a foundation for future empirical studies investigating the effects of trust-related arguments on consumers' trust in Internet stores.

Keywords: Trust, electronic commerce, argumentation, customer service

1. Introduction

Consumer trust continues to be a key issue impeding the proliferation of Internet shopping (Gefen and Straub, forthcoming). In a clear indication of this relationship, 35 percent of non-buyers (i.e. those who have never bought any products online) in North America surveyed recently by Forrester Research Inc. had abandoned a shopping cart while shopping online because they were concerned about providing their personal information, and 24 percent had done so due to fears about credit card fraud (Kelley, Rhinelander, and DeMoulin, 2001). A recent Gallup research survey provided further evidence when it found that more than 40 percent of Canadian Internet users would complete more online purchases if they could trust that a store would respect their privacy (Shaw, 2001). Similarly, various academic studies have suggested that trust has a positive influence on purchase intentions (Jarvenpaa, Tractinsky, and Vitale, 2000, Lim, Sia, Lee, and Benbasat, 2001, Wetsch and Cunningham, 1999) and actual buying decisions (Lim et al., 2001). Although the overall volume of B2C (business-to-consumer) commerce has been growing rapidly, its full potential will not be realized unless trust-related concerns are alleviated (Cheskin Research and Studio Archetype/Sapient, 1999). Lack of trust seems to be one of the key barriers to online shopping; hence examining how to improve consumer trust may be beneficial to both consumers and Internet stores.

Internet stores often provide trust-related arguments to ensure that consumers' concerns are taken care of. The term *trust-related argument* refers to a statement or statements that provide support for a claim associated with enhancing trust in the Internet shopping context (Adapted from Rottenberg, 1997). For example, some Internet stores include arguments like "Your online purchase is safe with us. We use advanced encryption technology to protect your information and your privacy" (see Figure 1).
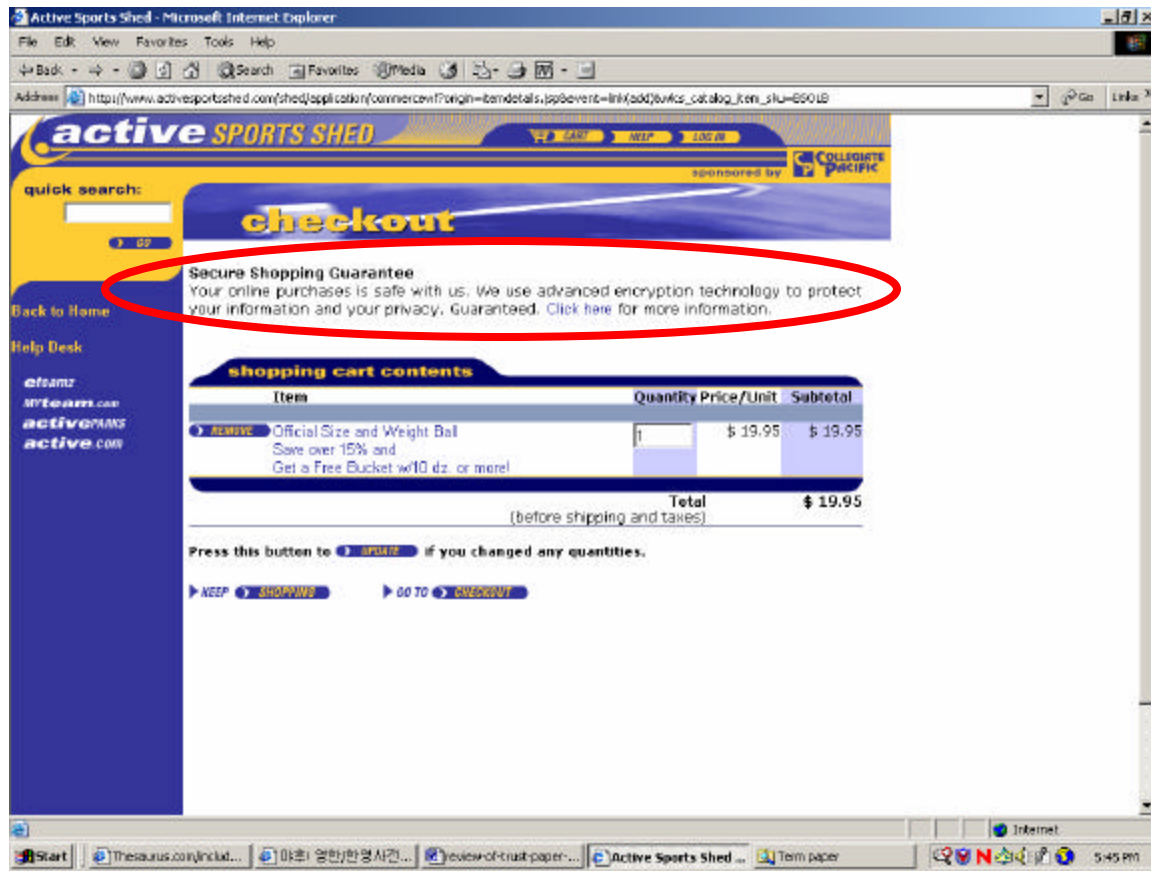
Figure 1: An example of a trust related argument (Source: www.activesportsshed.com)

Although Internet stores often present trust-related arguments, researchers have paid little attention to these arguments as tools used to improve consumer trust within the context of Internet shopping.

This paper identifies trust-related issues that need to be addressed by these kinds of arguments in Internet stores. Motivations to identify trust-related issues are based on Petty and Cacioppo's (1986, p. 5) suggestion that arguments should address relevant issues in order to be effective. By identifying trust-related issues, this paper develops a framework for evaluating trust-related arguments.

In the next section of the paper, the theoretical foundation of this study is described. Then in the third section, general methodology for identifying trust-related issues is explained. In the fourth section, literature regarding trust in business-to-consumer electronic commerce, models of trust, and trust building strategies/ features is reviewed. In the fifth section, important trust-related issues are identified using a trust model from academic literature, in conjunction with the customer resource life cycle framework, and subsequently the issues are combined to develop a framework for examining trust-related arguments. In Section 6, ten web sites are evaluated to demonstrate the applicability of the framework, the results are assessed and future research directions are proposed. The last section includes a discussion of factors potentially limiting the current study, and concluding comments.

2. Theoretical Background

2.1 Elaboration Likelihood Model

The Elaboration Likelihood Model [ELM] (Petty and Cacioppo, 1986, p. 4) attempts to place existing persuasion theories and research under one conceptual umbrella by positing two *qualitatively* different routes to persuasion: *central* and *peripheral* routes. The central route of persuasion occurs when people are highly involved with issues of the arguments and when they have a high level of ability to process the arguments. When these factors are limited, the peripheral route of persuasion occurs (O'Keefe, 1990, p. 103).

2.2 Changes in Attitudes and Beliefs in the ELM

With the central route, when arguments arise, they cause people to generate both positive and negative thoughts. If an argument leads to predominantly favorable thoughts, then the argument is "relatively successful in eliciting changes" in beliefs and attitudes (O'Keefe, 1990, p. 103). On the other hand, if an argument leads to predominantly

unfavorable thoughts, the argument would be "relatively unsuccessful in eliciting changes" in beliefs and attitudes (O'Keefe, 1990, p. 103). With the peripheral route, in contrast, people judge information according to simple heuristic cues, such as the reputation of the source, the number of arguments presented, and the length of an argument, without careful consideration of the argument content (Petty and Cacioppo, 1986).

2.3 Implication of Trust Issues

When people consider completing transactions with unfamiliar Internet stores, they might consider many potential issues regarding general trustworthiness of Internet stores, and subsequently they may find themselves with unfavorable thoughts. If assuring arguments about the potential issues are provided, these arguments are likely to weaken the influence of the unfavorable thoughts and to generate more favorable thoughts. As a result, consumers' trust is likely to increase. In this regard, potential issues that consumers are likely to have in transacting with unknown Internet stores should be identified.

3. Methodologies Used to Identify Key Issues

To identify a potential set of trust-related issues, two approaches have been used in the current study (please refer to Figure 2). First, issues were identified by using a trust model developed in existing IS literature (Lee and Turban, 2001). This model was chosen because its context was specific to Internet shopping. Second, another model was utilized although it was not originally used to identify trust issues, but rather to identify the customer resource life cycle (Ives and Learmonth, 1984). This model assisted in identifying the points in a customer's interaction with a web site where trust issues are expected to arise. Potential issues were identified by reasoning about what consumers would be vulnerable to in each of the antecedents of the trust model and at each stage of the customer resource life cycle. Subsequently, the two groups of issues were compared and consolidated. Lastly, the "content validity" of the list of issues identified was assessed by comparing it to the list of most important trust-related issues identified in two customer surveys and in the literature review of Section 4.3.

4. Literature Review

4.1 Trust in Business–to-Consumer Electronic Commerce

4.1.1 Trusting Intentions

The most frequently cited definition of trust in various contexts (according to Rousseau, Sitkin, Burt, and Camerer, 1998) is "willingness to be vulnerable," proposed by Mayer, Davis, and Schoorman (1995). Adapting from this definition, Lim et al. (2001) define consumer trust in Internet shopping as "the willingness of a consumer to expose himself/herself to the possibility of loss during an Internet shopping transaction, based on the expectation that the merchant will engage in generally acceptable practices, and will be able to deliver the promised products or services." As this definition indicates, consumer trust is a kind of behavioral intention (Gefen, Rao, and Tractinsky, 2003), referred to as "trusting intentions" by McKnight, Cummings, and Chervany (1998). The trusting intentions can be elaborated upon by exploring activities that expose consumers to the possibility of loss during Internet shopping transactions. In Internet shopping, consumers are likely to expose themselves to the possibility of loss (1) if they provide their e-mail address (exposing themselves to the possibility of receiving Spam email and other annoyances), (2) if they provide shipping information such as their name, address, and phone number (raising the possibility of privacy invasion including unsolicited visits and mails), (3) if they provide their credit card numbers (leading to the possibility of credit card fraud), or (4) if they complete online purchase transactions (with the possibilities of late or no delivery of a product, poor product quality, and inadequate service afterwards). In the current study, trusting intentions in online shopping are taken to include the intentions to perform these activities, which are required in most online transactions. In some contexts, other activities are also identified as trusting intentions. For example, an intention to accept advice from an online law firm can be another example of a trusting intention that exposes consumers to the possibility of loss (McKnight, Choudhury, and Kacmar, 2002).

4.1.2 Trusting Beliefs

Trusting beliefs positively influence trusting intentions (Gefen and Straub, 1999; McKnight et al., 2002). In Internet shopping environments, trusting beliefs, which have also been referred to as "trustworthiness" by Mayer et al. (1995), are consumers' perceptions of particular characteristics of Internet stores, including the abilities, the integrity, and the benevolence exhibited by the stores when they handle the consumers' transactions (Gefen and Straub, 1999; McKnight et al., 2002). Hereafter, the terms trustworthiness and trusting beliefs are used interchangeably.
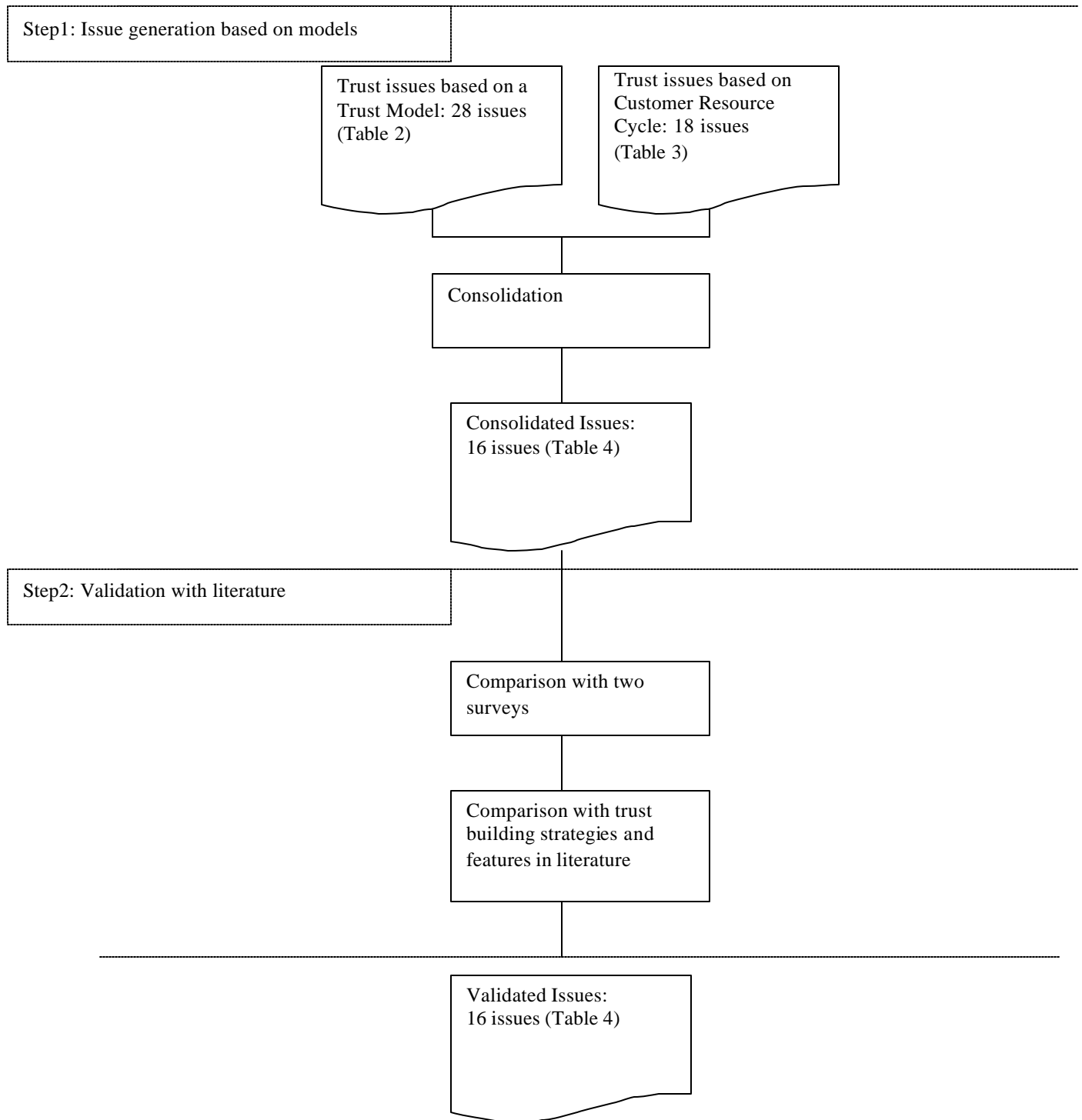
Step1: Issue generation based on models

Trust issues based on a Trust Model: 28 issues (Table 2)

Trust issues based on Customer Resource Cycle: 18 issues (Table 3)

Consolidation

Consolidated Issues: 16 issues (Table 4)

Step2: Validation with literature

Comparison with two surveys

Comparison with trust building strategies and features in literature

Validated Issues: 16 issues (Table 4)

Figure 2. Methodologies to identify trust-related issues

4.2 Models of Trust

McKnight and Chervany (2001) have proposed an interdisciplinary conceptual typology, with five constructs affecting trust in e-commerce: (1) the disposition to trust, (2) institution-based trust, (3) trusting beliefs, (4) trusting intentions, and (5) web vendor interventions. Disposition to trust is " the extent to which a person displays a

tendency to be willing to depend on others across a broad spectrum of situations and persons," and institution-based trust is an individual's "perception of the Internet environment." In B2C e-commerce, web vendor intervention is "actions a vendor may take to provide assurances about the vendor's sites," including practices related to privacy policy, third party seals, interacting with customers, developing a reputation, links to other sites, and guarantees (McKnight et al., 2002). According to this model, trusting beliefs and intentions are influenced by disposition to trust, institution-based trust, and web vendor interventions, and trusting beliefs may further affect trusting intentions.

Consumers' trust in Internet shopping has also been modeled by Lee and Turban (2001) using four groups of factors as antecedents: (1) trustworthiness of an Internet merchant, which includes perceptions of the merchant's ability, integrity, and benevolence; (2) trustworthiness of the Internet shopping medium, based on perceptions of an Internet merchant's technical competence and performance level (e.g. reliability, speed, and availability), and their understanding of the Internet shopping medium; (3) contextual factors such as perceptions of the effectiveness of third party certification bodies and public key security infrastructure systems; and (4) other factors, such as size and demographic variables. Individual propensity to trust was proposed as a moderator.

In broad terms, the two models are considered to be compatible. Individual trust propensity, trustworthiness of an Internet merchant, and trust in Internet shopping in Lee and Turban (2001) are equivalent or very close to disposition to trust, trusting beliefs, and trusting intentions in McKnight et al. (2002) respectively. Trustworthiness of the Internet shopping medium and perceived effectiveness of third party certification and public key infrastructure in Lee and Turban (2001) can be considered as web vendor interventions or institution-based trust in McKnight and Chervany (2001) depending on whether these perceptions are specific to a store, or more generally to the broader web environment. A key difference can be noted between McKnight et al. (2002) on the one hand, who posit that the effects of disposition to trust, institution-based trust, and web vendor interventions on trusting intention are mediated partially by trusting beliefs, and Lee and Turban (2001) on the other hand, who have asserted that trustworthiness in Internet shopping medium and perceived effectiveness of third party seals and public key infrastructure systems can affect trusting intentions directly, without mediation of trusting beliefs. In summary, the two models are compatible in broad terms, and the differences between them may be investigated further with empirical testing.

4.3 Trust-Building Strategies and Features in Information System Literature

Four groups of strategies or features to improve trusting beliefs have been identified in Information Systems (IS) literature: (1) providing assuring information reported by others, (2) providing assuring information about the store's policies and practices, (3) utilizing trust transfer, and (4) providing opportunities for interaction and cues for simple examinations.

4.3.1 Providing Assuring Information Reported by Others

Consumers often base their judgments regarding Internet stores on opinions reported by others, particularly third party certification authorities (e.g. third party certificates), other consumers (e.g. consumer feedback comments), friends, news reports, and magazines; in other words, trust towards Internet stores are shaped by reputation.

4.3.1.1 Third Party Certificates

McKnight and Chervany (2001) have asserted that third party seals, for example TRUSTe, BBB, and WebTrust, can increase trusting beliefs though the influence on specific trusting beliefs depends on the nature of the seal. Kovar, Burke, and Kovar (2000a) have tested conditions under which the WebTrust assurance seal is effective in influencing online transaction expectations and consumers' intentions to complete purchases online. In the course of this study, consumers who attended to the seal (e.g. who saw or clicked the seal to access more information), consumers who were exposed to the advertisement about the seal, and consumers who were knowledgeable about the CPA designation (Certified Public Accountants) tended to show higher online transaction expectations (Kovar, Burke, and Kovar, 2000b). Cheskin Research and Studio Archetype/Sapient (1999) and Cheskin Research (2000) also reported that third party certification symbols like TRUSTe, BBBonline, and VeriSign increase trust, but the effects are large only for respondents who are familiar with the meaning of the symbols. In summary, third party certifications can influence trusting beliefs and intentions, but the effects vary depending on consumers' familiarity with the seals and the attention they devote to the seals.

4.3.1.2 Consumer Feedback

Lim et al. (2001) has examined displays of satisfied customers' endorsements, as a trust-building feature. Four customer testimonials used in the experiment remarked upon: (1) cheap prices and timesaving processes, (2) excellent customer service and fast delivery, (3) store security, and (4) convenience. The authors report that the practice of displaying satisfied customers' endorsements positively influences perceptions of the ability and integrity of the store (i.e. trusting beliefs) and the positive perceptions in turn affect trusting intentions in relation to the store. Ba and Pavlou (2000) have also investigated the effects of consumer feedback on trusting beliefs in an auction setting.

4.3.1.3 Advertising Reputation

Reputation has been defined as "the extent to which buyers believe a selling organization is honest and concerned about its customer" (Jarvenpaa et al., 2000). Several studies have predicted positive relationships between reputation and trusting beliefs. For example, McKnight and Chervany (2001) have noted that advertising stores' good reputations increase trusting beliefs. Cheskin Research and Studio Archetype/Sapient (1999) have also proposed brand recognition as one of six primary components that can convey e-commerce trust. Perceptions of reputation have been tested empirically by Jarvenpaa et al. (2000) and Wetsch and Cunningham (1999), and both studies have reported that the perception of reputation relates positively to consumers' trusting beliefs in a store.

4.3.2 Providing Assuring Information about Store's Policies and Practices

McKnight and Chervany (2001) and Hoffman, Novak, and Peralta (1999) state that a company can improve consumers' trusting beliefs by posting its privacy policy. Their predictions are supported by two empirical studies: Wetsch and Cunningham (1999), who have reported that strong security and privacy policies are related to consumer trusting beliefs, and Fogg, Marshall, Laraki, Osipovich, Varma, Fang, Paul, Rangnekar, Shon, Swani, and Treinen's (2001) survey, which indicates that the display of a store's' policies increases the credibility[1] of its website.

4.3.3 Utilizing Trust Transfer

Stewart (1999) and Stewart (2003) have examined how evidence of a tie between parties affects trust. These studies test whether consumer trust in an unknown Internet store is positively influenced when consumers arrive at the store by selecting a hyper-link provided at a trusted site (e.g. a reputable magazine site). According to Stewart (2003), if the tie between two websites (e.g. consumers' "expectation on unity and consistency" of two sites) is high, then consumers form an initial impression from the first site they visit. This impression operates as a filter, causing consumers to interpret information from the second site consistently with the impressions they have already formed (Stewart, 2003). Stewart's (2003) experimental survey results confirm these predictions: (1) participants who arrived at an unknown store by clicking a hyper-link from a trusted site perceived a high level of interaction and similarity between the unknown site and the trusted site; and (2) both higher interaction and similarity positively influenced the participants' trusting beliefs in the unknown Internet store. Similarly, Kim and Prabhakar (2000) have predicted, "if one gets positive WOM [(word-of-mouth)] referrals on e-commerce from a person with strong personal ties, the consumer may establish higher levels of initial trust in e-commerce."

4.3.4 Providing Opportunities for Interaction and Cues for Simple Examination

According to Fogg and Tseng (1999), people judge the credibility of other people and businesses based on their first-hand experience (e.g. personal interactions) and simple examinations of surface qualities (e.g. presentation design).

4.3.4.1 Customers' Interaction with Web Stores

According to McKnight et al. (2002), consumers' interactions with Internet stores affect trusting beliefs, inasmuch as interactions provide evidence of a store's positive attributes. Similarly, Cheskin Research and Studio Archetype/Sapient (1999) have proposed that e-commerce trust is communicated by six primary components, three of which are related to smooth interactions: navigation (e.g. "the ease of finding what the visitor seeks"), fulfillment (e.g. the process works from the time a purchase process is initiated until the product is received), and technology (e.g. "functionality and speed"). In fact, an empirical study by Gefen and Straub (1999) has demonstrated that customers gain increased faith in the integrity and benevolence of a vendor after they receive an "e-mail responding favorably to [the customers' previous] comments and suggestions." Furthermore, a survey by Fogg et al. (2001) has also demonstrated that quick responses to customer service questions and e-mail confirmation of transactions increase the credibility of a website.

4.3.4.2 Cues for a Simple Examination

People sometimes judge the credibility of a website based on simple inspection of surface elements, for example the visual design of the site (Fogg and Tseng, 1999). Presentation (Cheskin Research and Studio Archetype/Sapient, 1999) and professional design (Fogg et al., 2001) are considered important elements in developing trust. An experimental study by Gefen and Straub (1999) indicated that displaying a "1-800 number in a large bold font for customer questions and suggestions" in an experimental website increased trusting beliefs in the associated Internet store. Similarly, a survey conducted by Fogg et al. (2001) reported that posting the store's physical address, phone number, e-mail address, and company photos increased the credibility of a website.

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[1] Please note that Fogg and Tseng (1999) differentiated their concept of credibility from the concept of trust. They asserted that credibility indicates the positive belief in "believability" of something while trust is close to the positive belief in "dependability" of something. This article is reviewed in the current paper because their discussion of credibility focuses on a website, and because many items in their survey are close to strategies and features that improve trusting beliefs in a store.

Table 1. Trust-building strategies and features in IS literature

Strategy Categories	Strategy / features
1. Providing assuring information reported by others	Third party certificates - TRUSTe - BBBonline - WebTrust - VeriSign
	Consumers' feedbacks - Satisfied customers' endorsements - Positive / negative feedback on sellers in auctions
	Advertising Reputation
2. Providing assuring information about store's policies and practices	Display store policies - Strong privacy / security policies
3. Utilizing trust transfer	Links from reputable sites
	Referrals from a person with strong personal ties
4. Providing opportunities for interaction and cues for simple examinations	Interacting with customers - Responsive communication - e-mail confirmation of order - Navigation - Fulfillment - Technical functionality and speed
	Cues for a simple examination - Presentation design - Explicit contact (e.g. toll free phone number, physical address, e-mail, and photos)

The key factors influencing Internet trusting beliefs identified in this literature review (as summarized in Table 1) will be utilized later in Section 5.4 to support the content validity of the consolidated trust framework.

5. Consumer Trust in Internet Shopping: Key Issues
5.1 Trust-Related Issues Based on a Model of E-Commerce Trust

First, trust-related issues were identified based on Lee and Turban's model (2001). A total of 28 potential issues that influence consumers' trust were identified as shown in Table 2. In our opinion, this model covers almost all of the factors identified in the literature review discussed in Section 4.

The issue of "Perceived trustworthiness of the Internet shopping medium" (containing six issues) principally involves technical issues associated with websites, notably response times and the ease of navigation. Thus, it would be difficult to increase consumer trust solely by providing arguments, if the functioning or performance of the website is evidently inadequate. In the case of benevolence (containing one issue), based on our survey of web sites we did not identify any examples of relevant arguments, and when consumers have little knowledge about an Internet store, integrity and benevolence beliefs are less likely to be differentiable (McKnight and Chervany, 2001). The 21 issues that remain (seven issues in ability, nine in integrity, and five in contextual factors) will be compared with issues identified in the next section, based on the customer resource life cycle framework.

5.2 Trust-Related Issues Based on the Customer Resource Life Cycle Framework

The customer resource life cycle framework (Ives and Learmonth, 1984) includes descriptions of thirteen stages customers undergo, from identification of needs to the eventual disposal of a product. The eighteen issues identified, mostly associated with "select source" and "order" phases, are grouped into three stages: pre-purchase, during the purchase, and post-purchase (see Table 3).

5.3 Consolidation of Trust-Related Issues

In broad terms, the issues identified by the two approaches discussed above are compatible. Those issues identified by the trust model can be subsumed into issues identified by utilizing the customer resource life cycle, and vice versa. In some cases, multiple issues in the approach based on the trust model were merged into a single issue in the customer resource life cycle approach for simplicity. For example, concerns about high prices, which can be divided into two issues in the trust model approach, namely high prices resulting from either a merchant's lack of ability or from a merchant's lack of integrity, are combined into one issue in the other approach.

Table 2. Trust related issues derived from Lee and Turban's trust model

Trust antecedents	Sub-category	Potential issues
Perceived trustworthiness of a merchant	Ability	Lack of knowledge and resources for a merchant to provide the following: a) Quality products b) Low price c) On-time delivery d) After sales support (cancel / return / maintenance) e) Secure handling of sales transactions f) Personal information protection g) Advice and information
	Integrity	a) Merchant may hide the purpose of gathering information b) Merchant may neglect establishing acceptable policies: 　1) Product quality is low 　2) Product price is high 　3) The merchant does not keep delivery dates 　4) Canceling and returning is troublesome 　5) The merchant is hard to contact 　6) The customer finds it hard to get maintenance 　7) The merchant may not protect credit card information 　8) The merchant may not protect personal information
	Benevolence	a) Focus on profit maximization rather than customer needs
Perceived trustworthiness of Internet shopping medium	Perceived technical competence	a) Functions in a website are inadequate to satisfy a consumer's request
	Performance	a) Web response time is very slow b) Operation often fails and/or there are broken links c) Web site is often inaccessible
	Understanding of Medium	a) Content structure is not clear b) Lost during navigation
Contextual factors	Perceived effectiveness of third party certification	a) Merchant may not pay attention to privacy and security b) Am I interacting with the web site as I had intended? c) Store may not exist d) Store may not pay attention to the resolution of a consumer's concerns and complaints
	Perceived effectiveness of security infrastructure	a) Someone might intercept information during transmission.

Table 3. Trust related issues based on the customer resource life cycle

Purchase stages	Customer resource life cycle	Potential Issues that undermine consumer trust
Pre purchase	1. Establish requirement	
	2. Specify requirement	a) Advice provided by a store or agent may not be correct
	3. Select source	a) A virtual store may not exist b) After sales support may not be good c) A store is not capable of delivering products on time d) Product quality may be low e) Prices may not be reasonable

During purchase	4. Order	a) Information transmission may not be secure b) A store may request unnecessary information about customers c) Personal information may not be protected d) A store may not keep its promised delivery date e) A customer may not get a proof of order f) A customer may not have ways to resolve issues once he or she places an order
	5. Authorize and pay	a) Credit card shopping may not be safe b) Customer payment may be effective as soon as he or she places an order
Post purchase	6. Acquire	a) A store may not deliver the product
	7. Test & accept	a) A store may not accept returns b) Returns may be difficult
	8. Integrate into and manage inventory	
	9. Monitor use and behavior	
	10. Upgrade if needed	
	11. Maintain	a) A store may not provide maintenance or service
	12. Transfer or dispose	
	13 Account for	

Based on their content, the issues that have arisen can be classified into four areas, as shown in Table 4:
1. Issues related to personal information,
2. Issues related to product quality and price,
3. Issues related to customer service, and
4. Issues regarding store presence.

Issues related to *personal information* are associated with the presence or absence of measures to protect customers' personal information. This includes credit card information and other personal information, including a customer's name, e-mail address, phone number, and mailing address. Among these, credit card information deserves different treatment than the others (Head and Yuan, 2001), because it is related more directly to money loss (e.g. through credit card fraud), while other information is more closely associated with privacy issues. *Product price and quality* refers to trust issues that are related to product attributes. *Customer service* refers to those issues that are important after the consumer places an order, and thus refers to specific transactions. It also includes service issues apparent to prospective customers. Issues related to *store presence* are concerns about whether the store is financially secure and is a *bone fide* establishment.

5.4 Content Validity of the Consolidated Trust Framework

In order to ascertain that the issues listed in Table 4 cover all key trust-related issues, they were first compared to the issues identified as important in two separate surveys of barriers to Internet shopping, and they were then compared to the factors identified in the literature review described in Section 4.3.

Two surveys of customers' trust-related concerns were utilized:
1. "Biggest Barriers to on-line purchasing," from an Angus Reid Group Presentation (Mossop, 2000).
2. "Reasons for NOT buying online," from Head and Hassanein (Forthcoming)

Table 5 and Table 6 demonstrate how these customer concerns correspond to the issues listed in Table 4.

All of the top ten issues from the Angus Reid research are covered by the current model, as shown in Table 5, with the exception of two items that are not directly related to trust issues: (4) " prefer traditional ways," and (9) "no need for online shopping." In Head and Hassanein's survey (forthcoming), one item in the list of the top seven issues is not mapped in the current model, as shown in Table 6, because it might be less related to trust issues: (1) "appeal of shopping offline." Based on this analysis, we are satisfied that the issues identified in Table 4 are an adequate coverage of the key trust-related issues associated with Internet shopping.

Next, the issues in Table 4 are compared to the content of strategies and features designed to improve consumers' trust, as described in Section 4.3 and summarized in Table 7. The left column in Table 7 indicates the source or reference that has discussed that particular trust strategy or feature shown in the middle column. The right column in Table 7 indicates whether the issues, which the trust-building strategies and antecedents imply, are included in the consolidated list of trust issues.

Table 4. Consolidated trust issues and examples of trust-enhancing information

Trust Area	Issues	Examples of trust-enhancing information
Personal information	Information transmission may not be secure	Encryption is working
	A store may request unnecessary information about customers	The reasons for requesting personal information
	Personal information may not be protected	Privacy is protected; a third party reviews the privacy policy; the merchant does not sell data
	Credit card shopping may not be safe	Credit card liability is up to $50 and a store refund $50
Product quality/ price	Product quality may be low	Product brand and warrantee, Information about quality control processes
	Price may not be reasonable	Pricing policy, customer feedback, guarantee
Customer service	A store may not keep promised delivery date	Deliver products on time (ability and integrity)
	Customer may not get a proof of order	Instant order confirmation and confirmation number
	Cancel/ return is troublesome	Easy cancel/ return
	Hard to contact	How to contact. Physical phone, e-mail, and address information
	Hard to get maintenance	After service contact point, Customer feedback
	Store may not pay attention to the resolution of consumers' issues	Customer satisfaction statistics, Customer testimonial, BBB online symbol and explanation
	Advice provided by a store may not be correct	Expertise of the store; customer feedback
	My payment may be effective as soon as I place an order	Payment will be effective after shipping, Escrow service available
Store presence	A virtual store may not exist	Certification of third party (BBB, TRUSTe, VeriSign, etc.)
	Am I interacting with the web site that I intend to	VeriSign

Table 5. Angus Reid Group survey results and equivalent trust issues

Issue Area	Biggest barriers to On-line Purchasing (Ranking)	Equivalent issues based on consolidated trust issue list in Table 4
1. Personal information	(1) Security of credit card information	Information transmission may not be secure. Credit card shopping may not be safe
	(2) Privacy concerns	Information transmission may not be secure A store may request unnecessary information about customers Personal information may not be protected
2. Product quality / price	(3) Can't see or touch	Product quality may be low
	(6) Shipping cost	Prices may not be reasonable
	(10) Taxes/ duties	Prices may not be reasonable

3. Customer service	(5) Follow-up concerns	A store may not keep its promised delivery date A customer may not get proof of an order Cancel/return processes may be troublesome The company may be hard to contact It may be hard for customers to get maintenance The store may not pay attention to the resolution of consumers' issues
4. Store presence	(7) Not comfortable	All issues are related
	(8) Don't know merchant	A virtual store may not exist Am I interacting with the web site that I intend to?
5. Unmapped	(4) Prefer traditional ways (9) No need	

Table 6. Head and Hassanein's survey results (forthcoming) and equivalent trust issues

Issue Area	Reasons for NOT buying online (Ranking)	Equivalent issues based on consolidated trust issue list in Table 4
1. Personal information	(3) Security concerns	Information transmission may not be secure. Credit card shopping may not be safe
	(4) Privacy concerns	Information transmission may not be secure. A store may request unnecessary information about customer Personal information may not be protected
2. Product quality / price	(2) Inability to sample a product	Product quality may be low
	(6) Shipping expense	Prices may not be reasonable
3. Customer service	(7) Delivery time	A store may not keep its promised delivery date
4. Store presence	(5) Lack of online vendor trust	All issues are related
5. Unmapped	(1) Appeal of shopping offline	

As shown in Table 7, several issues identified in academic studies are not included in the consolidated list, because the use of arguments will do little to resolve the issues (e.g. issues regarding responsive interaction, ease of finding information, simplicity of processes, tracking, functionality, speed, clarity, craftsmanship, and similarity). For example, non-responsive interaction and difficulty in navigation may be issues undermining trust, but they are not included because the presence of arguments may not help to relieve these issues if consumers actually experience slow responses and difficulty in navigation. In short, the consolidated list of trust issues adequately covers all trust issues that can be addressed through the use of arguments. Thus, we believe that the consolidated trust issue list provides a good basis for reviewing trust-assuring arguments in Internet stores.

6. Discussion and Future Research Directions
The main goal stated at the outset of this paper is: given the importance of trust, for what issues do Internet stores need to provide arguments to increase consumer trust?

In order to answer this question, a framework has been developed to identify the key trust-related issues, and they are organized into four categories: personal information, product quality and price, customer service, and store presence (Table 4). The framework is based on a model of trust from academic literature (Table 2) and a model of the customer resource life cycle (Table 3), and then validated by comparing the issues generated in the framework to issues identified in a review of academic studies (Table 7), and to issues of concern raised in two surveys (Section 5.4).

Table 7. Comparison of the consolidated issues to the issues identified from existing literature

Supporting Literature	Contents of trust building strategies / features	Extent to which the issues that the strategies / features indicate are included in the issues consolidated in Table 4 O: Fully included △: Partly included X: Not included	
1. Providing assuring information reported by others			
TRUSTe (Cheskin, 1999, Cheskin, 2000, McKnight and Chervany, 2001)	- Privacy policy is displayed - Adhere to the established privacy policy - Agree to comply with oversight and consumer resolution process	Included in personal information related issues	O
BBBonline (Cheskin, 1999, Cheskin, 2000, McKnight and Chervany, 2001)	- At least one year in business - Show satisfactory problem resolution history	Included in personal information and store presence issues	O
WebTrust (Kovar et al., 2000a, Kovar et al., 2000b, McKnight and Chervany, 2001)	- Data will be transmitted securely - Data will be stored on the company's computers securely - Keep stated policies about how transactions will be handled (including delivering the goods promised, in the time frame promised) - Keep stated policies about how personal information will be used	Included in personal information and customer service issues	O
VeriSign (Cheskin, 1999, Cheskin, 2000, McKnight and Chervany, 2001)	- Encryption is working - The website belongs to the company	Included in personal information and store presence issues	O
Customers' feedback (Lim et al., 2001)	- Cheap price and saving time - Excellent customer service and fast delivery - Secured store - Convenience	Included in product price/quality, customer service, and personal information issues. Convenience is a benefit, and hence is not included	△
Advertising reputation (Cheskin, 1999, Cheskin, 2000, Jarvenpaa et al., 2000, McKnight and Chervany, 2001, Wetsch and Cunningham, 1999)	- Describing history - Quoting policies (customer satisfaction, returns, and refund) - Consumer testimonials	Included in store presence and customer service related issues	O
2. Providing assuring information about store policies and practices			
Privacy/Security policy (Fogg et al., 2001, Hoffman et al, 1999, McKnight and Chervany, 2001, Wetsch and Cunningham, 1999)	- Information to protect privacy / security	Included in personal information issues	O
3. Utilizing trust transfer			
Link from a reputable site (Stewart, 1999,	- The positive attributes of a reputable site influence consumers' perceptions of	Not included since it is difficult to use arguments for this experience	X

Stewart, 2003)	unknown sites		
Referrals from a person with strong personal ties (Kim and Prabhakar, 2000)	- Positive word of mouth referral from a person with strong personal ties	Not included since it is difficult to use arguments for this experience	X
4. Providing opportunities for interaction and cues for simple examinations			
Responsive communication (Gefen and Straub, 1999, McKnight et al., 2002)	- Receiving e-mail responding favorably to consumers' comments and suggestions	Not included since it is difficult to use arguments for responsive interaction	X
e-mail confirmation (Fogg et al., 1999)	- Receiving e-mail for a confirmation of an order	Included in customer service issues	O
Navigation (Cheskin, 1999)	- The ease of finding what the visitor seeks	Not included since it is difficult to use arguments for ease of navigation	X
Fulfillment (Cheskin, 1999)	- Protection of personal information - Return policy - Simplicity of process - Tracking/Recourse	The issues of the first two are included in personal information and customer service related issues. The issues for the latter two are not included since it is difficult to use arguments for these design issues	△
Technical functionality and speed (Cheskin, 1999)	- Functionality - Speed	Not included since it is difficult to use arguments in these design issues	X

In order to demonstrate applicability of the framework, the framework has been applied to ten highly profiled websites[2]. Using the list of consolidated trust issues identified in Table 4 as a guide, a total of 42 trust related arguments were identified in the ten sites (Table 8).

Table 8. Number of arguments used in ten selected web sites

Trust issues	Number of Arguments
Credit card shopping may not be safe	9
My personal information may not be protected	8
Information transmission may not be secure	7
A store may request unnecessary information about customers	6
Price may not be reasonable	5
Product quality may be low	4
Return may be troublesome	2
Store may not keep a delivery date	1
Total	42

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[2] The ten sites were selected from two sources: eCommercetime.com, and Strikingitrich.com. According to eCommercetimes.com (Mahoney, 2001), there would be eight Dot-Com Survivors. They are: eBay, Yahoo!, Amazon, iQVC, JCPenney.com, Active.com, Barnesandnoble.com, and Travelocity. These eight sites were selected and two sites (Coastal Tool and Cassette House) were added based on the commendations in "Strikingitrich.com: profiles of 23 incredibly successful web sites you've probably never heard of" (Easton, 2000). Because they do not have their own retail shops, Yahoo! and Active.com were replaced by two reputable click and mortar retailers (Wal-Mart and Sears) based on colleagues' recommendations. Although these ten might not be the best models, all are likely to be recognized as successful retailing sites.

How do these sites fare in terms of covering the concerns listed in Table 4? As the data in Table 8 indicates, arguments are most likely to be found for those issues associated with personal information and credit card information requests, use and protection, followed by price and product quality arguments that are provided in half of the stores, and very few stores attend to trust concerns associated with customer service. However, the posting of arguments regarding issues of customer service and store presence would be important, too. For example, when they place an order, consumers likely want to know whether or not their purchase is reversible before they place an actual order. In such cases, arguments about return and cancellation policies may help consumers to make the ordering decision with higher confidence.

The framework provided in this paper (Table 4) will be of benefit to both practitioners and researchers, by identifying the important trust-related issues that need to be accounted for in Internet stores. Practitioners can utilize this framework to discover the potential issues for which they should provide arguments and the potential issues that are not addressed in their existing websites. For researchers, the paper provides a foundation for examining trust-related arguments as a way to improve consumers' trust.

Future research in the area of using trust-related arguments include the following:

- The application of Toulmin's model of argumentation (1958) as a way to develop well-structured arguments in the Internet setting can be a future research topic. Gregor and Benbasat (1999) have observed that the explanations that confirm to Toulmin's model of argumentation (1958) were found to be more persuasive and to lead to greater trust in several studies in the expert system settings. Ye and Johnson (1995) have also suggested that application of Toulmin's model provides a structured way to analyze and improve arguments.
- Examining the effects of different delivery modes on trusting beliefs can provide useful guidance for implementing arguments in Internet stores.
- Questions about which issues are more important for increasing consumers' trust may be examined empirically in future research.

7. Limitations and Concluding Comments

7.1 Limitations

Some limitations of this study must be considered when interpreting the paper. First, although the proposed framework was developed based on academic literature, generalization of this framework may require more empirical tests. Second, according to the Elaboration Likelihood Model, the influence of argument content on trusting beliefs depends on consumers' involvement in the issues of arguments. For example, it is possible that the effects of arguments are relatively high only when consumers actually try to buy a product from a store, but not so when consumers are just browsing a store unless they perceive arguments as a strong trust-assuring cue. Lastly, the current framework has not included various characteristics of evidence (e.g. novelty, recency, facts, and opinions), which can influence persuasion effects (Reinard, 1988). Further research considering characteristics of evidence would make this framework more comprehensive.

7.2 Concluding Comments

As the ample evidence from numerous academic studies and surveys of current and potential customers attest, lack of trust is the key impediment to the further proliferation of Internet shopping. This paper has proposed a framework for evaluation of trust-related arguments, which is expected to be an important means for increasing consumer trust, by identifying the potential trust issues that need to be accounted for in Internet shopping. This framework provides a base for future research to develop a comprehensive implementation guide of trust-related arguments. Currently, the effects of well-formed arguments are being investigated as a follow-on study, in addition to the effects of the different delivery modes of arguments to understand their influence on trusting beliefs.

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