
Explaining and Predicting the Impact of Branding Alliances and Web Site Quality on Initial Consumer Trust of E-Commerce Web Sites

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ABSTRACT: Trust is a crucial factor in e-commerce. However, consumers are less likely to trust unknown Web sites. This study explores how less-familiar e-commerce Web sites can use branding alliances and Web site quality to increase the likelihood of initial consumer trust. We use the associative network model of memory to explain brand knowledge and to show how the mere exposure effect can be leveraged to improve a Web site’s brand image. We also extend information integration theory to explain how branding alliances are able to increase initial trust and transfer positive effects to Web sites. Testing of our model shows that the most important constructs for increasing initial trust in our experimental context are branding and Web site quality. Finally, we discuss future research ideas, limitations, implications, and ideas for practitioners.

KEY WORDS AND PHRASES: associative network model of memory, brand awareness, brand image, branding alliance, e-commerce, information integration theory, Internet, trust, Web site quality.

TRUST IS CRITICAL IN FACILITATING E-COMMERCE and online transactions [3, 24, 26, 37, 43, 56] and in forming long-term customer relationships [15, 23, 37]. Trust is a strong, positive predictor of a consumer’s intention to purchase, which in turn is a good predictor of purchasing [15, 16, 39, 67]. However, the growth of e-commerce continues to be impeded by consumers’ lack of trust in online vendors [3, 24, 26, 37, 43, 56].

A key challenge to e-commerce is that creating trust typically requires multiple interactions and superior service over a period of time [22, 37]. Also, e-commerce Web sites that do not have established reputations or brands are at a disadvantage because consumers are more trusting of Web sites with recognized brands [4, 71]. For example, e-commerce Web sites with more established brands may be able to charge significantly higher prices than Web sites without established brands [11]. Also, unlike offline commerce, greater vulnerability exists in online transactions due to the seller’s physical absence [3, 13, 24, 43]. When consumers are unfamiliar with a vendor’s Web site, they are less likely to trust it and are therefore less likely to inquire about it and purchase products from it [22, 27]. Such factors can be substantial impediments to start-up companies, lesser-known firms, and firms entering new markets.

The inclusion of the brand of a well-known third-party company allows consumers to recall more meaningful, powerful information when deciding on a purchase [34, 35]. Co-branding alliances can cause the positive associations of a well-known company to be attributed to a less familiar entity [27, 63, 69]. Thus, co-branding alliances could be effective in improving trust in Web sites; however, little is presently known about co-branding with Web sites.

In addition, research attempting to tie Web site usability or quality to trust has shown mixed results and has been largely developmental. Hampton-Sosa and Koufaris [28] suggest compelling reasons for why consumers judge a Web site as an overall

reflection of the trustworthiness of a company (as also supported by [31]); however, their claims are not supported by empirical evidence. An adequate model integrating trust and Web site quality has yet to be set forth, either due to a lack of a model to account for empirical support of Web site quality leading to trust (e.g., [5, 50]) or a lack of empirical support of the proposed model [22]. Given the importance of trust in online transactions and the challenge of developing trust when a Web site involves a lesser-known brand, this study addresses the following research questions: When a company or brand is not well-known, are there ways—such as branding and Web site quality—to develop trust more rapidly, or should a vendor rely solely on exhibiting trustworthy behavior over time? If branding, Web site quality, and personal disposition to trust all impact consumer trust, which factors are most important? In this paper, we answer these questions and provide theoretical explanations for why third-party co-branding alliances and Web site quality should improve initial trust in unfamiliar e-commerce Web sites. We answer these questions while accounting for the complex, multidimensional nature of trust—in its nomological network—which is typically overlooked in current e-commerce studies [49].

Background

Defining Brand Equity, Brand Awareness, and Brand Image

A KEY GOAL OF ANY WEB-BASED BUSINESS should be to build brand equity to increase online transactions. A *brand* is “a name, term, sign, symbol, or design, or combination of them which is intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of competitors” [38, p. 442]. *Brand equity* is a measure of the favorable market outcomes that would not have occurred if the same product or service did not have that brand associated with the product or service [35]. Brand equity is created when a consumer has an awareness of a brand and an associated positive image that together create unique brand associations [35]. Hence, to achieve market advantages, it is critical for a Web site to increase brand knowledge. *Brand knowledge* [35] is composed of brand awareness and brand image. *Brand awareness* is a consumer’s ability to identify a brand under different conditions [35]. Brand awareness consists of brand *recognition* (a consumer’s ability to recognize that he or she has been previously exposed to the brand) and brand *recall* (the ability of a consumer to generate the brand from memory given a related cue, such as a product category) [35]. *Brand image* defines the set of negative or positive associations a consumer has with a brand [35]. These brand associations “are the other informational nodes linked to the brand node in memory and contain the meaning of the brand for consumers” and can vary in strength [35, p. 3].

Because cognitive science has shown that memory is durable, positive or negative associations are highly enduring; thus, it is crucial to promote positive brand associations. Traditional marketing techniques improve brand image by creating positive associations with a brand by describing positive attributes, carefully choosing memorable names, creating positive secondary associations, and so forth [35].

The Associative Network Model of Memory: Storing Brand Information

Before proceeding to the theoretical model, we describe the *associative network model of memory* upon which our theoretical model is built. Cognitive science researchers generally agree that the associative network model is a useful model of long-term memory (LTM) [1, 34]. In this model, LTM is “represented as a network of nodes and connecting links, where nodes represent stored information or concepts and links represent the strength of association between nodes” [34, p. 317]. This model is particularly powerful within the context of branding. This model explains that anything that relates to brand knowledge, such as brand-specific information, brand identification, product category, and so on, can be stored as a memory node [34]. The retrieval of information in LTM comes through *spreading activation* [1, 34]:

A particular node in LTM is activated by a retrieval cue, and activation spreads from that node to other linked nodes in LTM. When the activation of a particular node exceeds a threshold level, its contents are recalled. The strengths of the association between the activated node and all other linked nodes determine which nodes are activated. [34, p. 317]

As an illustration, Figure 1 represents the LTM of a hypothetical consumer with respect to his or her brand knowledge of Ritz-Carlton. The strength of the links between the nodes is represented by the thickness of the lines. Thus, given a retrieval cue—for instance, a Ritz-Carlton logo—the first node to be activated would be the “Ritz-Carlton” node. Next, through spreading activation, the most likely nodes to be activated would be *hotel* and *top service*, then *classy*, *refined*, *discreet*, *room service*, *sleeping in*, *pleasant*, and *relaxation*.

An effective retrieval cue is the key to retrieving information from a node. Brands, logos, and so on serve as such cues [34]. Thus, strong brand familiarity provides an effective retrieval cue for accessing brand knowledge. *Brand familiarity* “captures consumers’ brand knowledge structures, that is, brand associations that exist within a consumer’s memory” [12, p. 293]. It is important to note that “established successful brands help to create differentiation through brand associations that go beyond the limits of the features and attributes of the product itself” [42, p. 35].

Theoretical Model

OUR MODEL EXPLAINS AND PREDICTS HOW positive impressions of a third-party brand, stored in LTM, can be associated with and transferred to an unknown Web site, thus increasing initial trust in that Web site. Our theory is termed the *branding-association-trust model* (BATM), and is explained in four stages. First, using the associative network model of memory, we show how the *mere exposure effect* can create or strengthen positive brand image for existing brand nodes in a consumer’s memory. Second, we show how increased brand awareness, brand image, and Web site quality can be leveraged to increase initial trust. Third, we then extend *information integration theory* to

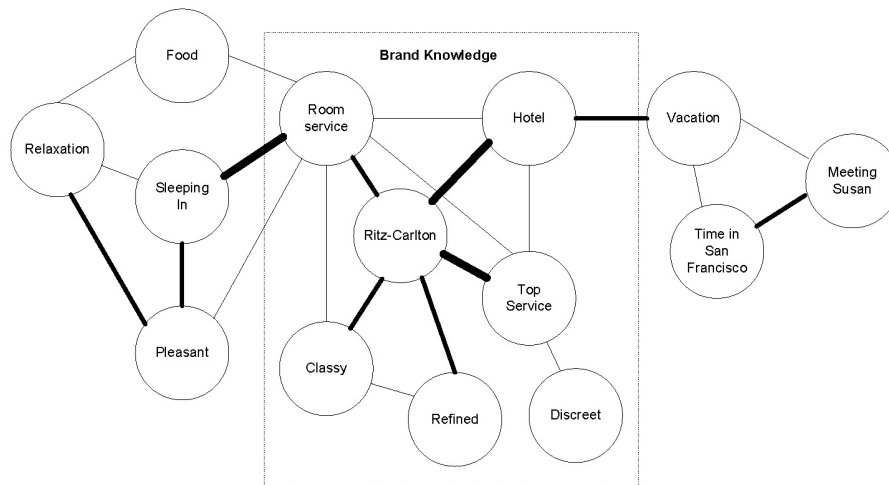


Figure 1. Example Representation of a Consumer's Long-Term Memory of Brand Knowledge

show how brand alliances can create stronger associations between well-known brands and unknown Web sites. Fourth, for nomological validity, we integrate our theory by confirming and extending McKnight et al.'s [49] model of trust to additionally show that initial trusting beliefs will be affected by consumers' institution-based trust and disposition to trust. Those beliefs, in turn, affect initial trusting intentions.

BATM Stage 1: Strengthening Stored Brand Image Through Exposure

We posit that greater brand awareness through repeated exposure will positively increase the image of a brand by creating or strengthening existing image nodes' links to the brand nodes stored in memory through the *mere exposure effect*. The mere exposure effect is the observed phenomenon that the "mere repeated exposure of the stimulus is a sufficient condition for the enhancement of the individual's attitude to that stimulus" [72, p. 384]. Bornstein conducted a seminal meta-analysis of more than 200 experiments on the mere exposure effect and summed up the phenomenon by stating that "familiarity leads to liking" [8, p. 265].

The *two-factor model of mere exposure effects*, initially developed in Berlyne [6] and extended in Stang [65], provides strong insights as to why and how the mere exposure effect occurs [8]. This model considers the combined effects of stimulus habituation and boredom [8] (the latter, which relates to long-term effects of repeated exposure, is not addressed in this study). *Stimulus habituation* accounts for the mere exposure effect primarily through the idea that people judge the unfamiliar to be threatening and thus develop negative impressions toward unfamiliar things.

Impressions through mere exposure are represented either by new nodes representing the impressions in memory associated with the brand knowledge node(s) or by

strengthening the association between existing impression nodes and brand knowledge nodes. Because nodes with links of higher strength are more likely to be retrieved [34], efforts to enhance impressions through repetition increase the likelihood of future positive impression retrieval.

We now apply this model to brand awareness and brand image and extend the model to e-commerce Web sites. Brand awareness increases with exposure to a brand and typically occurs through repeated advertising exposure over time. Brands with the most advertising tend to develop the most awareness and familiarity among consumers [7]. The positive effects of repetition have long been studied in advertising and are found to help improve positive impression and recall, which in turn result in a higher intention to purchase [61, 62]. Repetition of logos has also been used to help prime positive impression [58]. Moreover, as brands become more familiar through increased awareness, they are more likely to be favored as tried-and-trusted, familiar signals [29]. More brand awareness generally results in less threat to consumers because of increased familiarity, and thus results in more positive impressions, as manifested through improved brand image. For example, in Figure 1, the brand image of Ritz-Carlton would largely be manifested through spreading activation of the positive impression traits of *classy*, *refined*, *discreet*, and possibly through further activation of *relaxation* and *pleasant*.

Conversely, little exposure to a brand results in little awareness (manifested by few to no nodes being recalled, given a retrieval cue), which should result in increased threat to consumers, because of the unfamiliar and riskier nature of the brand, and thus more negative impressions, which will be manifested through a negative brand image. Given the above, we propose that brand awareness positively affects brand image:

Hypothesis 1: Exposure to a brand of which a consumer has high brand awareness will cause a more positive brand image than exposure to a brand of which a consumer has low brand awareness.

BATM Stage 2: Increasing Trust with Brand Awareness and Image, and Web Site Quality

Trust has been addressed in several e-commerce studies (see [24, 26, 48, 55] for a more complete review). Our study focuses primarily on initial trust because of its critical effect on first-time visitors to a Web site [43, 51]. *Initial trust* has been defined as the ability of the truster to believe and rely upon the trustee without any firsthand knowledge of the trustee [51].

Initial trust is composed of two subconstructs—trusting beliefs and trusting intentions. *Trusting beliefs* is defined in a Web context as a consumer's believing that a Web site will act with benevolence, integrity, and competence toward the consumer [49]. *Trusting intentions* "means that the truster is securely willing to depend, or intends to depend, on the trustee" [49, p. 337]. Trusting beliefs lead to trusting intentions, which lead to trust-related behaviors (e.g., purchasing). Therefore, our study focuses primarily on how (1) the Web site and (2) the brand affect initial trusting beliefs, which then affect trusting intentions.

Web Site Quality (Trust Source 1)

We now explain how positive impressions of a Web site's quality enhance initial trusting beliefs. Perceived *Web site quality* reflects consumers' overall perceptions of how well they think a Web site works and looks, particularly in comparison to other sites [49]. Web site quality has been examined by a diverse number of studies within the information systems (IS) [36, 60] and marketing disciplines [73]. Most studies have conceptualized Web site quality as a formative construct composed of several subconstructs, although there is no clear consensus as to which subconstructs to use [70]. At least 30 different subconstructs of Web site quality have been identified in literature [20]. However, typical components of conceptualizations of Web site quality include navigability [45], graphical style [53], and functionality [74]. We follow McKnight et al. [49], with Web site quality being defined by the user's general perception of navigability, aesthetics, and functionality of the Web site.

The positive link between Web site quality and trust is supported by Everard and Galletta [16], who explain how impression formation based on Web site quality affects trust in a very short period of time. They predict, and show empirical support, that the initial impressions of perceived Web site quality positively affect trust. Thus, perceived Web site quality serves as a retrieval cue and enables consumers to place trust in the Web site because it evokes feelings of trust toward the vendor. Similarly, Ha and Perks [27] conducted a study that found that increased experience with an effectively designed Web site increased the tendency of consumers to trust the Web site. Initial trust can also be increased by cues or impressions that serve as the strongest first general impression of the Web site [43].

Accordingly, if a consumer's initial experience with a Web site is negative (e.g., from a nonresponsive, inaccurate, or flawed presentation), then his or her initial impression (which will be used as a retrieval cue) is likely to activate a node and associated links that involve negative impressions; this would cause the consumer to infer negative beliefs about the vendor's attributes. Conversely, a consumer's initial impression of a professional, timely, and high-quality Web site as a retrieval cue is likely to activate an LTM node and associated links that involve positive impressions, which would enable the consumer to infer positive beliefs about the attributes of the vendor that enable initial trust and improve the perception of the brand's image.

While no memory nodes exist for a new Web site, the positive features of the new Web site could act as retrieval cues to nodes for quality Web sites or other contexts of high professionalism that the user has established in LTM. By linking the new Web site to these types of trusted attributes, trusting beliefs would be indirectly associated with the new Web site node through the trust-related attributes associated with the Web site. Moreover, as the Web site stimulates attributes needed for a trusted vendor, perceived Web site quality should also increase the perceived brand image of the unknown Web site.

Brand (Trust Source 2)

Similarly, brand knowledge can also explain how to enhance initial trusting beliefs. An exploratory study of the antecedents of online trust showed a positive relation-

ship between awareness of a company and trust in its Web site [71]. Like Web site quality, brand serves as a retrieval cue to affect the attributes of the vendor's image, which enables trusting beliefs. There are many brand attributes that can influence the feelings of trust that consumers have toward a brand, which are conveyed through the sense of brand image. Brands with positive brand image convey positive impressions that serve as associations to strengthen the consumer's belief that the trustee has positive attributes that are beneficial to the truster. Conversely, brands with negative images and unknown brands do not have associations within the consumer's memory to positively affect the beliefs of the truster. As a result, brands that have a positive image are associated with positive attributes that enable the truster to infer increased trusting beliefs in the vendor. This indirect association through brand image provides a basis for consumers to establish initial trusting beliefs in a Web vendor without the previous interactions that would normally provide the basis for trust. The tie between brand and trust becomes more important within the context of e-commerce Web sites because "brands can provide greater comfort online than offline in customer choice [13, 71]" [4, p. 136].

BATM Stage 3: Incorporating Information Integration Theory

Given Stages 1 and 2, we can now explain how brand alliances can be used as retrieval cues to activate associated positive attribute nodes and create positive links with unknown Web sites. A *brand alliance* is the "short- or long-term association of two or more individual brands, products, and/or other distinctive proprietary assets" [64, p. 31]. *Brand alliance* is also an umbrella term for co-branding and similar techniques such as cross-promotion, joint marketing, and joint branding [64]. Brand alliances can apply to the context of e-commerce Web sites because such alliances can be symbolic through use of brand names or logos [64]. Brand alliances allow unfamiliar brands to share the image of higher-image brands.

Simonin and Ruth [64] propose a theory that shows how preexisting impressions or associations with both brands in a brand alliance combine with perceptions of product fit and brand fit to create an overall impression of the alliance, which in turn directly predicts the overall impression of each brand. Simonin and Ruth's theory is based on research showing that secondary, non-product-based associations are powerful influences on the brand image nodes in memory [35]. These links need not be directly related to a brand—they simply need to be associated with a brand so that the association and brand are recorded as linked associations in memory. The model Simonin and Ruth [64] use to explain these ties is called *information integration theory* [2], which further explains how people will likely process existing nodes and associations and create new links between nodes (in our case, because of brand alliances).

This theory explains that "attitudes or beliefs are formed and modified as people receive, interpret, evaluate, and then integrate stimulus information with existing beliefs or attitudes" [64, p. 32]. The key to this model, then, is accessibility through stronger nodes and associations. If a belief about a brand is more accessible (a stronger link), individuals will be more likely to access the belief's node when retrieval cues

associated with the brand are used [17, 18, 64]. When such an associative node is more accessible, it will bias the information processing regarding the brand in the direction of the associated positive or negative impression [19, 30, 64]. In terms of the associative network model, strong impressions toward brands have stronger and more links to brand information nodes than weak impressions. These impressions are thus more likely to be retrieved when an external retrieval cue is given, resulting in increased positive or negative impressions. Applying this theory to brand alliances,

Judgments about the brand alliance are likely to be affected by prior attitudes toward each brand, and subsequent judgments about each brand are likely to be affected by the context of the other brand. The brand alliance stimulus information, presented through advertising or by experiencing it directly, accesses related affect and beliefs about those brands and the products that are stored in memory. [64, p. 32]

In our context, the brand alliance stimulus information (retrieval cue) is the brand name or logo.

To clarify our model, if one brand alliance partner has a weak network of associations and poor accessibility (the unknown Web site in our context), then the positive spillover effect of the strong alliance partner (the known brand in our context) on the weaker brand alliance partner will be strong [17, 18, 64]. As a result, any recalled associations relating to the stronger member of the alliance will then be associated with the weaker partner as well [10, 64]. However, "attitudes toward a familiar brand will be more resistant to change" [64, p. 34] because the strong brand will have an extensive network of nodes with strong associations and is thus less likely to be negatively affected by the unknown partner.

Simonin and Ruth's [64] empirical findings support their theory and show strong evidence for the notion of a lesser-known brand getting a "free rider" effect out of an unequal brand alliance. Simonin and Ruth also show that because highly familiar brands are highly resistant to changes [64], lesser-known brands generally do not negatively affect the image of well-known, entrenched brands [69]. In fact, most well-known brands generally benefit from branding alliances by strengthening preexisting positive brand knowledge [67, 69]. The same research suggests that co-branding could be effective for introducing new products with unknown brand names [69]. We extend this assumption, which provides an extreme form of a brand alliance, to partnering with an unknown brand. Although the scenario of a pure free rider has not been tested, the same trust transfer should occur if our theory holds. Combining the theory in this section (on brand alliances) with the theory in the previous section (which describes how brand awareness, brand image, and Web site quality affect initial trusting beliefs) yields the following hypotheses:

Hypothesis 2: A Web site of an unknown brand displaying an associated third-party brand of which a consumer has high brand awareness will elicit more initial trusting beliefs than a similar Web site with a brand for which less brand awareness exists.

Hypothesis 3: A Web site of an unknown brand displaying an associated third-party brand of which a consumer has a positive brand image will elicit more initial trusting beliefs than a similar Web site with a brand for which a less positive brand image exists.

Hypothesis 4: A Web site of an unknown brand that is perceived to have high Web site quality will elicit more initial trusting beliefs than a similar Web site that is perceived to have low Web site quality.

Furthermore, if this model holds, the impact of positive affective associations should go both ways: as long as the additional affective information does not conflict with existing associations, an unknown Web site that is judged to be of high quality should create a positive association for a third-party brand that serves as the retrieval cue for the unknown Web site.

Hypothesis 5: A Web site of an unknown brand that is perceived to have high Web site quality will generate a greater increase in positive brand image for an associated third-party brand than a similar Web site that is perceived to have low Web site quality.

BATM Stage 4: Extending to McKnight et al.'s Model of Trust

To complete our trust predictions and to maximize the nomological validity of our study, we include the predictors of trusting beliefs that have been previously examined—disposition to trust and institution-based trust. We include these predictors because they account for alternative explanations of how initial trusting beliefs may be affected in our study [43].

Disposition to Trust

McKnight et al. define *disposition to trust* as “the extent to which a person displays a tendency to be willing to depend on others across a broad spectrum of situations and persons” [49, p. 339]. They define two subconstructs to this construct: *faith in humanity* “means one assumes others are usually upright, well meaning, and dependable” [49, pp. 339–340]; *trusting stance* “means that, regardless of what one believes about peoples’ attributes, one assumes better outcomes result from dealing with people as though they are well meaning and reliable” [49, p. 440]. Important to our model is McKnight et al.’s prediction that one’s disposition to trust affects one’s trusting beliefs and positively affects institution-based trust [49]. In a related study, McKnight et al. found that one’s disposition to trust positively affected one’s trust in a Web site [52]. Gefen [21] also found that a person’s disposition to trust was the key determinant of trust in interacting with a Web-based vendor. This relationship was also supported in Gefen and Straub [24], Lee and Turban [41], Lim et al. [43], and Pavlou and Gefen [57]. McKnight et al. believe the explanation for these outcomes is that “disposition to trust is especially salient in e-commerce relationships because

these relationships are characterized by social distance, which limits the amount of information a consumer has about the vendor" [52, p. 254]. We replicate and extend these predictions and findings:

Hypothesis 6: One's disposition to trust positively affects one's initial trusting beliefs.

Hypothesis 7: One's disposition to trust positively affects one's institution-based trust.

Institution-Based Trust

McKnight et al. define *institution-based trust* as "the belief that the needed structural conditions are present (e.g., in the Internet) to enhance the probability of achieving a successful outcome in an endeavor like e-commerce" [49, p. 339]. They define two dimensions of institution-based trust: *structural assurance*, which "means one believes that structures like guarantees, regulations, promises, legal recourse, or other procedures are in place to promote success" [49, p. 339], and *situational normality*, which "means one believes that the environment is in proper order and success is likely because the situation is normal or favorable" [49, p. 339]. They also predict that institution-based trust is a positive predictor of trusting beliefs toward a Web-based vendor. In a related study, McKnight et al. [52] found that one's structural assurance positively affected one's trust in a Web site. The explanation for this relationship is that "consumers who feel safe about the Internet in general are more likely to trust a specific web business" [52, p. 255], a claim supported in Gefen et al. [26], Kim et al. [37], McKnight and Chervany [48], Pavlou [54], and Pavlou and Gefen [57]. We replicate and extend these predictions and findings to test the nomological validity of our model:

Hypothesis 8: One's institution-based trust positively affects one's initial trusting beliefs.

Hypothesis 9: One's initial trusting beliefs positively affects one's initial trusting intentions.

Figure 2 graphically summarizes the hypotheses that operationalize our BATM theory with the nomological extension to McKnight et al.'s model.

Method

Design

THE RESEARCH DESIGN FOR THIS STUDY WAS A multiblock experiment with logo/name usage and company image as the treatments applied to 298 participants. Participants were randomly assigned to one of 10 treatments. This research used only individual participants who were working and responding alone; pretest and posttest data were collected with each treatment.

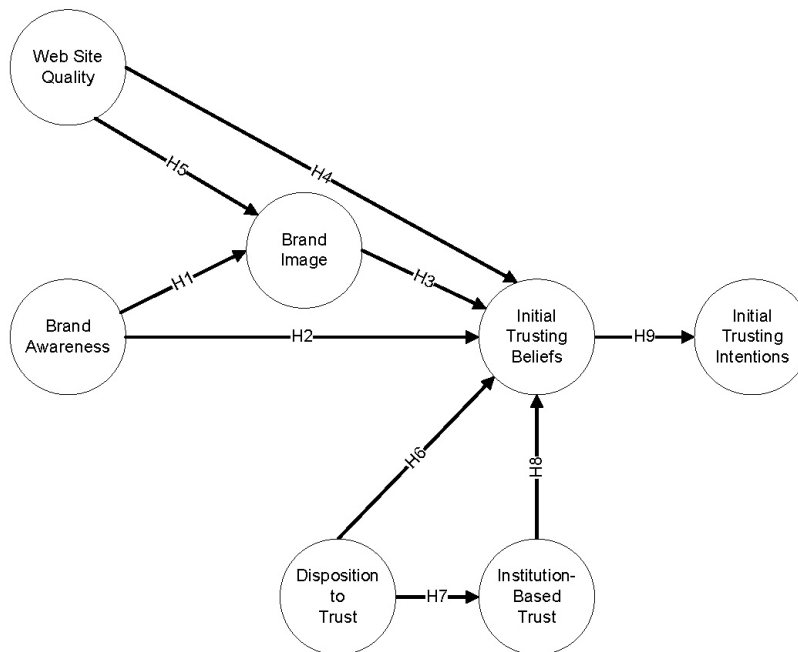


Figure 2. Theoretical Model

Participants

A total of 298 students at a large southeastern university participated in the experiment. All were students in sections of an introductory IS course required for business undergraduates and were offered extra credit to participate in the study. Thus, a range of business majors was represented in our sample. The same facilitator and same course were used for all data collection, which was done at four different times between December 2005 and January 2007. Human-participant approval was obtained for this study, and all standard procedures were followed. The participant pool was well balanced in terms of gender and diversity with respect to the demographics of the university. Even though participants were in an introductory course, the students tended to be older and more experienced than typical introductory course students: the average age was 22.8 (standard deviation [SD] 6.8), and the average years in college were 3.8 (SD 1.2).

Treatments

The experiment consisted of a Web-based simulation of a hotel reservation Web site similar to Expedia (www.expedia.com). According to an established randomization algorithm, a server randomly assigned participants to a treatment. This maximized randomization but caused unequal sizes of treatments. Participants were assigned to

Table 1. Summary of Treatments and Number Tested ($N = 298$)

Treatment	High-image third-party brand	Low-image third-party brand	Unknown third-party brand	Control
1. Logo-only branding	37	33	39	—
2. Name-only branding	18	20	18	—
3. Logo and name branding	31	29	32	—
Subtotals	86	82	89	41

a control (no name or logo), name only, logo only, or name and logo branding treatment with a high, low, or unknown third-party brand on the experimental Web site. We chose to deliver branding knowledge in these combinations so that we could also test whether any of these forms of retrieval cues were superior to the others. This procedure resulted in a 3×3 , fully crossed experiment with a control treatment. Before any treatment was experienced, all participants read instructions about the experiment and its procedures, provided basic demographic information, and participated in a pretest developed by McKnight et al. that measures one's disposition to trust [49]. Table 1 summarizes the treatments.

Brand Awareness and Brand Image

Participants viewed the HotelBooking.com Web site (the fictional Web site created for the experiment) with a third-party brand as indicated by a name and/or logo on the top and bottom of the page. Participants were given the realistic task of confirming a room reservation on this simulated hotel Web site. Both high-image (Ritz-Carlton) and low-image (Motel 6) brand conditions were considered high-brand-awareness conditions, whereas the fictitious hotel was considered a low-brand-awareness condition.

High, Low, or Unknown Third-Party Image

Each participant was shown a third-party logo and/or name for a high-image, low-image, or unknown lodging company. We used the names and logos of two actual lodging companies to serve as high- and low-image examples, and created a name and logo for a fictitious hotel to serve as an unknown brand.

Control

Control participants viewed the simulated Web site with no third-party sponsor shown on the page. This was the no-brand-awareness/no-brand-image condition. Participants were asked to complete the same task as participants in the other treatments.

After completing the task, participants answered questions that gathered their perceptions about their perceived levels of trust and their perceived image of the third-party brander. This procedure enabled us to gather the perceived image that each third party had on each participant and the perceived level of trust that the participant had in the simulated Web site.

Measures

We used an instrument developed by Javalgi et al. [33] to measure perceived image and another instrument developed by Lastovicka and Gardner [40] to measure brand awareness. A separate instrument was used to measure perceived online trust [49]. Minor wording changes were made to the image and the online trust instruments so that they were particularly applicable to the hotel booking Web site task.¹

Procedures

The experiment involved a simulated Web site that participants accessed from a computer. Experimental procedures given in an instructional packet were administered uniformly for all participants. The information packet contained an informed consent form and instructions for the experimental task. All relevant information was contained in the packet. Once participants finished reading the packet, they proceeded to the simulation Web site.

All participants completed a basic demographic survey and the pretest portions of the McKnight et al. [49] online trust instrument, which assessed participants' disposition to trust. Once participants accessed the experiment Web site, the simulation server randomly assigned participants to one treatment and forwarded them to the appropriate Web site.

We helped prevent hypothesis guessing by assigning a realistic task that did not directly affect any of our hypotheses or reveal the nature of our study. On the Hotel-Booking.com simulation Web site, participants were asked to confirm the reservation of an already selected hotel room as outlined in their information packet. Participants were required to use fake identities for the purpose of the experiment as required by the university institutional review board to complete the reservation. Once the participants reviewed the completeness and accuracy of the information and of the reservation, the experimental simulation was complete. The participants were forwarded to the posttreatment instrument on a separate Web page.

Analysis

Manipulation Validity and Treatment Tests

TO ASSESS THE MANIPULATION VALIDITY OF THE EXPERIMENT [9, 68], manipulation check questions were added to the posttest to determine to what degree participants per-

ceived their treatment manipulations. The manipulation check ascertained whether the participant had noticed the third-party company logo and/or name displayed on the simulation Web pages. Of the 298 participants, 18 did not notice the manipulation (not counting the 41 control participants). Although the 18 unmanipulated participants might have added unexplained variance to the results, data for these individuals were retained for analysis. Straub et al. suggest that although unmanipulated participants add additional variance to results, data for these participants may profitably be retained in the data set to provide "a more robust testing of the hypotheses" [68, p. 408]. Having established that the majority of the participants in our experiment were conscious of the manipulation, we chose the conservative approach of retaining the unmanipulated individuals to enhance the robustness of our tests, though this retention weakens our results.

We also tested whether brand and image treatments had the expected effect. In performing these tests, we retained the data of the participants who believed they were not manipulated; thus, the results are quite conservative. To check the efficacy of brand treatments, we grouped the participants by the well-known brands conditions ($\mu = 4.30$, $SD = 0.86$), and the control condition (no brand) and the fake brand were classified as unknown brands ($\mu = 4.04$, $SD = 0.88$). Using analysis of variance (ANOVA), this tested positively at $F = 6.30$ (1, 298), $p = 0.013$. To check the effect of image treatments, we grouped the control condition and fake brand as unknown brands that should have had low images ($\mu = 4.12$, $SD = 0.83$), and we separated the low-image condition ($\mu = 4.08$, $SD = 0.8$) and high-image condition ($\mu = 4.5$, $SD = 0.79$), with the expectation that the high-image condition should have the highest image. Post hoc Tukey's comparisons partially confirmed the efficacy of this treatment at $F = 6.37$ (1, 298), $p = 0.002$, showing that the high-image condition had the highest image; however, it was also shown that the unknown brands statistically had the same image as the low-image condition. (This interesting result is further explained in the Discussion section.)

As a final exploratory test, we examined whether it made a difference to branding if brand information was conveyed via logo only, name only, or a combination of logo and name. We felt this difference was more salient to the real brands conditions than to the unknown brand. The branding means were as follows: high-image brand logo ($\mu = 4.6$, $SD = 0.76$), high-image brand name ($\mu = 4.1$, $SD = 0.95$), high-image brand both ($\mu = 4.2$, $SD = 0.68$), low-image brand logo ($\mu = 4.2$, $SD = 1.1$), low-image brand name ($\mu = 4.2$, $SD = 0.8$), and low-image brand both ($\mu = 4.3$, $SD = 0.8$). This tested insignificantly at $F = 1.1$ (1, 168), $p = 0.360$. The image means were as follows: high-image brand logo ($\mu = 4.5$, $SD = 0.83$), high-image brand name ($\mu = 4.3$, $SD = 0.65$), high-image brand both ($\mu = 4.5$, $SD = 0.82$), low-image brand logo ($\mu = 4.1$, $SD = 1.0$), low-image brand name ($\mu = 4.2$, $SD = 0.68$), and low-image brand both ($\mu = 4.0$, $SD = 0.68$). This tested significantly at $F = 2.37$ (1, 168), $p = 0.04$. However, post hoc Tukey's comparisons revealed no significant differences. Overall, we conclude that use of a logo, name, or combination of a logo and name are similarly effective retrieval cues for establishing branding or an image.

Formative Versus Reflective Indicators

A key step before assessing factorial validity that has recently come to light in IS research is to determine which constructs are formative and which are reflective. Given that all of our measures were carefully validated in previous research, our analysis was largely confirmatory [14, 32, 59]. Likewise, it is also critical to consider whether any of the constructs represent second-order constructs composed of first-order constructs (or dimensions), which can be either reflective or formative [46, 59]. Based on this recent literature, the following constructs are formative—general Web experience, branding, and image. Conversely, personal innovativeness is reflective. We followed the clear conceptualizations and validations by McKnight et al. [49] on all of the trust constructs. (For a detailed description of the trust constructs, refer to McKnight et al. [49].)

Assessing Validity and Reliability

To establish the factorial validity of our reflective indicators, we followed the procedures outlined in Gefen and Straub [25] and used partial least squares (PLS) for our structural equation modeling (SEM) analysis. Following these procedures yielded very high convergent validity. For discriminant validity, we first looked at the correlation of the latent variable scores, which showed very strong discriminant validity (except for item 1 of follow advice, which was then dropped). We next compared the square root of the average variance extracted (AVE) for each construct to the correlations among constructs (e.g., [66]). This, too, confirmed high discriminant validity after the one-item adjustment in the previous step. This high discriminant validity is notable given the large number of highly related but conceptually distinct first-order trust factors. Finally, the composite reliability scores (similar to Cronbach's α in that they are both measures of internal consistency) showed high reliability.²

Validating formative measures is particularly challenging because indicators in formative measures can move in opposite directions from each other and can theoretically covary with other constructs; thus, reliability measures for formative measures are meaningless, and traditional applications of convergent and discriminant validity do not apply [59].

We used a modified multitrait-multimethod approach to validate our formative constructs, as originally proposed in Diamantopoulos and Winklhofer [14] and built on and demonstrated in Loch et al. [44] and Petter et al. [59]. We followed the emerging practice for checking convergent validity and discriminant validity, allowing us to conclude that reasonable discriminant validity exists with our formative constructs.³ Finally, because of the nature of formative measures, reliability checks cannot be reasonably made [14].

Given the strong reliability in the reflective measures, and the convergent validity and discriminant validity in the reflective and formative measures, we conclude that our measurement model is valid for analysis via PLS SEM.

Results of Theoretical Model Testing

Table 2 summarizes the hypotheses, the path coefficients, and the *t*-values for each of the theoretical paths in the model. The specific results are also depicted graphically in Figure 3. Figure 4 summarizes the refined model. The second-order constructs are represented with thicker construct borders.

Discussion

Summary of Results

BASED ON OUR STUDY CONDITIONS, WE FOUND several important relationships that support our underlying theoretical model. Brand awareness positively affected brand image (H1) and initial trust beliefs (H2), brand image positively affected initial trusting beliefs (H3), Web site quality positively affected initial trusting beliefs (H4) and brand image (H5), disposition to trust positively affected institution-based trust (H7), institution-based trust positively affected initial trusting beliefs (H8), and initial trusting beliefs positively affected initial trusting intentions (H9). The one prediction that was not supported was the proposed positive relationship between disposition to trust and initial trusting beliefs (H6).

Contributions

This study provides several contributions for researchers and practitioners. Most importantly, we show that an unknown Web site can create a branding alliance with a known brand (preferably one with a high branding image) and almost immediately gain an increase in trusting beliefs and intentions from Web site visitors. Accordingly, this is the first study to confirm the ability of a full “free rider” (completely unknown Web site) to positively participate in a branding alliance first studied by Simonin and Ruth [64]. Showing that trust can be rapidly fostered for an unknown Web site through a branding alliance is also very relevant for practice. As previously shown, trust is critical in facilitating online transactions and is a strong, positive predictor of a consumer’s intention to purchase, which in turn is a good predictor of purchases. Our theory and findings are particularly useful for start-up companies and firms entering new markets because it means they can compete more effectively in the short-term through brand alliances.

We also show that a consumer’s disposition to trust is not as important in our context as other factors. Much more important determinants of initial trusting beliefs—in order of highest effect—are Web site quality, brand image, institution-based trust, and brand awareness. Importantly, each of these constructs, other than institution-based trust, is directly controllable by a Web site’s designer. The differences in the strengths of the paths between brand image and brand awareness point to the importance of not just aligning with a known brand but aligning with a brand with a high image because brand image is more influential than brand awareness.

Table 2. Summary of Path Coefficients and Significance Levels

Hypothesis	Corresponding paths	Expected (actual) sign	Path coefficient	t-value (df = 298)
H1	Brand awareness → brand image	+	0.384	6.57***
H2	Brand awareness → initial trusting beliefs	+	0.142	2.74**
H3	Brand image → initial trusting beliefs	+	0.274	4.90***
H4	Web site quality → initial trusting beliefs	+	0.395	7.11***
H5	Web site quality → brand image	+	0.333	6.24***
H6	Disposition to trust → initial trusting beliefs	+	-0.029	0.52 ^{ns}
H7	Disposition to trust → institution-based trust	+	0.507	10.86***
H8	Institution-based trust → initial trusting beliefs	+	0.243	5.23***
H9	Initial trusting beliefs → initial trusting intentions	+	0.807	34.69***
N/A	Disposition to trust—benevolence is a first-order factor of disposition to trust	+	0.354	11.38***
N/A	Disposition to trust—integrity is a first-order factor of disposition to trust	+	0.380	16.35***
N/A	Disposition to trust—competence is a first-order factor of disposition to trust	+	0.325	11.47***
N/A	Disposition to trust—trusting stance is a first-order factor of disposition to trust	+	0.343	10.46***
N/A	Situational normality—general is a first-order factor of institution-based trust	+	0.161	21.23***
N/A	Situational normality—benevolence is a first-order factor of institution-based trust	+	0.228	24.44***
N/A	Situational normality—integrity is a first-order factor of institution-based trust	+	0.266	27.59***
N/A	Situational normality—competence is a first-order factor of institution-based trust	+	0.251	22.12***
N/A	Structural assurance is a first-order factor of institution-based trust	+	0.312	22.06***
N/A	Trusting intentions—depend is a first-order factor of initial trusting intentions	+	0.388	21.70***
N/A	Trusting intentions—follow advice is a first-order factor of initial trusting intentions	+	0.483	24.07***
N/A	Trusting intentions—give information is a first-order factor of initial trusting intentions	+	0.146	12.73***
N/A	Trusting intentions—make purchase is a first-order factor of initial trusting intentions	+	0.191	12.71***
N/A	Trusting beliefs—benevolence is a first-order factor of initial trusting beliefs	+	0.269	26.16***
N/A	Trusting beliefs—integrity is a first-order factor of initial trusting beliefs	+	0.418	48.49***
N/A	Trusting beliefs—competence is a first-order factor of initial trusting beliefs	+	0.413	35.43***
N/A	Personal innovativeness → Web site quality	N/A	0.348	6.34***
N/A	Web experience → Web site quality	N/A	-0.176	2.46**

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

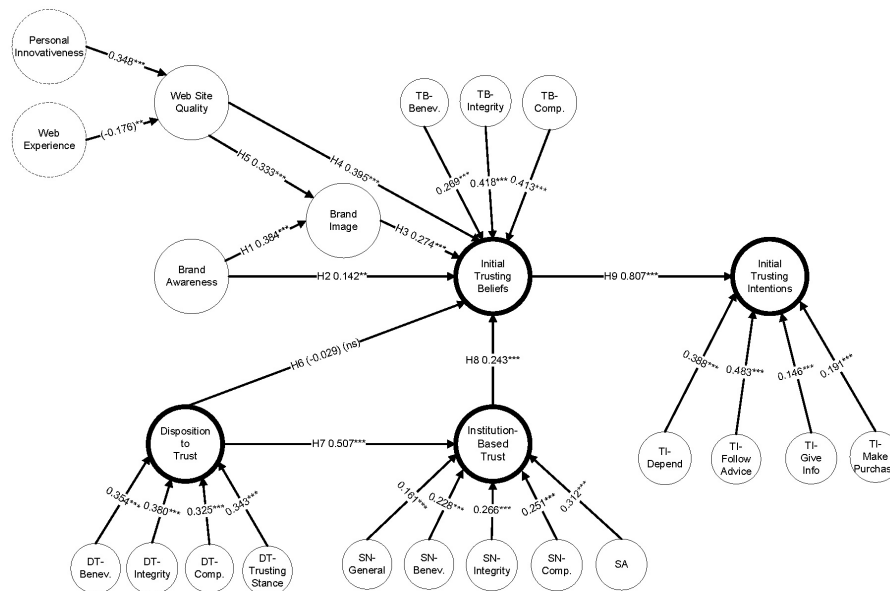


Figure 3. Model Testing Results

Notes: TB = initial trusting beliefs; DT = disposition to trust; SN = situational normality; SA = structural assurance; TI = trusting intentions. Variance explained is indicated for each construct as R^2 . The path coefficients, or betas, are indicated on the paths between two constructs, along with their direction and significance. The second-order constructs are represented with thicker construct borders (disposition to trust, institution-based trust, initial trusting beliefs, and initial trusting intentions). The significance of the path estimates was calculated using a bootstrap technique with 200 resamples. As would be expected, the R^2 s of the second-order factors did not include the first-order factors that made up the second-order factors because these would account for 100 percent of the variance in PLS. ** $p < 0.01$; *** $p < 0.001$.

It is worth noting that in our model, perceived Web site quality had the largest impact on initial trusting beliefs because this may be the factor most easily controlled by a Web site designer. This is a particularly important contribution, considering that previous related research on these ties has been largely exploratory, mixed, and inconsistent in its theoretical explanations. The comparative advantage of Web site quality in increasing initial trusting beliefs is strong: comparing the difference between the Web site quality path to initial trusting beliefs and the brand awareness path to initial trusting beliefs provides a high effect size of 0.30. The difference between the Web site quality path to initial trusting beliefs and the brand image path to initial trusting beliefs provides a medium effect size of 0.17. Even so, the strength of Web site quality in our model is likely understated because beyond the brand treatments, no differences were designed in the Web sites. Furthermore, it is noteworthy that Web site quality had an impact on perceived brand image that was nearly equal to brand awareness impact. This finding strongly supports our application of the associative network model of memory to branding alliances with unknown Web sites. Furthermore, this finding

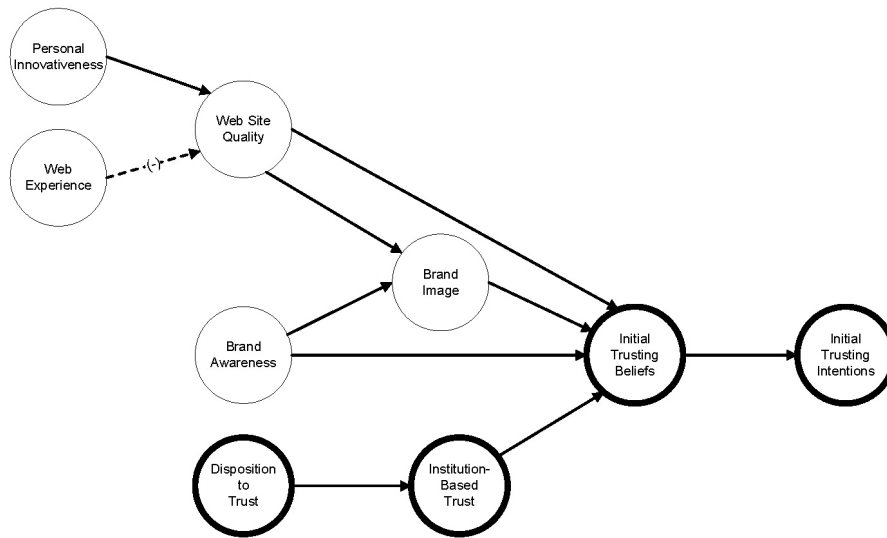


Figure 4. Final Theoretical Model

potentially explains why conditions of low/no brand knowledge had statistically equal perceived brand image as did the low-image brand condition. Absent any other brand knowledge cues, participants looked to the Web site quality for retrieval cues with which to make associations with brand image. Hence, the only way the no/low brand knowledge conditions would have had lower brand image would have been through association with low-quality Web sites. This finding can have a big practical impact on marketing campaigns that build brand awareness—indicating that Web site quality needs to be considered as a key tool in building such awareness.

To increase the nomological validity of our model, we extended it with a full integration of McKnight et al.'s [49] model of trust so that we could account for the complex and multidimensional nature of trust that is often overlooked in e-commerce research. First, we affirmed several important relationships in our context: between disposition to trust and institution-based trust (H7), between institution-based trust and initial trusting beliefs (H8), and between initial trusting beliefs and initial trusting intentions (H9).

Second, we also confirmed and further validated the multidimensional model of trust in e-commerce developed by McKnight et al.'s [49] theory where one of their findings did not fully support their theory—indicating that their prediction was correct. We both predicted that institution-based trust would positively affect initial trusting beliefs. However, McKnight et al. found no positive empirical link between the two, while we did. One key difference between our studies is that their task involved a legal Web site, whereas ours focused on a hotel reservation site. It could be that people are less likely to trust a legal Web site than a hotel reservation site because the law is complicated (and thus one may be at greater risk to trust a legal Web site), and our

study was based on simulated personal information. Exploratory research has shown that the determinants of and influences on trust differ according to the type of Web site and consumer [4]: if information risk is high, privacy and order fulfillment must tie strongly to trust; for information-intensive sites, navigation and presentation are the greatest determinants; for high-involvement category Web sites (i.e., financial services and cars), brand strength is the greatest determinant. Hence, an important theoretical extension that needs further investigation is the degree to which perceived risk is a negative moderator of the relationship between institution-based trust and trusting beliefs. Finally, we showed that a logo, name, or combination of a logo and name were similarly effective in creating a retrieval cue for LTM brand knowledge. Our model is able to explain that if a brand is well-known, it can be retrieved by its name or logo.

Limitations

One key limitation of our research is that the diminished strength of our manipulations likely diminished the strength of our results. We did not pretest the high-image brand and low-image brand treatments manipulations to see if they corresponded directly to high and low brand images; this correspondence was argued through logic and then supported by our empirical collection. However, we may have been able to find stronger differences between other brands in pretesting. In the case of the fake brand treatment, a pilot test could have revealed whether participants were able to discern whether the brand was real.

Furthermore, as this study involved an experiment, the study is limited in its generalizability to real-life settings. This study may also be bounded in its ability to be generalized to other business-to-consumer offerings outside of the online hotel reservation service offering. This study is also limited by the ability of survey-based measurements to fully reflect the true feelings of respondents. The participants may not have perceived the personal information given them in the packet as truly confidential and therefore may not have associated the same level of risk with the Web site simulation as they would have had they used their own personal information. The experimental task may have diminished the strength of the results.

The other generalizability limitation in this study may be the use of students. Although students are certainly appropriate target users of commercial travel Web sites, they likely have key differences from less-educated or older users. We believe that these other users may be affected more strongly by perceptions of Web site quality and co-branding because they likely have a lower level of institutional trust in the Internet because of less experience and exposure. This supposition clearly merits further research.

Extensions to Future Research

The slight but theoretically important differences between our task and that of McKnight et al. [49] points to the need to replicate our theoretical model for a variety

of sites and transaction types. Not surprisingly, the need for trust and the determinants of trust are not the same for all consumers and for all types of online transactions. Based on McKnight et al.'s study and our own results, additional research clearly needs to be conducted to examine other determinants of trust and to create typologies of determinants of trust for different types of Web sites and consumers.

However, it is important to emphasize that any positive links to an unknown Web site could be temporary and ephemeral in nature because repeated exposure is necessary to develop LTM. Thus, while the first impression may be positive, repeated exposure (holding true to our model) is critical for any enduring effects. Future research should consider the long-term trust-development process involving the use of branding alliances and performance. Lack of performance will always undermine trust and create a negative reputation.

As brands become more familiar through increased awareness, they are more likely to be favored as tried-and-trusted familiar signals. However, this principle has also been shown to occur with fake brands (called the false familiarity effect) [29]. It might also be useful to investigate whether fake retrieval cues could be used in the place of highly similar and legitimate retrieval cues. Another point of future research relates to the 14 participants who felt they did not experience the intended manipulation. Interestingly, even though we retained these participants' data in our model, the model results were very strong. Thus, it is possible that most of the participants were subconsciously manipulated. This could be an important artifact of the exposure effect, on which we build part of our theory. Bornstein's [8] seminal meta-analysis shows that to experience the exposure effect, participants need not recognize the stimulus. Thus, further research should investigate whether brief exposures to branding alliances result in a positive effect similar to the positive effect that occurs when one recognizes the exposure.

Other than the quality of the Web site, we measured and explored factors that may contribute to perceived Web site quality. Exploratory analysis suggested that a Web site user's personal disposition toward innovation is a strong positive factor in assessing Web site quality. Yet experience with Web sites was a weak negative predictor of perceived Web site quality. Thus, to the extent that Web site design can encourage exploration and innovation, it is possible that perceptions of Web site quality could be manipulated, despite the experience of the Web site user. We suspect that there could be a strong relationship between computer self-efficacy and personal innovativeness with Web sites. Joint research on Web site factors that could improve these constructs would benefit Web site quality impressions—and, most importantly, perceptions of trust.

Finally, we believe our findings can improve future research on third-party seals. Research on privacy and security seals has produced mixed results, but it has generally concluded that third-party seals fail to encourage significant trust [5, 47, 52]. Bart et al. concluded that "managers must go beyond privacy and security and focus on factors such as navigation and presentation, advice, and brand strength to enhance trust for their Web sites" [4, p. 148], as is supported elsewhere (e.g., [21, 27]). Similarly, in exploratory research, Bélanger et al. [5] failed to find support for the theory that

privacy and security seals could increase trust in Web sites. Instead, the researchers showed that reputation, Web site cosmetics, and other Web site attributes appear to better encourage trust.

Conclusion

Finding ways to increase initial trust in unknown e-commerce Web sites was the main goal of this study. Research shows that well-known, familiar brands are more trusted; yet applying this knowledge to unfamiliar e-commerce Web sites has been overlooked. Accordingly, this study explored how branding alliances are able to transfer positive impressions to unknown Web sites and increase the likelihood of initial trust by consumers. Our study indicates that, in our context, Web site quality and Web site branding are important constructs in developing consumer trust of unknown Web sites. Furthermore, Web site quality has an important effect on brand image.

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NOTES

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1. Full documentation of the scales is available upon request from the authors.
 2. Specific results of each factorial validity step are available upon request from the authors.
 3. Specific results of the formative validity check are available upon request from the authors.

REFERENCES

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1. Anderson, J.R. *The Architecture of Cognition*. Cambridge: Harvard University Press, 1983.
 2. Anderson, N.H. *Foundations of Information Integration Theory*. New York: Academic Press, 1981.
 3. Ba, S.L., and Pavlou, P.A. Evidence of the effect of trust building technology in electronic markets: Price premiums and buyer behavior. *MIS Quarterly*, 26, 3 (2002), 243–268.
 4. Bart, Y.; Shankar, V.; Sultan, F.; and Urban, G.L. Are the drivers and role of online trust the same for all Web sites and consumers? A large-scale exploratory empirical study. *Journal of Marketing*, 69, 4 (2005), 133–152.
 5. Bélanger, F.; Hiller, J.S.; and Smith, W.J. Trustworthiness in electronic commerce: The role of privacy, security, and site attributes. *Journal of Strategic Information Systems*, 11, 3 (2002), 245–270.
 6. Berlyne, D.E. Novelty, complexity and hedonic value. *Perception and Psychophysics*, 8, 5-A (1970), 279–286.
 7. Bogart, L., and Lehman, C. What makes brand names familiar? *Journal of Marketing Research*, 10, 1 (1973), 17–22.

8. Bornstein, R.F. Exposure and affect: Overview and meta-analysis of research, 1968–1987. *Psychological Bulletin*, 106, 2 (1989), 265–289.
9. Boudreau, M.; Gefen, D.; and Straub, D.W. Validation in IS research: A state-of-the-art-assessment. *MIS Quarterly*, 25, 1 (2001), 1–24.
10. Broniarczyk, S.M., and Alba, J.W. The importance of brand in brand extension. *Journal of Marketing Research*, 31, 2 (May 1994), 214–228.
11. Brynjolfsson, E., and Smith, M.D. Frictionless commerce? A comparison of Internet and conventional retailers. *Management Science*, 46, 4 (2000), 563–585.
12. Campbell, M.C.; Keller, K.L.; Mick, D.G.; and Hoyer, W.D. Brand familiarity and advertising repetition effects. *Journal of Consumer Research*, 30, 2 (2003), 292–304.
13. Degeratu, A.M.; Rangaswamy, A.; and Wu, J. Consumer choice behavior in online and traditional supermarkets: The effects of brand name, price, and other search attributes. *International Journal of Research in Marketing*, 17, 1 (2000), 55–78.
14. Diamantopoulos, A., and Winklhofer, H.M. Index construction with formative indicators: An alternative to scale development. *Journal of Marketing Research*, 38, 2 (2001), 269–277.
15. Dwyer, F.R.; Schurr, P.H.; and Oh, S. Developing buyer–seller relationships. *Journal of Marketing*, 51, 2 (1987), 11–27.
16. Everard, A.P., and Galletta, D.F. How presentation flaws affect perceived site quality, trust, and intention to purchase from an online store. *Journal of Management Information Systems*, 22, 3 (Winter 2005–6), 56–95.
17. Fazio, R.H. How do attitudes guide behavior? In E.T. Higgins and R.M. Sorrentino (eds.), *Handbook of Motivation and Cognition: Foundations for Social Behavior*, vol. 1. New York: Guilford Press, 1986, pp. 204–233.
18. Fazio, R.H. On the power and functionality of attitudes: The role of attitude accessibility. In A.R. Pratkanis, S.J. Breckler, and A.G. Greenwald (eds.), *Attitude Structure and Function*. Hillsdale, NJ: Lawrence Erlbaum, 1989, pp. 153–179.
19. Fazio, R.H., and Williams, C.J. Attitude accessibility as a moderator of the attitude-perception and attitude-behavior relations: An investigation of the 1984 presidential elections. *Journal of Personality and Social Psychology*, 51, 3 (September 1986), 505–514.
20. Field, J.M.; Heim, G.R.; and Sinha, K.K. Managing quality in the e-service system: Development and application of a process model. *Production and Operations Management*, 13, 4 (2004), 291–306.
21. Gefen, D. E-commerce: The role of familiarity and trust. *Omega: The International Journal of Management Science*, 28, 6 (2000), 725–737.
22. Gefen, D. Customer loyalty in e-commerce. *Journal of the AIS*, 3, 1 (2002), 27–51.
23. Gefen, D., and Straub, D.W. Managing user trust in B2C e-services. *e-Service Journal*, 2, 2 (2003), 7–24.
24. Gefen, D., and Straub, D.W. Consumer trust in B2C e-commerce and the importance of social presence: Experiments in e-products and e-services. *Omega: The International Journal of Management Science*, 32, 6 (2004), 407–424.
25. Gefen, D., and Straub, D.W. A practical guide to factorial validity using PLS-Graph: Tutorial and annotated example. *Communications of the AIS*, 16, 5 (2005), 91–109.
26. Gefen, D.; Karahanna, E.; and Straub, D.W. Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, 27, 1 (2003), 51–90.
27. Ha, H.-Y., and Perks, H. Effects of consumer perceptions of brand experience on the Web: Brand familiarity, satisfaction and brand trust. *Journal of Consumer Behavior*, 4, 6 (2005), 438–452.
28. Hampton-Sosa, W., and Koufaris, M. The effect of website perceptions on initial trust in the owner company. *International Journal of Electronic Commerce*, 10, 1 (Fall 2005), 55–81.
29. Holden, S.J.S., and Vanhuele, M. Know the name, forget the exposure: Brand familiarity versus memory of exposure context. *Psychology and Marketing*, 16, 6 (1999), 479–496.
30. Houston, D.A., and Fazio, R.H. Biased processing as a function of attitude accessibility: Making objective judgments selectively. *Social Cognition*, 7, 1 (Spring 1989), 51–66.
31. Jarvenpaa, S.L., and Tractinsky, N. Consumer trust in an Internet store: A cross-cultural validation. *Journal of Computer-Mediated Communication*, 5, 2 (1999), 1–35.

32. Jarvis, C.B.; MacKenzie, S.B.; and Podsakoff, P.M. A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *Journal of Consumer Research*, 30, 2 (September 2003), 199–218.
33. Javalgi, R.G.; Traylor, M.B.; Gross, A.C.; and Lampman, E. Awareness of sponsorship and corporate image: An empirical investigation. *Journal of Advertising*, 23, 4 (1994), 47–58.
34. Keller, K.L. Memory factors in advertising: The effect of advertising retrieval cues on brand evaluations. *Journal of Consumer Research*, 14, 3 (1987), 316–333.
35. Keller, K.L. Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57, 1 (1993), 1–22.
36. Kettinger, W.J., and Lee, C.C. Pragmatic perspectives on the measurement of information systems service quality. *MIS Quarterly*, 21, 2 (1997), 223–240.
37. Kim, H.-W.; Xu, Y.; and Koh, J. A comparison of online trust building factors between potential customers and repeat customers. *Journal of the AIS*, 5, 10 (2004), 392–420.
38. Kotler, P. *Marketing Management: Analysis, Planning, Implementation, and Control*, 8th ed. Englewood Cliffs, NJ: Prentice Hall, 1991.
39. Ku, Y.C.; Liu, C.; Marchewka, J.; and Mackie, B. A study of consumers' trust in privacy in electronic commerce. Paper Presented at Twelfth International Conference on Comparative Management, Kaohsiung, Taiwan, May 23–25, 2000.
40. Lastovicka, J.L., and Gardner, D.M. Components of involvement. In J.C. Maloney and B. Silverman (eds.), *Attitude Research Plays for High Stakes*. Chicago: American Marketing Association, 1979, pp. 53–73.
41. Lee, M.K.O., and Turban, E. A trust model for consumer Internet shopping. *International Journal of Electronic Commerce*, 6, 1 (Fall 2001), 75–91.
42. Leuthesser, L.; Kohli, C.; and Suri, R. $2 + 2 = 5$? A framework for using co-branding to leverage a brand. *Journal of Brand Management*, 11, 1 (2003), 35–47.
43. Lim, K.H.; Sia, C.L.; Lee, M.K.O.; and Benbasat, I. Do I trust you online, and if so, will I buy? An empirical study of two trust-building strategies. *Journal of Management Information Systems*, 23, 2 (Fall 2006), 233–266.
44. Loch, K.D.; Straub, D.W.; and Kamel, S. Diffusing the Internet in the Arab world: The role of social norms and technological cultururation. *IEEE Transactions on Engineering Management*, 50, 1 (2003), 45–63.
45. Loiacono, E.T.; Watson, R.; and Goodhue, D. WebQual: An instrument for consumer evaluation of Web sites. *International Journal of Electronic Commerce*, 11, 3 (Spring 2007), 51–87.
46. Lowry, P.B., and Briggs, R.O. Testing complex path models containing mixed interaction terms using the product-indicator and summated-indicator approaches. Working Paper, Information Systems Department, Brigham Young University, Provo, UT, January 2008.
47. Mauldin, E., and Arunachalam, V. An experimental examination of alternative forms of Web assurance for business-to-consumer e-commerce. *Journal of Information Systems*, 16, Supplement (2002), 33–54.
48. McKnight, D.H., and Chervany, N.L. What trust means in e-commerce customer relationships: An interdisciplinary conceptual typology. *International Journal of Electronic Commerce*, 6, 2 (Winter 2001–2), 35–59.
49. McKnight, D.H.; Choudhury, V.; and Kacmar, C.J. Developing and validating trust measures for e-commerce: An integrative typology. *Information Systems Research*, 13, 3 (2002), 334–359.
50. McKnight, D.H.; Choudhury, V.; and Kacmar, C. The impact of initial consumer trust on intentions to transact with a Web site: A trust building model. *Journal of Strategic Information Systems*, 11, 3 (2002), 297–323.
51. McKnight, D.H.; Cummings, L.L.; and Chervany, N.L. Initial trust formation in new organizational relationships. *Academy of Management Review*, 23, 3 (1998), 473–490.
52. McKnight, D.H.; Kacmar, C.J.; and Choudhury, V.M. Shifting factors and the ineffectiveness of third party assurance seals: A two-stage model of initial trust in a Web business. *Electronic Markets*, 14, 3 (2004), 252–266.
53. Montoya-Weiss, M.; Voss, G.; and Grewal, D. Determinants of online channel use and overall satisfaction with a relational, multichannel service provider. *Journal of the Academy of Marketing Science*, 31, 4 (2003), 448–458.

54. Pavlou, P.A. Institution-based trust in interorganizational exchange relationships: The role of online B2B marketplaces on trust formation. *Journal of Strategic Information Systems*, 11, 3 (2002), 215–243.
55. Pavlou, P.A. Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, 7, 3 (Spring 2003), 101–134.
56. Pavlou, P.A., and Fygenson, M. Understanding and predicting electronic commerce adoption: An extension of the theory of planned behavior. *MIS Quarterly*, 30, 1 (2006), 115–143.
57. Pavlou, P.A., and Gefen, D. Building effective online marketplaces with institution-based trust. *Information Systems Research*, 15, 1 (2004), 37–59.
58. Perfect, T.J., and Heatherley, S. Preference for advertisements, logos, and names: Effects of implicit memory. *Psychological Reports*, 80, 4 (1997), 803–808.
59. Petter, S.; Straub, D.W.; and Rai, A. Specifying formative constructs in information systems research. *MIS Quarterly*, 31, 4 (2007), 623–656.
60. Pitt, L.F.; Watson, R.T.; and Kavan, C.B. Service quality: A measure of information systems effectiveness. *MIS Quarterly*, 19, 2 (1995), 173–187.
61. Ray, M.L., and Sawyer, A.G. Repetition in media models: A laboratory technique. *Journal of Marketing Research*, 8, 1 (1971), 20–29.
62. Sawyer, A.G. The effects of repetition of refutational and supportive advertising appeals. *Journal of Marketing Research*, 10, 1 (1973), 23–33.
63. Shocker, A.D. Positive and negative effects of brand extension and co-branding. *Advances in Consumer Research*, 22, 1 (1995), 432–434.
64. Simonin, B.L., and Ruth, J.A. Is a company known by the company it keeps? Assessing the spillover effects of brand alliances on consumer brand attitudes. *Journal of Marketing Research*, 35, 1 (1998), 30–42.
65. Stang, D.J. Effects of “mere exposure” on learning and affect. *Journal of Personality and Social Psychology*, 31, 1 (1975), 7–12.
66. Staples, D.S.; Hulland, J.S.; and Higgins, C.A. A self-efficacy theory explanation for the management of remote workers in virtual organizations. *Organization Science*, 10, 6 (1999), 758–776.
67. Stewart, K.J. Trust transfer on the World Wide Web. *Organization Science*, 14, 1 (2003), 5–17.
68. Straub, D.W.; Boudreau, M.-C.; and Gefen, D. Validation guidelines for IS positivist research. *Communications of the AIS*, 13, 4 (2004), 380–427.
69. Washburn, J.H.; Till, B.D.; and Priluck, R. Co-branding: Brand equity and trial effects. *Journal of Consumer Marketing*, 17, 7 (2000), 591–604.
70. Wolfinbarger, M., and Gilly, M.C. eTailQ: Dimensionalizing, measuring and predicting e-tail quality. *Journal of Retailing*, 79, 3 (2003), 183–198.
71. Yoon, S.-J. The antecedents and consequences of trust in online-purchase decisions. *Journal of Interactive Marketing*, 16, 2 (2002), 47–63.
72. Zajonc, R.B.; Swap, W.C.; and Harrison, A.A. Limiting conditions of the exposure effect: Satiation and relativity. *Journal of Personality and Social Psychology*, 18, 3 (1971), 384–391.
73. Zeithaml, V.A.; Berry, L.L.; and Parasuraman, A. The behavioral consequences of service quality. *Journal of Marketing Research*, 60, 2 (1996), 31–46.
74. Zeithaml, V.A.; Parasuraman, A.; and Malhotra, A. Service quality delivery through Web sites: A critical review of extant knowledge. *Journal of the Academy of Marketing Science*, 30, 4 (2002), 362–375.

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