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# Effect of Brand Associations on Consumer Reactions to Unknown On-Line Brands

*Elena Delgado-Ballester and Miguel Hernández-Espallardo*

**ABSTRACT:** The temporal and spatial separation between on-line retail brands and their customers means that on-line transactions are characterized by uncertainty, anonymity, and lack of control. The resulting high perception of risk and fear of opportunism make trust a crucial element of electronic commerce. New on-line brands have a substantial barrier to the initiation of transactions by consumers because they are relatively unknown in comparison to their established and known counterparts. This study focuses on how new on-line brands can persuade consumers to engage in on-line transactions. Drawing on the branding and social psychology literature, an experiment was designed to ascertain how association with well-known brands increases customers' trust of an unknown on-line brand, along with other desirable behaviors, such as bookmarking, intention to purchase, and willingness to provide personal information. The results obtained from a sample of 265 subjects faced with the decision of buying a travel package from an unknown on-line travel agency show that association and similarity with a known brand are factors that promote customers' trust and behavioral intentions. The implications for theory and managerial activities are discussed.

**KEY WORDS AND PHRASES:** Brand trust, consumer behavior, degree of association, new on-line brands, perceived similarity.

The growth of business in consumer electronic commerce has been phenomenal in recent years. However, there are still some important barriers to the complete development of e-commerce [65]. The specialized literature mentions lack of trust in on-line brands as the most substantial of these [20, 43, 59].

How can new and relatively unknown on-line brands persuade consumers to engage in on-line transactions? This question is of special relevance because (1) many on-line retailer brands are new and relatively unknown to most consumers [11, 21], and (2) most of the studies in this area have not focused on *initial trust*, that is, trust in an unfamiliar on-line brand with which the consumer has no prior experience [33, 60, 65]. Given the disadvantages that new and relatively unknown on-line brands face, as compared to their established and known counterparts, the main goal of the present research is to analyze how initial trust and its behavioral consequences can be elicited in consumers' first visits to the Web site of an unknown on-line brand. Specifically, and inspired by the branding and psychology literature, the novelty of this study resides in its analysis of the association of unknown brands with known

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brands in an on-line environment as a mechanism for transferring attitudes and behaviors. This is an issue that deserves empirical analysis [53].

## Conceptual Framework and Hypotheses

In the context of Web-based commerce, initial trust is a very important element in persuading consumers to engage in the first on-line transaction, because it is during the first encounter with an unknown on-line brand that perceptions of risk and uncertainty are particularly salient. Users mitigate and overcome these perceptions by relying on signals or symbols or whatever information they have to make inferences about the unknown on-line brand before deciding to buy [39]. A number of studies on signaling and asymmetric information have examined how specific Web site characteristics and site appearance, the use of seals of approval, return policies and privacy disclosures, and assurances of security encryption and money-back guarantees all serve as quality signals and risk relievers [3, 11, 24, 32, 59, 60, 65].

Some opinions endorse the idea that other factors, such as branding, may also build trust and enhance the perception of value and quality [19, 29, 50, 53, 57, 65]. Ernst & Young reported that 69 percent of those surveyed stated that brand names play a significant role in their on-line buying decisions. Nevertheless, few studies have addressed the use of brand names as a trust-building tactic in an on-line environment. At the same time, there are several reasons why trustmarks (e.g., TRUSTe, VeriSign) are not always the best method to instill trust. For instance, consumers may not be familiar with the trustmarks, may not view them as assuring, may find them difficult to understand and vague, or may not even notice their presence on the Web [2, 34, 65]. This makes it more relevant to investigate alternative mechanisms to build initial trust, such as the use of well-known and reputed brand names. This approach is far from new in the off-line sector, where building brands through brand alliances is a common practice [57, 61]. However, no empirical studies have explored the phenomenon in the on-line context.

The present study is based on the fundamental idea that brand names are a powerful heuristic cue for evaluations and choice decisions because they often signal intangible offering properties that must otherwise be learned through experience. Taking this idea, the study proposes that a new and relatively unknown on-line brand, hereinafter termed the *target brand*, can overcome the significant weakness of having neither initial recognition nor an established reputation by being linked with a reputed and well-known brand, hereinafter the *source brand*.

Several research streams on attitude and belief formation provide robust theoretical explanations for the transfer of perceptions and impressions between brands [3, 41, 44, 56]. In an attempt to gain a more complete understanding of how this transfer process occurs, the present paper extends earlier research by focusing on the specific characteristics of the association between brands that favors this process.

Much of the prior research on social judgment and information processing assumes that impression and judgment transfers between two entities—in the

present instance, two brands—rely on the perception that they are related [31, 40, 47]. The logic behind this idea is clear: Perceptions of relatedness between two brands suggest in some way that they constitute a coherent and unified group, and this favors the formation of an initial impression of one brand in terms of the impression of the other. The question is, therefore, What characteristics determine perceptions of relatedness? Campbell's seminal work proposed that certain perceptual features, such as similarity or degree of association, are important bases of perceptions of relatedness [8]. Some recent studies that draw on Campbell's work, having operationalized these characteristics and empirically analyzed how they affect perceptions of relatedness, have concluded that they are relevant and valuable, and can be applied to electronic commerce [47, 48, 55]. Consequently, the discussion here focuses on these two characteristics to analyze in an empirical context how unknown on-line brands benefit from the reputation and image of established brands to persuade consumers to engage in on-line transactions. In particular, the study addresses two basic ideas:

1. The reputation, image, and general impression of the established brand (i.e., the source brand) will be transferred to the consumer's perception of the new and unknown on-line brand (i.e., the target brand) to the extent that the target is perceived as similar to the source.
2. The reputation, image, and general impression of the established brand (i.e., the source brand) will be transferred to the consumer's perception of the new and unknown on-line brand (i.e., the target brand) to the extent that the target is perceived as associated with the source.

In both cases consumer perceptions will manifest themselves in different attitudes and behaviors toward the target brand that are desirable in generating on-line sales. These ideas are explored below.

### ***Effect of Perceived Similarity Between Products/Services on Consumer Reactions to a New On-Line Brand***

Judgments of similarity between the products/services offered by two brands that are presented together are expected to play a significant role in how consumers respond. Perceived similarity is the extent to which consumers perceive products/services to be compatible [37]. Its importance lies in the fact that generalizations of affect and impressions between brands are enhanced when the products involved are viewed as having a complement or substitute application and use context. Consequently, the literature considers similarity as composed of two dimensions: substitutability and complementarity. In a relational-cooperative context, where two brands are presented together and transfer effects are analyzed, it can be expected that complementarity, which is related to the degree in which two brands might be consumed jointly to satisfy some particular and common need, is the relevant dimension, as

compared to substitutability, defined as the degree to which two brands have a common application and use context such that one can replace the other in usage. Therefore, in this research similarity has to be viewed from a complementarity perspective.

The concept of similarity has been used by studies in multiple-product marketing settings, such as brand alliances, joint sales promotions, brand extensions, and sponsorship activities [1, 12, 13, 35, 37, 51]. In all these cases, predictions have been based on several theoretical perspectives that use the concept of similarity to explain the processes underlying evaluative judgments; for example, cognitive consistency, stimulus generalization, affect transfer, and categorization theory [10, 22, 31, 56, 64].

In particular, categorization theory suggests that general affect can be transferred from one object (the source brand) to another (the target brand) by virtue of category-based processing. From a categorization perspective, consumers' knowledge about products/brands forms integrated (i.e., schema-like) structures in memory. Such memory structures are composed of similarly perceived/judged objects, referred to as a category, and an associated summary description (i.e., a prototype) that represents the category. Such organized knowledge allows causal or evaluative judgments to be made about a novel item (i.e., a brand). Therefore, a consumer making evaluative judgments about the target brand may evaluate it on the basis of the prototypical description already formed in memory, depending on the degree to which the target brands shares similar attributes with the known brand. As far as product category can be conceived as a brand attribute, if the two brands are perceived as similar in this attribute, existing impressions of the source brand can affect evaluative judgments or impressions toward the target brand. In short, judgments of similarity among offers play an important role in determining the degree to which the existing impressions of known brands can be extended to the new on-line brand. As a result, one might expect to find greater transfer of trust where there is higher similarity among offers.

*H1: The greater the perceived similarity between products involved, the more positive the initial trust will be toward the new on-line brand.*

Furthermore, because the ultimate variable of interest is the consumer's willingness to transact with the on-line new brand, it is also proposed that the degree of perceived similarity among the involved products favors behavioral responses toward the unknown on-line brand. The focus here will be on three behavioral intentions [43]: (1) share personal information with the on-line brand, (2) save the Web address or page of a Web site for the purpose of returning to it (bookmarking), and (3) purchase goods or services from the on-line brand. Each behavioral intention construct captures a projection or anticipation that the consumer will behave in a specified way.

*H2: The greater the perceived similarity between products involved, the more positive will be—*

*H2a: the initial willingness to provide the new on-line brand with personal information.*

*H2b: the initial bookmarking intentions toward the new on-line brand.*

*H2c: the initial purchase intention from the new on-line brand.*

### **Effect of Degree of Association Between Brands on Consumer Reactions to a New On-line Brand**

The degree of association between brands is another characteristic that determines perceptions of relatedness. It refers to expectations of unity and coherence among members of a group—in the present instance, between brands. Consequently, it favors the transfer of impressions from the source brand to the target. This premise is consistent with research in social psychology about how members of a group make social judgments [40, 48]. A basic assumption of this line of research is that the degree of association among the individuals in a group suggests in some way a perception of the group as coherent and unified. For example, there is little relation among people standing in a line at a bank, as compared to the degree of relation among members of a family. Thus, the degree of association favors the formation of an initial impression of one member in terms of the impression of other members of the group.

It is reasonable to think that if one member of a group is believed, say, to be trustworthy, then a newly encountered member of the same group may be assumed to be trustworthy to the extent that the group's members are perceived to be associated with one another.

The rationale behind the adoption of this theoretical reasoning to the present research context is that association among brands can range along a continuum of collaborative efforts. For instance, in the context of brand alliance, different forms of collaborations among brands have been analyzed as the research stream has matured. These range from publicity-based agreements to cooperation and integration further along the value chain in co-product development and/or commercialization. Between the two extremes of this continuum, other forms of relations exist that share different degrees of objectives, such as reputation endorsement and collaboration on core competences.

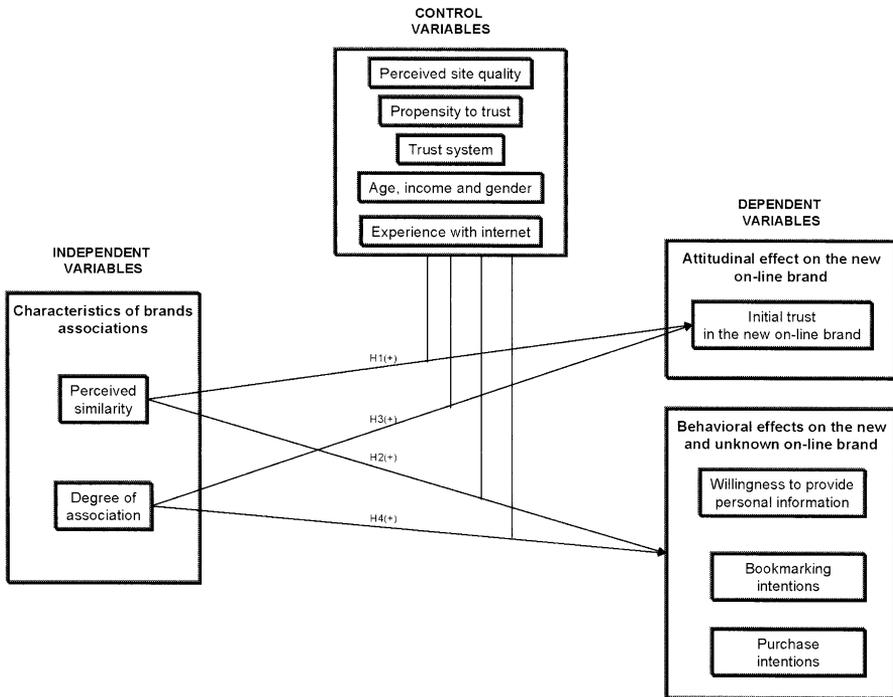
As a result of the reasoning outlined above, one would expect to find greater generalization of trust the greater the perceived association between brands.

*H3: The greater the degree of association between brands, the more positive the initial trust will be toward the new on-line brand.*

Furthermore, and based on the foregoing theoretical background, judgments of association between brands also elicit different behavioral intentions toward the target brand:

*H4: The greater the degree of association between brands, the more positive will be—*

*H4a: the initial willingness to provide the new on-line brand with personal information.*



**Figure 1. The Research Model**

*H4b: the initial bookmarking intentions toward the new on-line brand.*

*H4c: the initial purchase intention from the new on-line brand.*

Based on the preceding discussion, the overall research model (see Figure 1) posits that perceived similarity between products and the degree of association between brands (independent variables) influence users' trusting feelings and behavioral intentions toward a new and unknown on-line brand (dependent variables). While the specific focus of the present study is the impact of brand associations on reactions to a new and unknown on-line brand, it is appropriate to include other factors that the research literature has identified as influencing consumer perceptions or intentions to buy from a Web site. These are treated in this research as control variables, as explained below.

### **Control Variables**

Several studies have examined whether customers' perceptions of on-line trust and dispositions to transact are determined by Web site or consumer characteristics. Among the first set of factors, perceived site quality might be a strong predictor of initial trust in an on-line brand because the absence of human contact on a Web site confers the Web site with the title of being the only connection between the brand and its customers [27]. Consequently, the

first impressions of an unknown brand will be built upon the quality of its Web site [44]. Furthermore, consumers make strong presumptions about an e-brand based on what they experience in their initial encounters with it [58]. This being so, consumers' perceptions of the quality of the Web site are very likely related to their trust in the on-line brand and to their intention to engage in transactions with it [16, 46, 58].

Other sets of control factors included in the model are related to individual characteristics of customers. Propensity to trust, also known as disposition to trust, is viewed as a general willingness to depend on others or to perceive others as trustworthy [32, 33]. Its effect on trust formation can be especially significant when the consumer has no prior information about the brand [42]. This is, in fact, the case in the present study. Therefore, following the suggestion of past studies that propensity to trust should be included along with other variables in any model related to trust [32, 42], this personal characteristic is also incorporated in the present model to control for its probable effects.

The model also controls for the effects of the trust system, which is to say, the customer's trust in the Internet as a safe platform to perform transactions—a perception of the general reliability and functioning of the system that results in the belief that the Web has protective legal or technological structures that ensure that transactions can be conducted in a safe and secure manner. It is assumed that initial on-line trust might have a significant impact in the early stages of the development of a specific transaction with an unknown e-brand because of consumers' lack of firsthand knowledge about the new on-line brand [20, 55]

Based on previous research, the model also includes gender, age, income, and experience with the Internet. The impact of gender on buying behavior in an off-line environment has been the focus of attention of numerous academic papers, with the finding that women tend to be more involved in purchasing activities. There have been only a few similar studies in an on-line environment, but they hypothesize that gender plays a role on the Internet [4, 17, 55].

Age is another popular demographic characteristic used in previous consumer studies. Their findings suggest that the ability to process information declines with age and that attitudes and usage levels related to the Internet vary among age groups. This is especially so in respect to looking for purchase travel packages, the product category chosen in the present experimental study, as will be explained later [4, 17, 55, 62].

Regarding the income characteristic, some studies have found that there are still some disparities among income groups in regard to Internet penetration rates [4, 38]. It has also been found that people searching for travel information or purchasing travel packages are more likely to have higher incomes [62].

Finally, experience with the Internet may also be an important control variable, because more experienced users may have more information-processing ability to appreciate technical features of Web site design [6]. They may also be more discerning in their evaluations of Web sites and more comfortable using the Web to make a purchase [55].

Based on the above reasoning, all these variables were included in the model. Their moderating effects on the relationships were statistically controlled insofar as all of them might have an influence on the relationships among the independent and dependent variables.

## Methodology

### Experimental Design

The research model was tested using an experimental design on a simulated retail Web site. The experimental task consisted of buying a travel package—a prearranged holiday combination offered for sale at an inclusive price, covering a period of more than 24 hours and including transportation, accommodation, and other tourist services—in a fictitious (i.e., unknown to the participants) on-line travel agency ([www.todovacaciones.com](http://www.todovacaciones.com)). This type of service was selected for the experiment because:

1. Travel/tourism is one of the top product/service categories in on-line shopping. Therefore respondents with the appropriate background and experience were not as hard to find as in other industries.
2. Travel agencies are a relevant site to test for on-line trust because, in comparison to other types of products (music, books), they carry more inherent risk for users, making initial trust in the on-line brand more important.

Following common practice in experimental designs, a discussion group session was conducted prior to the main study [25]. This was intended to improve in two ways the chances that the main study would be adequately designed to comply with the research goal. First, it made it possible to select two types of products/services that differed in degree of similarity from the one offered by the unknown brand (a travel agency). This served to manipulate the *perceived similarity factor*. Second, the pretest also determined the two types of links between the target and the source brands that differed in their degree of association (*degree of association factor*). The group consisted of 15 individuals: 7 faculty and 8 students of business administration. They were all selected because they had experience in the use of Internet shopping and had bought at least one travel package before, and because of their knowledge of marketing research.

In the case of the perceived similarity factor, the members of the discussion group were provided with a definition of the concept (perceived similarity) and a list of different types of services. On the basis of this list, they were asked to select those services on the list that they perceived as more/less similar to the one offered by travel agencies. Hotels, car renting, airlines, and cruise lines were all considered as categories with high similarity to travel agencies. At the low end of this factor, the following sectors were initially considered: insurance, electricity supplier, banks, and retailing. On the basis of these two lists, the group members selected airlines and electricity suppliers as, respectively, the most and least similar to the offers of a travel agency. After the two services were chosen, a similar procedure was followed to select the brands that would act as the *source* in the trust-transfer process. The group members were provided with a list of airlines brands (Iberia, AirMadrid, Spanair, and AirNostrum) and a list of electricity brands (Endesa, EnelViesgo, Iberdrola, and Union Fenosa). From these two lists, Iberia and Endesa emerged as the

two most trustworthy and familiar brands in their categories.

A similar procedure was followed to select the two extreme examples of the degree of association between brands. The authors' review of the literature in co-branding and alliances, along with the discussion with the group members, led a consideration of the following set of alternatives: advertising link, recommended site, joint venture or other equity-based form of collaboration, partial ownership, and corporate group integration. When provided with an idea of what "degree of association" between brands means, the group members mentioned the advertising link and the corporate group integration as the two most extreme yet realistic forms of association between the unknown brand and the known brand. As will be described in detail later, the results obtained in the manipulation checks of the main study validated the decisions made at this stage of the research.

Hypotheses were tested by an experiment based on an intersubjective  $2 \times 2$  fully factorial matrix. The experimental manipulations involved two perceived similarity levels (high, represented by the airline brand, and low, represented by the electricity brand), and two links with different degrees of association between brands (high, represented by the corporate group integration, and low, represented by the advertising link). These experimental conditions resulted in four Web sites reflecting a combination of perceived similarity and degree of association, as shown in Table 1.

### **Web Design**

A fictitious travel agency Web site was created to serve as the unknown brand site ([www.todovacaciones.com](http://www.todovacaciones.com)). This made it possible to control for the effects of specific characteristics of the Web site, such as navigation appearance, variety of travel packages, and stable prices. It has been suggested that these cues influence consumer perceptions of the characteristics of on-line retailers, which in turn may influence the trust level [41].

The link between the Web pages of the brands involved in each experimental condition was created by displaying hypertext links on the target brand's site to the source's site. In the case of an advertising association, the source brand appeared in a special area on the Web site of the target brand, and this area was described as an advertising section (see Appendixes A and C). The corporate group link was indicated by signaling that the source and target brands belong to the same corporate group (see Appendixes B and D). A similar procedure has been used in other studies [45].

### **Sample and Procedure**

A sample of potential e-commerce customers was sought and randomly recruited by a fieldwork market research company. Subjects were randomly approached and later prescreened to find respondents who had made at least one on-line purchase during the past year. Proportions of men and women were specified to be balanced to avoid bias due to gender. Participants were scheduled for sessions in a room equipped with laptop computers. A total of

	<b>Low similarity between services (utility condition)</b>	<b>High similarity between services (airline condition)</b>
Low degree of association between brands (advert. condition)	TRAVEL AGENCY & ELECTRICITY SUPPLIER combined with an ADVERTISING link	TRAVEL AGENCY & AIRLINE COMPANY combined with an ADVERTISING link
High degree of association between brands (corporate condition)	TRAVEL AGENCY & ELECTRICITY SUPPLIER combined with a CORPORATE link	TRAVEL AGENCY & AIRLINE COMPANY combined with a CORPORATE link

**Table 1. Experimental Conditions of the Study.**

265 subjects completed the survey. The characteristics of the participants are summarized in Table 2. The majority were 25 to 44 years old and employed, spent an average of 8.6 hours per week on the Web, and had made on-line purchases in the last year. The average buying-decision involvement was 5.37 on a scale of 1 (not at all involved) to 7 (highly involved). This reflected the existence of risk perceptions among the participants, making initial trust in the on-line brand important.

Participants were randomly assigned to each of the four experimental group conditions described earlier (*see Table 1*). They accessed the study materials through a Web page that provided an explanation of the procedure. Instructions explained that they would be asked to engage in a shopping exercise related to a weekend trip. In particular, they were asked to imagine they were choosing a travel package and had enough money to pay for it. They were told to use only their assigned Web site to find a trip that was satisfactory.

After viewing the instructions, the subjects were directed to one of the four experimental Web sites and began to explore the travel packages offered on that site. After choosing the travel package they preferred most, they completed an on-line questionnaire. The questionnaire was set up so that the participants were required to answer all the questions before they could submit their responses, thus eliminating any possibility of missing values.

## **Measures**

Existing scales were used when available, and, where necessary, slight wording changes were made to adapt the questions to the context of the study. All multi-item scales were measured on a 5-point Likert scale with anchors from strongly disagree (1) to strongly agree (5). Only two scales (brand familiarity and perceived similarity) were measured on a 7-point semantic differential scale based on the literature. The source and nature of these scales are discussed below. The list of items for each scale can be seen in Table 3.

*Perceived similarity* between a travel package and each of the two other product categories (airlines and electricity supplier) was measured using a

**Sociodemographic and behavioral data**

	<i>n</i>	%
Gender		
Male	133	50.2
Female	132	49.8
Age group		
18-24 years	53	20.0
25-34 years	75	28.3
35-44 years	85	32.1
45-54 years	34	12.8
> 55 years	18	6.8
Hours per week spent on Internet	8.6	
Work		
Unemployed	12	4.5
Retired	5	1.9
Full-time	184	69.4
Housewife	7	2.6
Students	55	20.8
Number of on-line transactions in 2004		
1 transaction	39	14.7
2-4 transactions	107	40.3
5-10 transactions	47	17.7
> 10 transactions	72	27.2

**Table 2. Sample Information.**

three-item semantic differential scale. Participants assessed the degree to which the products (1) had something in common, (2) were compatible in their use, and (3) were complementary. These items were derived from previous studies [1, 30]. They indicate the extent to which subjects view two service/product offers as complementary, meaning that they could be consumed jointly to satisfy a specific common need.

*Degree of association* between brands was captured with two items that measured the participants' perceptions about the intensity of the business relationship between the two brands involved (the source and the target) in each type of link (advertising vs. corporate).

*Initial brand trust* was measured with a scale adapted from prior literature to reflect the evaluative, general, and abstract nature of the trustworthiness of on-line retailer brands [33, 59].

The measures of *willingness to provide personal information* and *bookmarking intention* were taken from the same study [59]. Regarding the former, subjects were asked whether they would be willing to share personal information with the unknown on-line brand. The bookmarking intention scale measured the participant's intention to save the Web address for the purpose of returning to it. Therefore, it implied an interest in visiting the site in the future.

*Intention to purchase* from the Web site was measured using a scale of two items taken from past research that reflects participants' expectation that they will make a purchase [7, 9].

Construct/indicator	Standardized loading	t-value	Reliability (SCR <sup>a</sup> , AVE <sup>b</sup> )
Perceived similarity (between products)			SCR = 0.91, AVE = 0.78
[PS1]. Do not have anything in common/Have something in common	0.89	18.08	
[PS2]. They are not compatible in their uses/They are compatible in their uses	0.86	17.01	
[PS3]. They are not complementary/They are complementary	0.91	18.78	
Degree of association (between brands)			SCR = 0.78, AVE = 0.64
[GV1]. Both brands have some degree of relationship	0.76	11.11	
[GV2]. Both brands are independent between them (R) <sup>d</sup>	0.85	12.15	
Brand trust			SCR = 0.92, AVE = 0.70
[T1]. Todovacaciones.com is trustworthy	0.83	16.39	
[T2]. I believe that todovacaciones.com will keep what it affirms in its Web site	0.87	17.46	
[T3]. Todovacaciones.com is a guarantee that I will not have problems when buying from the Web site	0.83	16.33	
[T4]. Todovacaciones.com can be trusted completely	0.85	16.82	
[T5]. Todovacaciones.com gives me confidence in buying from its Web site	0.82	16.05	
Bookmarking intention			SCR = 0.79, AVE = 0.50
[BB1]. I would save the address of the todovacaciones Web site	0.67	11.39	
[BB2]. I would bookmark the todovacaciones Web site	0.63	10.54	
[BB3]. If I need to look for another travel, I would return to visit this Web page	0.74	12.95	
[BB4]. I would save the todovacaciones Web site for another occasion	0.78	13.76	
Willingness to provide personal information			SCR = 0.88, AVE = 0.72
[W1]. If I were required to register with the todovacaciones Web site, I would be comfortable giving personal information	0.79	14.80	
[W2]. If I were required to register with the todovacaciones Web site, I would provide accurate information	0.85	16.58	
[W3]. If I were required to register with the todovacaciones Web site, I would provide complete information	0.92	18.44	
Intention to purchase			SCR = 0.66, AVE = 0.49
[IP1]. I would buy from this Web site	0.73	12.15	
[IP2]. I would use my credit card to purchase from this Web site	0.68	11.27	

Trust propensity					
[TP1] It is easy for me to trust other people	0.85	16.76			
[TP2] My tendency to trust other people is high	0.88	17.86			
[TP3] Trusting someone is easy	0.83	16.22			
[TP4] I tend to trust other people, even though I have little knowledge of them	0.83	16.30			
[TP5] I generally trust other people	0.83	16.23			
Trust system					
[TS1]. Using the Internet I feel safe in doing business	0.59	10.30			
[TS2]. I feel comfortable using the Internet to transact personal business	0.85	16.81			
[TS3]. The Internet has enough safeguards to make me feel comfortable using it to transact personal business	0.85	16.83			
[TS4]. I feel assured that legal and technological structures adequately protect me from problems on the Internet	0.84	16.62			
[TS5]. In general, the Internet is a safe environment in which to transact business	0.91	18.81			
Perceived site quality					
[PQ1]. This Web site provides complete information	0.73	13.06			
[PQ2]. This Web site has helpful pictures	0.69	12.15			
[PQ3]. On this site, it is easy to find the information I wanted	0.78	14.36			
[PQ4]. I would give this Web site an excellent rating	0.86	16.57			
Brand familiarity <sup>c</sup>					
[F1]. Brand [X] is not familiar to me/Brand [X] is familiar to me	0.97	21.51			
[F2]. I do not know brand [X]/I know brand [X]	0.98	22.20			
[F3]. I have not heard anything about brand [X]/I have heard something about brand [X]	0.97	21.48			

SCR = 0.92, AVE = 0.71

SCR = 0.90, AVE = 0.66

SCR = 0.85, AVE = 0.58

SCR = 0.98, AVE = 0.94

### Table 3. Construct Measurement Summary: Confirmatory Factor Analysis (CFA) and Scale Reliability.

Notes: <sup>a</sup> Scale composite reliability ( $\rho_c = [\sum \lambda_i]^2 \text{var}(\xi) / ([\sum \lambda_i]^2 \text{var}(\xi) + E\Theta_{ij})$ ). <sup>b</sup> Average variance extracted ( $\rho_c = [\sum \lambda_i^2 \text{var}(\xi)] / [\sum \lambda_i^2 \text{var}(\xi) + E\Theta_{ij}]$ ). <sup>c</sup> The data used to conduct the CFA are only those specified to the familiar and known brand. <sup>d</sup> The item was reversed to conduct the CFA.

*Perceived site quality* was measured with a scale of four items to reflect the participants' perceptions of the Web site's information quality and interface design [7, 43]. Classification data such as *age*, *income*, *gender*, and *experience with Internet* were collected at the end of the session to control for their effects in the set of dependent variables.

*Trust propensity* was measured according to a previous study [33]. The five items of the scale evaluated general willingness to depend on others. Finally, *trust system* was measured with five items that described the structural assurance of the Internet, namely, the belief that transactions on the Web can be conducted in a safe and secure manner [43].

As a manipulation check of the different levels of familiarity between the source brands and the unknown brand, *brand familiarity* was also measured. This measure was used to examine differences in familiarity between brands to validate the hypotheses testing the extent to which the target brand had to be less known and less familiar than the source brands. The scale was composed of three differential semantic items.

### **Measurement Properties**

Before testing the hypotheses, structural equation modeling, using LISREL was employed to estimate the measurement model on the multiple-item scales of the ten constructs used in the study [28]. The measurement model provided a reasonable fit to the data ( $\chi^2 = 867.23$ ,  $df = 549$ ,  $p < 0.00$ ; GFI = 0.85; CFI = 0.95; RMSEA = 0.044; SRMR = 0.045; TLI = 0.95; IFI = 0.95). Excluding the GFI, the traditionally reported fit indices were within the accepted range, especially TLI and IFI, which are recommended as Type II and III incremental indices over the GFI, which is an absolute fit index [26]. Reliability of the measures was calculated with the composite reliability index and the average variance extracted index [5, 18]. For all the measures, both indices were higher than the evaluation criteria of 0.6 for the composite reliability and 0.5 for the average variance extracted [3]. As shown in Table 3, all items loaded on their hypothesized factors and the estimates were positive and significant (the lowest  $t$ -value was 10.30), which provided evidence of convergent validity [5]. Discriminant validity was indicated since the confidence interval ( $\pm 2.0$  S.E.) around the correlation estimate between any two latent indicators never included 1.0.

Table 4 provides an overview of the means, standard deviations, and correlations of the construct. Appendix E provides the correlations, means, and standard deviations of the means.

## **Results**

### **Manipulation Checks**

One-way analyses of variance (ANOVAs) were conducted to assess whether the two independent variables (i.e., perceived similarity and degree of associa-

**Matrix of correlations and standard errors<sup>a</sup>**

Construct	Standard deviation													
	Mean	1	2	3	4	5	6	7	8	9	10			
1. Perceived similarity	3.96	1.69												
2. Degree of association	3.11	0.68	0.48*											
3. Brand trust	3.04	0.63	0.14**	0.19*										
4. Bookmarking intention	3.49	0.73	0.10	0.24*	0.34*									
5. Willingness to provide personal information	3.36	0.93	0.13***	0.15**	0.41*	0.28*								
6. Intention to purchase	3.29	0.86	0.14***	0.23*	0.54*	0.71*	0.59*							
7. Trust propensity	3.07	0.85	0.03	0.08	0.44*	0.03	0.25*	0.28*						
8. Trust system	3.14	0.87	0.01	0.05	0.48*	0.26*	0.48*	0.66*	0.35*					
9. Perceived site quality	3.29	0.73	0.21*	0.20*	0.62*	0.53*	0.26*	0.54*	0.22*	0.26*				
10. Brand familiarity <sup>b</sup>	4.46	2.42	0.32*	0.11	-0.08	0.08	0.00	0.06	-0.15**	-0.1	0.02			

**Table 4. Construct Means and Standard Deviations, and Correlation Matrix.**

Notes: <sup>a</sup> Correlations ( $\Phi$ ) below the diagonal.  $\Phi$ 's standard errors are displayed above the diagonal. <sup>b</sup> The data used to conduct the CFA are only those specified to the familiar and known brand. \*  $p < 0.01$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.10$ .

tion) were correctly manipulated. Each of the manipulation checks indicated that they were perceived as expected. The advertising link was perceived as representing a lower degree of bound than the corporate link ( $X_{\text{advert}} = 2.91$  vs.  $X_{\text{corporate}} = 3.06$ ,  $F_{1,263} = 4.928$ ,  $p < 0.05$ ). Respondents also perceived that, in comparison with the electricity suppliers, there was higher similarity between the services provided by the target brand (travel agency) and the airline services ( $X_{\text{airlines}} = 4.877$  vs.  $X_{\text{utility}} = 3.045$ ,  $F_{1,263} = 109.46$ ,  $p < 0.00$ ). Finally, the source brands received more favorable familiarity ratings than the target brand ( $X_{\text{familiarity\_sourcebrand}} = 4.46$  vs.  $X_{\text{familiarity\_targetbrand}} = 2.45$ ,  $F_{1,264} = -11.694$ ,  $p < 0.000$ ).

### **Test of MANCOVA assumptions**

A multivariate analysis of covariance (MANCOVA) examined the effects of perceived similarity and the degree of association on the specified dependent variables (i.e., brand trust, willingness to provide personal information, bookmarking intentions, and purchase intentions). Alternative explanations for the results were ruled out by using as covariates the set of seven control variables previously described (see Figure 1).

Before the analysis was performed, the assumptions of MANCOVA were tested. First, no high multicollinearity among the dependent variables was found (average  $r = 0.385$ , Bartlett test of Sphericity  $\chi^2(6) = 210.015$ ,  $p < 0.000$ ). Therefore all dependent variables were analyzed together. Second, the test of homogeneity of covariance matrices among groups was statistically significant (Box's  $M. = 78.890$ ,  $p < 0.00$ ), and so the assumption of homogeneity was not accepted. However, this has been found to have minimal impact if the groups are approximately equal in size [23]. Therefore, the robustness of MANCOVA could be assumed.

Finally, since only variables related to the dependent variables should be considered as covariates, the correlation coefficients among the control and the dependent variables were computed. Four of the interaction terms (age, experience with the Internet, gender, and income) were not correlated to the dependent variables. This result was in line with other studies in which demographic variables and experience with the Internet were not found to have moderating effects on trusting beliefs and intention to engage in on-line transactions [55]. In some sense, it suggests that the analysis of demographic profiles of general Internet users is becoming less important insofar as the penetration rate of the Web is increasing [4]. Therefore, these were not included in the final analysis. This procedure reduced the covariates to three variables: propensity to trust, trust system, and perceived site quality.

### **Test of Hypotheses**

After four of the covariates were eliminated from the analysis, a MANCOVA was conducted with the two independent variables, the four dependent variables, and the three remaining control variables as covariates. Before analyzing the main effects of the independent variables to test the hypotheses,

	Test	Value	F	Significance
Perceived site quality	Pillai's trace	0.301	27.460	0.000
	Wilk's lambda	0.699	27.460	0.000
	Hotelling's trace	0.431	27.460	0.000
Propensity to trust	Pillai's trace	0.900	6.332	0.000
	Wilk's lambda	0.910	6.332	0.000
	Hotelling's trace	0.099	6.332	0.000
Trust system	Pillai's trace	0.267	23.250	0.000
	Wilk's lambda	0.733	23.250	0.000
	Hotelling's trace	0.365	23.250	0.000

**Table 5. Multivariate Test of Significance: Effects of Covariates on Reactions to the New On-Line Brand.**

it is necessary to focus on the effect of the covariates on the set of dependent variables. The results showed that all of them exerted significant multivariate effects on the dependent variables (see Table 5). This suggested that it was appropriate to include the covariates in the analysis. Their inclusion in the model underlines the real significance of the effects of the independent variables upon the dependent ones.

Given their significant effects, MANCOVA yielded a nonsignificant multivariate effect ( $F_{4,255} = 1.477, p = 0.209$ ) of perceived similarity (H1 and H2). However, univariate results revealed that perceived similarity provided a statistically significant proportion of the explained variability observed in two behavioral responses of consumers (see Table 6). Specifically, brand associations with higher perceived similarity between their products/services enjoyed a significantly higher bookmarking (H2b,  $p = 0.060$ ) and purchasing intentions on the part of consumers (H2c,  $p = 0.042$ ). However, different degrees of perceived similarity did not significantly differ in brand trust (H1,  $p = 0.488$ ) and willingness to provide personal information (H2a,  $p = 0.627$ ). This implied nonacceptance of hypothesis 1, whereas hypothesis 2 can be partially accepted.

Hypotheses 3 and 4 dealt with the effect of the degree of association between brands on consumer reactions to the new on-line brand. Despite the significant effects of the covariates, this variable significantly contributed to explaining the additional variance of the dependent variables because MANCOVA offered a significant multivariate effect ( $F_{4,255} = 6.730, p < 0.000, \chi^2 = 0.095$ ) (see Table 7).

As for hypothesis 3, it posited that the greater the bounding or association between brands, the higher the initial trust toward the unknown on-line brand. Consistent with this prediction, univariate results revealed a significant difference in the groups' responses. It was concluded, accordingly, that the hypothesis was supported by the data (H1,  $p = 0.005$ ). Moreover, univariate analyses showed that the corporate link had a greater and more positive effect than the advertising link on reactions to the unknown brand in terms of providing personal information (H4a,  $p = 0.000$ ), bookmarking the Web page of that brand (H4b,  $p = 0.004$ ), and intention to purchase (H4c,  $p = 0.004$ ). These results gave support to hypothesis 4.

Test	Value	F	Significance
Pillai's trace	0.023	1.477	0.209
Wilk's lambda	0.977	1.477	0.209
Hotelling's trace	0.023	1.477	0.209

Univariate tests of significance							
Variable	F	Significance	$\eta^2$	Group	Item mean*	SD	n
H1	0.481	0.488	0.002	Low similarity	3.06	0.704	132
				High similarity	3.04	0.559	133
H2a	0.237	0.627	0.001	Low similarity	3.41	0.964	132
				High similarity	3.31	0.903	133
H2b	3.556	0.060	0.014	Low similarity	3.44	0.75	132
				High similarity	3.56	0.719	133
H2c	4.174	0.042	0.016	Low similarity	3.25	0.915	132
				High similarity	3.33	0.816	133

**Table 6. Multivariate Test of Significance: Effects of Perceived Similarity on Reactions to New On-Line Brand.**

\* Scores for all variables: 1 = strongly disagree, 5 = strongly agree.

<b>Test</b>		<b>Value</b>	<b>F</b>	<b>Significance</b>
Pillai's trace		0.095	6.730	0.000
Wilks's lambda		0.905	6.730	0.000
Hotelling's trace		0.106	6.730	0.000

<b>Univariate tests of significance</b>							
<b>Variable</b>	<b>F</b>	<b>Significance</b>	<b><math>\eta^2</math></b>	<b>Group</b>	<b>Item mean*</b>	<b>SD</b>	<b>n</b>
H3 Trust	8.033	0.005	0.030	Advertising (low association) Corporate (high association)	2.84	0.620	133
H4a Willingness to provide personal information	14.431	0.000	0.053	Advertising (low association) Corporate (high association)	3.26	0.577	132
H4b Bookmarking	8.446	0.004	0.032	Advertising (low association) Corporate (high association)	3.05	0.993	133
H4c Purchase	8.288	0.004	0.031	Advertising (low association) Corporate (high association)	3.68	0.749	132
				Advertising (low association) Corporate (high association)	3.33	0.79	133
				Advertising (low association) Corporate (high association)	3.67	0.63	132
				Advertising (low association) Corporate (high association)	3.04	0.868	133
				Advertising (low association) Corporate (high association)	3.54	0.791	132

**Table 7. Multivariate Test of Significance: Effects of Degree of Association on Reactions to New On-Line Brand.**

\* Scores for all variables: 1 = strongly disagree, 5 = strongly agree.

In addition to testing these research hypotheses, MANCOVA also allowed for the observation of the two-way interaction effect of the independent variables—perceived similarity and degree of association. The overall results for all the dependent variables together showed that this interaction effect was nonsignificant ( $F_{4,255} = 1.406$ ,  $p = 0.233$ ). However, one significant two-way interaction effect was found with regard to intention to purchase. For this dependent variable, the effect of perceived similarity was only significant at lower levels of association between brands (advertising condition) (advertising condition:  $X_{\text{high similarity}} = 3.26$  vs.  $X_{\text{low similarity}} = 2.66$ ;  $F_{1,131} = 16.509$ ;  $p < 0.000$ ; corporate condition:  $X_{\text{high similarity}} = 3.47$  vs.  $X_{\text{low similarity}} = 3.58$ ,  $F_{1,130} = 0.639$ ,  $p = 0.426$ ). Thus, in the advertising condition of the experiment, purchasing intention scores were larger when there was a high similarity between products/services (airline condition) than when the perceived similarity was low (utility condition).

Table 8 is a summary description of the results obtained in each experimental condition and for the hypotheses testing.

## Discussion of Findings and Implications

The purpose of this research was to provide insights into how consumers can be persuaded to engage in transactions with unknown on-line brands. Compared to previous studies that examined different kind of cues (e.g., perceived site quality, seals of approval, privacy disclosures), the originality of this study resides in its analysis of the interaction among commercial brands as a mechanism of transferring trust and eliciting behavioral responses to the unknown on-line brand. On the basis of the branding and social psychology literature, the study proposes that specific characteristics of that interaction, such as perceived similarity and degree of association among brands, may favor the transfer effect and the behavioral responses to unknown on-line brands.

The hypotheses were tested and partially supported using the data from an experiment. Based on the results obtained, degree of association among brands was found to be a more decisive factor than perceived similarity in consumer reactions to a new on-line brand. In particular, it favors the transfer of trust and elicits such behavioral responses as bookmarking the Web site of the unknown brand, providing personal information, and intention to purchase.

As for perceived similarity, it exerts a significant impact on bookmarking intentions, a behavior that entails very low risk and involvement on the customer's part. As suggested by the significant two-way interaction effect on purchase intentions, the effect of perceived similarity is only a determinant in situations where individuals perceive a low bounding among brands (i.e., the advertising link). In contrast, at the highest degree of association (i.e., the corporate group link) it does not matter whether there is any similarity between offers. Interestingly, the results also reveal that perceived similarity does not significantly affect behavior that is viewed as risky (e.g., provide personal information) and trusting perceptions. Therefore, new or unfamiliar on-line retailer brands may potentially benefit from efforts that highlight an association between the new e-brand and a familiar one because the perceived

	Low similarity (utility condition)	High similarity (airline condition)	H3	H4a	H4b	H4c
Low degree of association (advert. condition)	Trust = 2.70 Willingness = 2.88 Bookmarking = 3.12 Purchase = 2.66	Trust = 2.92 Willingness = 3.14 Bookmarking = 3.44 Purchase = 3.26	Trust = 2.84	Willingness = 3.05	Bookmarking = 3.33	Purchase = 3.04
High degree of association (corporate condition)	Trust = 3.26 Willingness = 3.72 Bookmarking = 3.62 Purchase = 3.58	Trust = 3.25 Willingness = 3.61 Bookmarking = 3.76 Purchase = 3.47	Trust = 3.26	Willingness = 3.68	Bookmarking = 3.67	Purchase = 3.54
H1	Trust = 3.06	Trust = 3.04				
H2a	Willingness = 3.41	Willingness = 3.31				
H2b	Bookmarking = 3.44	Bookmarking = 3.56				
H2c	Purchase = 3.25	Purchase = 3.33				

**Table 8. Mean Values of Dependent Variables in Each Experimental Condition.**

Note: Scales ranged from 1 = Strongly disagree, 5 = Strongly agree.

similarity factor is not enough to overcome the perceptions of risk and uncertainty derived from on-line purchases and interactions.

The insignificant effect of perceived similarity on trust perceptions differs from the positive impact obtained by Stewart [55]. It should be noted, however, that her notion of perceived similarity is between Web sites and not between offers. A possible explanation is that visual and perceptual similarity between Web sites is easier to evaluate than similarity between offers, thus facilitating inferences between brands and, therefore, the transfer of trust from the known and familiar brand to the unknown one.

With these results, the present study demonstrates that individuals who lack prior experience with a new on-line brand may manifest higher dispositions to trust it and engage in commercial transactions with it the more they perceive it to be associated with another, familiar brand and, to a lesser extent, the higher the perceived similarity between the offers. Previous studies suggest that transfer is a potentially powerful tool for building trust and is the result of using the name of another trustworthy third party [14, 15, 33]. The richness of the present study is that it provides conclusions about which characteristics of the third party favor the transfer process. In this sense, its findings provide some evidence for previous research that did not examine the factors that may favor the trustworthiness of an on-line brand prior to a transaction.

Important theoretical implications for the brand alliance literature are derived from this study. Research on brand alliances is generally concerned with and focused on pre-attitude toward brands, product and brand similarity and familiarity, and perceived quality implications for consumer evaluations of the brand alliance [36, 49, 52, 54]. The present study expands the understanding of alliances, especially in an on-line environment. To the best of the authors' knowledge, no empirical research has been conducted on brand alliances in an on-line environment that may help understand the characteristics and conditions that favor their acceptance by consumers. In fact, managerial reality is ahead of the academic community, as shown by the fact that the network nature of the electronic medium has capitalized the idea of partnering as a way of doing business and has even spawned its own brand of partnering through affiliate programs. Keeping in mind the situation described above, the present research effort represents a seminal empirical work that addresses the question of how new firms may choose alliance partners. For example, the study's findings suggest that the degree of relationship or connection between brands is more important than a similarity criterion between offers when choosing a familiar and well-known brand to pair or link to the target brand. Consequently, it would be of interest to place the latter in prominent locations on Web pages (e.g., in a partner showcase) to ensure that they are seen and to make the relationship between the brands very clear to viewers.

The study has also considered some control variables. In line with other studies, the results obtained confirm that demographics do not exert a relevant influence either on initial trust or on behaviors toward a new on-line-brand [4, 55]. However, a positive and significant influence was found in the individual's propensity to trust, the trust system, and perceived site quality, as previous studies have also empirically demonstrated [33, 58]. Managers of new on-line brand may consider the first two as important hints of two psychographic

factors that are of particular interest when directing the introduction of an on-line brand to a segment with higher disposition to accept it. The relevance of perceived site quality is another confirmation of the importance of this factor, particularly in new on-line brands, where individuals may be less inclined to give second opportunities.

## **Future Research Avenues**

Some of the limitations inherent in the design of the present study provide avenues for future research opportunities. The experiment was designed to examine how specific characteristics of brand associations may help transfer trust from a familiar brand to an unknown on-line one and motivate other behavioral responses. The limitations that typically apply to experimental research also apply here. Although a desirable benefit of an experimental design is the ability to isolate particular variables of interest and test for predicted effects, a weakness is its inability to capture other dynamic processes.

More research is needed to identify potential moderators and tease out alternative explanations. In the search for missing moderators, an important place to begin is the experimental paradigm used in this research. The initial objective of the research was to provide a baseline in a product market. Additional studies should test the effects in other products and services to determine whether the results found here are replicable. The participants were asked to assume that they were interested in buying a trip for a weekend but were not actually given an opportunity to do it in practice. Thus such factors as lack of interest could have affected the validity of the results. Future research needs to consider whether lack of interest makes individuals less motivated to process the information provided by the target brand and, consequently, to be more reliant on the source brand to infer a first impression of the unknown one.

An additional limitation of the study has to do with the use of the type of informational cues. The effect of the association between brands in the transfer process was assessed by controlling for the presence of other informational trust-cues (guarantees, privacy disclosures, etc.). The participants were not given any information on these issues, although they may also be effective in transferring trust and favor behavioral responses to the new brand. Studying the combination effects of different cues may also be fruitful.

Regarding the concept of perceived similarity, future researchers should take into account that the present authors see this as more akin to the idea of complementarity between two service/product offers, which is why they presented participants in the experiment with different pairs of offers that varied in their degree of complementarity (e.g., a travel agency and an airline are more complementary in their uses than a travel agency and an electric supplier). It seems logical to emphasize this complementarity characteristic in a cooperative context like the one analyzed in this study. Nevertheless, some researchers might see perceived similarity as related to the idea of substitute, which is the extent to which consumers view two product/services offers as having a common application and use context such that one product can replace the other in usage. Consequently, it would be interesting for future

studies to also analyze the perspective of substitutes, which is not dealt with in this study, when analyzing the effects of perceived similarity on consumer reactions to the new on-line brand. This would help to extrapolate the present results in contexts in which companies could be considering competitors to do business with them.

Regarding the manipulation of degree of association, only two extreme but realistic forms of associations between brands were considered in this study: the advertising link and the corporate group integration. Although one can conclude, in general terms, that the higher the degree of association, the better the effects on the new on-line brand, it is important to take into account that the conclusions of the study apply directly only to small companies that are on-line divisions of large corporations or have been bought up by them. Explicit consideration of other forms of association, such as affiliation programs, is open to future research.

In general, the use of different methodologies and contexts may prove to be interesting. Future research should provide other methods in order to provide triangulation with the present findings. As a guideline to other alternative experimental designs, new studies could consider that the study did not observe the transfer process directly but only some characteristics which favor that process. Consequently the experiment adopted a post-test design that observed and compared post-test observations between groups of participants after these groups had received a specific treatment (e.g., exposure to one of the four experimental conditions described in Table 1). Because initial attitudes toward the new brand and the familiar brand were not tested before exposure to the brand associations, new studies might adopt a different experimental design (i.e., a pre-test/post-test design) to observe whether the initial reactions toward the new on-line brand are more or less positive after participants are exposed to the brand associations.

Finally, the brands involved in the collaboration were observed together in the study, assuming, based on previous literature, that trust transfer occurs from the better-known to the lesser-known brands. However, there was no analysis of whether the transfer process may also exert spillover effects on the better-known brand, and this poses an interesting question. The study observed that brand associations "help" the lesser-known partner brands. It would be revealing to know whether the better-known brands are also helped, since otherwise they might not have an incentive to pair with lesser-known brands that contribute little but gain much from the partner. Furthermore, can a transfer process be reversed so that the perception that a known and an unknown brand are related serves to decrease trust and valuation of the known brand? Because the technology of the World Wide Web allows links to be sent with or without the consent of those who are linked, answering this question might be of interest for brand managers who want to protect the value and image of their brands from such practices [56].

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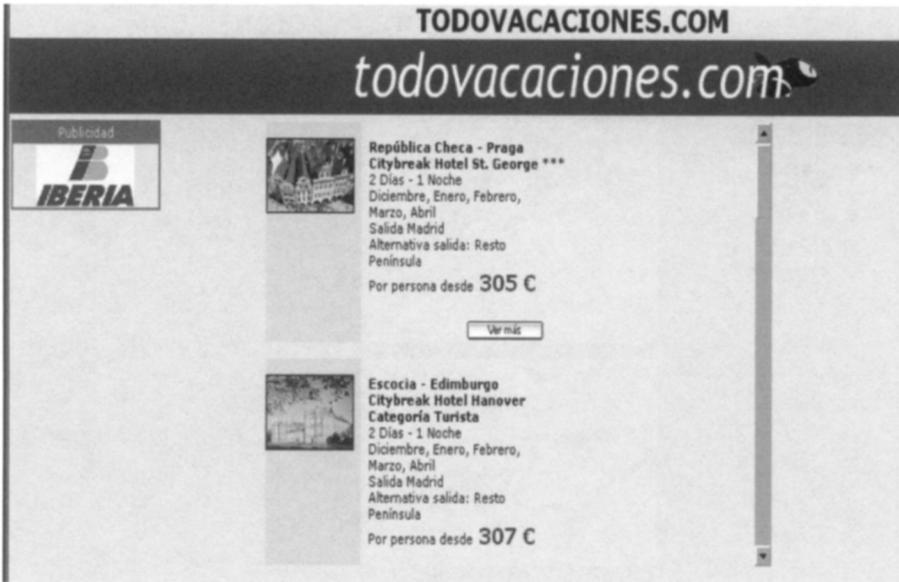
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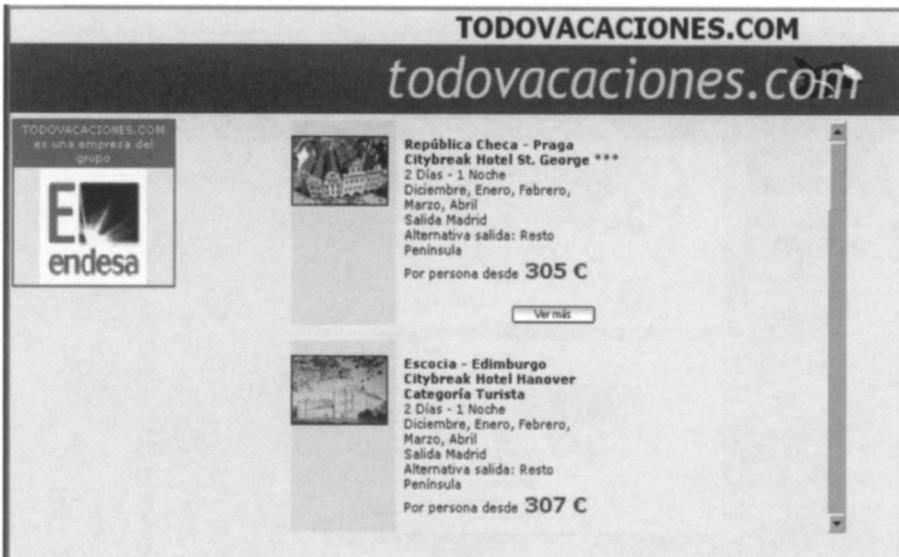
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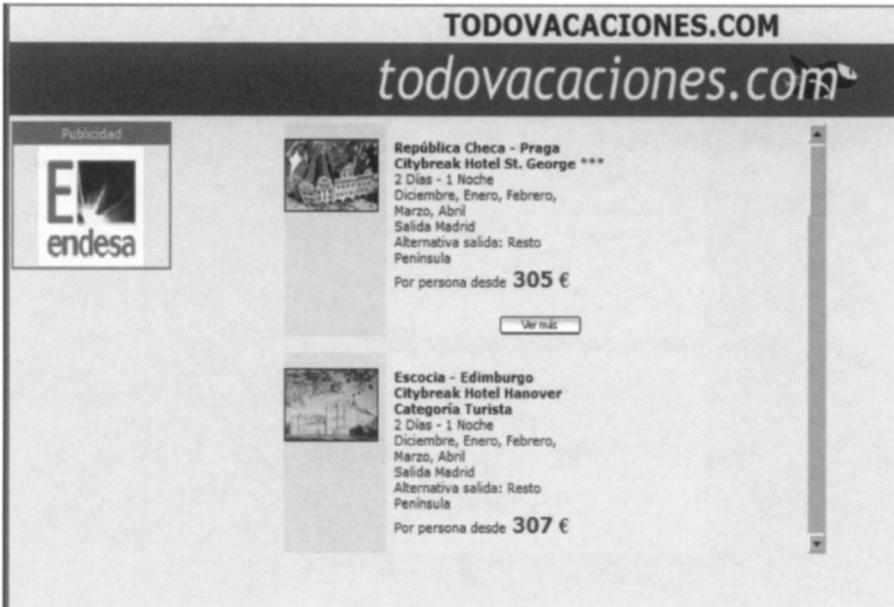
### Appendix A. High similarity and advertising link experimental condition



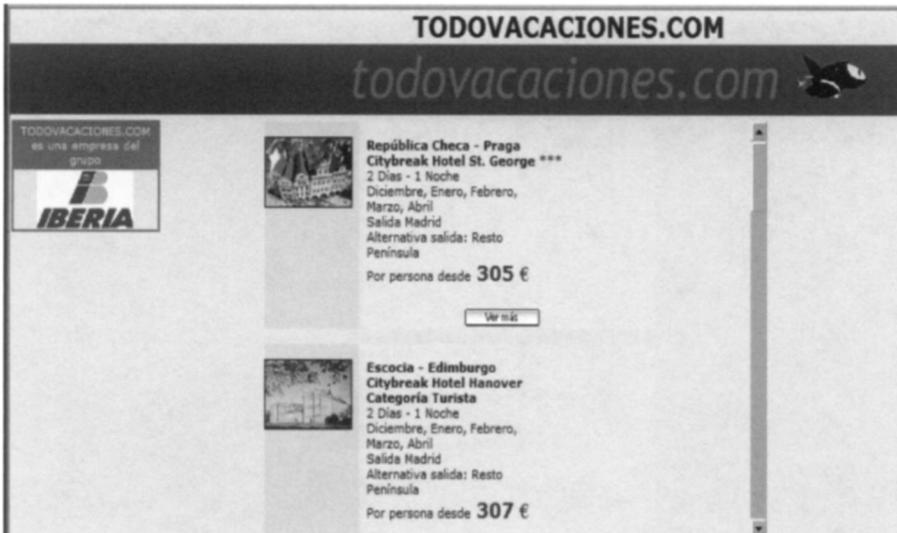
### Appendix B. Low similarity and corporate link experimental condition



### Appendix C. Low similarity and advertising link experimental condition



### Appendix D. High similarity and corporate link experimental condition





(Continued)

		Matrix of correlations																																				
Items	M	SD	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35																			
1. PS1	3.76	1.87																																				
2. PS2	4.16	1.77																																				
3. PS3	3.96	1.84																																				
4. GV1	3.14	0.79																																				
5. GV2	2.87	0.75																																				
6. T1	3.07	0.74																																				
7. T2	2.97	0.72																																				
8. T3	3.10	0.71																																				
9. T4	3.00	3.00																																				
10. T5	3.07	3.07																																				
11. BB1	3.63	0.91																																				
12. BB2	3.00	1.09																																				
13. BB3	3.76	0.79																																				
14. BB4	3.58	0.922																																				
15. W11	3.21	1.09																																				
16. W12	3.61	0.95																																				
17. W13	3.26	1.05																																				
18. IP1	3.29	0.98																																				
19. IP2	3.29	1.02																																				
20. TP1	3.11	0.92	0.190																																			
21. TP2	3.09	0.99	0.185	0.773																																		
22. TP3	2.96	0.99	0.193	0.676	0.735																																	
23. TP4	2.90	1.05	0.164	0.678	0.717	0.726																																
24. TP5	3.30	0.92	0.181	0.719	0.712	0.671	0.706																															
25. TS1	3.73	0.98	0.394	0.099	0.158	0.121	0.117	0.185																														
26. TS2	3.10	1.08	0.463	0.230	0.240	0.238	0.281	0.207	0.553																													
27. TS3	2.95	1.01	0.447	0.267	0.277	0.229	0.270	0.210	0.467	0.740																												
28. TS4	2.96	1.01	0.364	0.193	0.217	0.196	0.216	0.201	0.499	0.685	0.737																											
29. TS5	2.97	1.01	0.501	0.301	0.328	0.289	0.304	0.288	0.518	0.770	0.754	0.775																										
30. PQ1	3.32	0.95	0.203	0.122	0.155	0.169	0.149	0.199	0.165	0.199	0.157	0.196	0.233																									
31. PQ2	3.00	0.93	0.253	0.122	0.150	0.203	0.135	0.153	0.190	0.161	0.171	0.215	0.183	0.532																								
32. PQ3	3.43	0.89	0.215	0.110	0.119	0.116	0.126	0.182	0.131	0.102	0.099	0.146	0.148	0.577	0.512																							
33. PQ4	3.41	0.79	0.309	0.147	0.169	0.168	0.135	0.170	0.199	0.174	0.189	0.187	0.184	0.630	0.569	0.682																						
34. F1	4.35	2.43	0.062	-0.148	-0.138	-0.117	-0.125	-0.145	-0.023	-0.097	-0.119	-0.117	-0.046	0.045	0.008	0.092	0.032																					
35. F2	4.43	2.47	0.050	-0.151	-0.121	-0.101	-0.107	-0.128	-0.024	-0.097	-0.113	-0.098	-0.047	-0.006	-0.047	0.044	-0.002	0.952																				
36. F3	4.59	2.50	0.041	-0.142	-0.139	-0.118	-0.127	-0.109	-0.032	-0.087	-0.103	-0.110	-0.042	0.021	-0.014	0.063	0.013	0.934	0.951																			

Note: The data used to conduct the CFA are only those specified to the familiar and known brand.

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