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Establishing eTrust through Humanized Website Design

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Abstract

Trust is an essential component for any business transaction, and is particularly critical and challenging in the online environment, which is characterized by a de-humanized interface. In this paper the concept of humanized Website design is introduced as a potential trust instiller with online customers. The validity of this concept is investigated within the framework of an online trust model which distinguishes between product, company and referee trust. An empirical study is outlined, and results are analyzed to determine the effects of Website humanization. Results from this study indicate a significant correlation between human elements in design and trust in an online environment.

1. Introduction

Although electronic commerce (e-Commerce) promised significant potential to revolutionize the way business is conducted, online business is still relatively insignificant. In particular, business-to-consumer e-Commerce transactions have not reached a point of critical mass, largely due to a lack of online consumer trust (Görsch 2001; Corritore et al. 2001; Head et al. 2001; Baldwin and Currie 2000). Trust is a critical component for any business transaction, and is particularly essential in the e-Commerce environment, where transactions are more impersonal, anonymous and automated. Trust is vital to fostering and improving customer relationships (Speier et al., 1998), and if vendors are not able to instill customer trust in their e-Commerce operations, they are doomed to online failure.

The structure of the paper is as follows: Online trust (eTrust) is briefly discussed in Section 2, with emphasis on a recently proposed online trust model. The concept of humanized Website design is introduced in Section 3, where hypotheses are presented to evaluate the impact of humanized Website design on three eTrust dimensions (product trust, company trust and referee trust). Section 4 and 5 outline the methodology and data analysis of an experimental study designed to test the impacts of humanized Website design on eTrust. Finally, conclusions and areas for future research are summarized in Section 6.

2. eTrust

Trust is a complex concept that has been widely studied. However, it remains a difficult concept to describe due to its dynamic, evolving and multi-faceted nature (Ambrose and Johnson 1998; Lewicki and Bunker 1996; Rotter 1980). Common elements across many definitions of trust are vulnerability, control and time. In this paper, we adopt the definition proposed by Geyskens et al. (1996), where trust is the belief or expectation that the vendor's word or promise can be relied upon and the vendor will not take advantage of the consumer's vulnerability.

The concept of eTrust is essentially the same as that of trust. However, differences between these two concepts arise from key differences between the online and offline environments where eTrust and trust are pursued respectively. The main differences between these environments are (Yoon 2002; Head et al. 2001; Roy et al. 2001; Furnell and Karweni 1999; Jarvenpaa et al 1999; Doney and Cannon 1997):

- The parties involved may interact across different times and locations, and the rules and regulations may vary across these zones
- Less data control during and following its transfer
- Partners are less likely to know each other in an online environment, compared to an offline environment
- There are lower barriers to entry and exit for online businesses. Online vendors may be considered "fly-by-night" as there are few assurances that they will stay in business for some time
- In offline environments, consumer trust is affected by the seller's investments in physical buildings, facilities and personnel. These factors are not as visible in the online environment. In addition, the physical evaluation of products is hindered in an online setting
- There is an absence of the human element online. Electronic transactions are more impersonal, anonymous and automated than person-to-person off-line transactions

eTrust Models

Researchers have proposed several models to conceptualize eTrust (Åberg & Shahmehri 2000, Lee et al. 2000; Roy et al. 2001; Salam et al. 1998; Yoon 2002; Papadopoulou et al. 2001; Head et al. 2002), many of which focus on building trust through engenderers such as strong brand names, assurances by trusted third parties, fulfillment of customer expectations, and having the appropriate user interface.

Many existing models treat eTrust as a unified whole concept. This approach may be valid for identifying how particular factors impact eTrust in general, but it does not allow for the exploration of how various factors may affect trust along different trust dimensions.

Recently, Head et al. proposed a new model which takes a finer look at the concept of eTrust, by examining it along the three trust dimensions of product trust, company trust and referee trust (Head et al. 2002). The model, illustrated in Figure 1, proposed that developing trust along these three dimensions is critical to instilling trust in online customers. The aggregation of the trust gained through each of these specific dimensions reflects the overall trust level that a customer holds for an online vendor. Trust is engendered along each of these dimensions through the elements shown in the *Trust Engenders* box feeding that particular circle. Although the three eTrust dimensions are

distinct, they can influence one another where the trust gained/lost through one dimension could strengthen/weaken trust along the other dimensions. For example, positive reviews by trusted referees could facilitate the development of product or company trust. On the other hand, product trust lost through experience could reduce trust in the referees that recommended that product.

3. eTrust Through Humanized Website Design

A significant hurdle facing e-Commerce success continues to be the major differences that exist between the online and offline shopping experiences. One significant difference between online and offline environments, is that the offline shopping experience encompasses a wide range of emotions involving various types of interactions with humans through multiple sensory channels (Institute of Korea Science and Technology, 1996). The online shopping experience, on the other hand, is primarily geared towards reducing the user's cognitive burden through functional and performance-based Website design heuristics (Nielsen 2000, Brinck et al. 2000, Slaybaugh 2001, Head & Hassanein 2002a). As such, e-Commerce may be viewed as being de-humanized, since it is more impersonal, anonymous and automated than traditional person-to-person commerce (Head et al. 2001). Dormann (2000) states that emotions “play a large role in problem solving and decision making by providing information on the emotional desirability of the options available, thereby reducing and limiting reasoning to only those that induce positive feelings”. Therefore, it is important that emotions be considered when designing e-Commerce Websites.

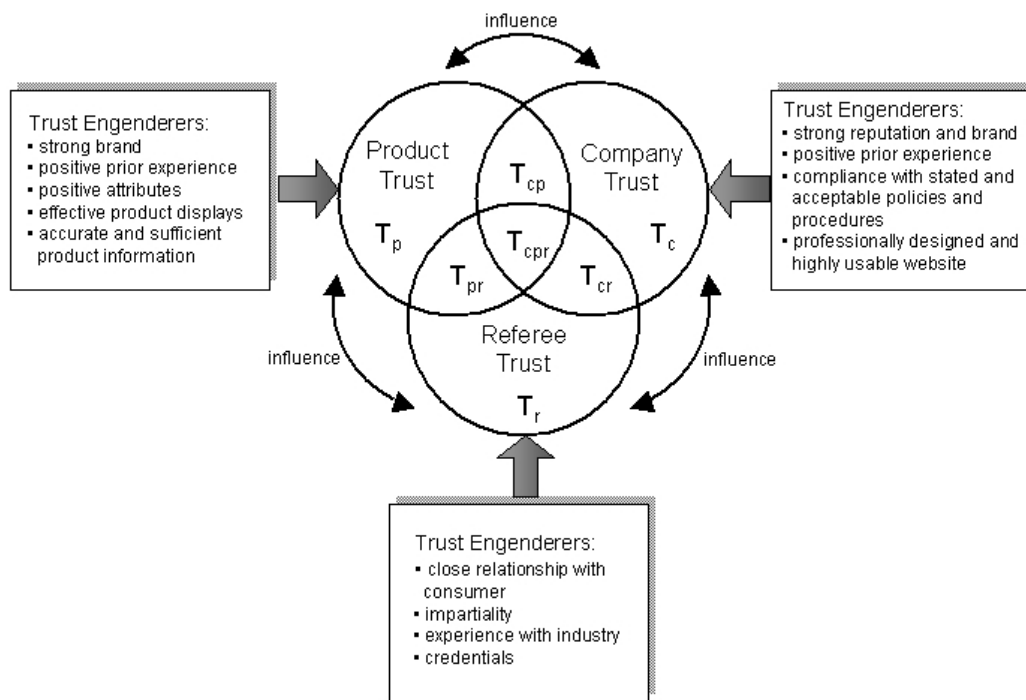


Figure 1: Circles of Online Trust Model (Head et al. 2002)

3.1 Humanized Website Design

Consumers who use the Internet to purchase items are mostly faced with de-humanized product images and descriptions. Here the term “de-humanized” is used to refer to

products that are displayed with little or no emotional appeal. Such products are usually accompanied by descriptions that are functional, attribute-based, and at the very least, unemotional. It is important to note that web designers who develop such pages are following the advice of usability experts, such as Jacob Nielsen, whose heuristics are well regarded in the industry. This is not to suggest that Nielsen's guidelines are inaccurate, however, they tend to only address functional and performance aspects of Websites. Such a de-humanized approach will likely not facilitate a trusting environment online.

A humanized approach to Website design would incorporate various human-centric elements, such as emotive textual descriptions, relevant pictures of people, appropriate audio and video clips, virtual communities, virtual and real shopping agents, among others. Some recent studies have explored the relationship between humanized Website design and users' satisfaction levels. Kim and Moon (1997) reported that manipulation of visual elements of the interface (such as color and clip art) can affect the user's level of trust for an e-Commerce interface. Friedman et al. (2000) argue that people trust other people, not machines. Åberg and Shahmehri (2001) showed that human web assistants have a positive influence on users' attitudes towards Websites. Papadopoulou et al. (2001) propose that e-Commerce trust can be more easily formed within a humanized agent-mediated environment. Mackay et al. (1997) argue that purchase decisions could be based on symbolic elements of products as conveyed in pictures rather than on their actual features. Based on this, Dormann (2000, 2001) suggests that paying attention to picture effectiveness can be a key factor to the success of e-Commerce.

From the above research, there appears to be strong support for introducing humanized elements in Website design. This literature indicates that humanized design may be linked to eTrust and warrants further study.

3.2 Hypotheses

In order to evaluate the impact of humanized design on the eTrust dimensions, introduced in the *Circles of Online Trust* model, we propose the following hypotheses. These hypotheses are also generated from the humanization research surveyed in the previous subsection. In this research we restrict our investigation to the impact of humanized textual descriptions and pictorial depictions.

H1: Humanized Website design has a positive impact on product trust

McCabe (2001) found that customers were more willing to purchase material products online when emotive descriptions of touch properties were provided, compared to a basic attribute listing. For example, a towel that was described as: "its soft-looped design feels smooth and comfortable against your skin", was more appealing to customers than the same towel described as: "100% Egyptian cotton, white, 30" x 54". Mackay et al. (1997) also suggest that product purchase decisions can be influenced by their pictures and imagery. Thus, we hypothesize that humanized Website design through emotive textual descriptions and pictorial depictions has a positive impact on product trust.

H2: Humanized Website design has a positive impact on company trust

A recent study by Nielsen et al. (2001) found that users were interested in finding information about the companies whose sites they browse. Users also expressed an interest in seeing pictures and biographies of the founders and key players in the company (Nielsen et al. 2001; Fogg et al. 2001). Thus, we hypothesize that humanized Website design through emotive textual descriptions and pictorial depictions has a positive impact on company trust.

H3: Humanized Website design has a positive impact on referee trust

Online customers are interested in finding out whether companies are recognized by any independent reputable third parties (Nielsen et al. 2001, Head & Hassanein 2002b). If a vendor's site is linked from independent sites, the customer interprets this as a signal of trust (Palmer et al., 2000). In addition to third party sites, referees may include previous customers or contacts that are familiar with the products or services of the vendor. For instance, within a humanized virtual community, customers can gain trust in such referees through interaction and exchanging of opinions (Papadopoulou et al. 2001). Thus, we hypothesize that humanized Website design through emotive textual descriptions and pictorial depictions has a positive impact on referee trust.

H4: Humanized Website design has a positive impact on the overall trust towards that site

Fogg et al. (2001) conducted an online study to assess the impact of various Website elements on people's perception of credibility. In this study "real-world-feel", including pictures, ranked at the top of factors affecting users' perception of Website credibility, where credibility is highly correlated with trustworthiness. Thus, we hypothesize that humanized Website design through emotive textual descriptions and pictorial depictions has a positive impact on the overall trust towards a Website.

4. Methodology

An experiment was conducted to investigate the influence of humanized design on eTrust, within the context of the *Circles of Online Trust Model*. Subjects examined different Websites that exhibited varying degrees of humanization and data was subsequently collected and analyzed to evaluate the impact of humanized design on their product trust (H1), company trust (H2), referee trust (H3), and overall trust (H4).

4.1 Websites

In order to isolate the impact of humanized design on eTrust, multiple Websites were created for a fictitious clothing company. Clothing was identified as the online product to use in this study as it lends itself well to the application of humanization. It is also a product that all consumers would be familiar with and has the potential for mass online appeal. Further more, several studies (Commercenet and Nielsen Media Research 1999; King et al. 2000; HarrisInteractive 2000), report top selling online products to include clothing. A fictitious company was chosen to avoid any potential bias from previous branding or experiences.

These sites incorporated three levels of humanized design for the three trust dimensions (product, company, referee), as per the Circles of Online Trust model and hypotheses presented above. Table 1 outlines the humanized characteristics of the three Websites developed for this study. As previously mentioned, this study was restricted to humanization of textual and graphic information. Example screen shots of the study sites are shown in Figures 2 through 9. To minimize learning effects, the clothing shown on the three sites were not identical; however they all belonged to the same product type and style.

Table 1: Humanized Design Characteristics of the Test Websites

Site Name	Humanization Level	Humanized Design Characteristics		
		Product	Company	Referee
Site-1	Low	Products are shown in a solitary format with point form, functional descriptions	Employee names and positions are identified	No referee information
Site-2	Medium	Products are shown on people's torsos with short, enhanced descriptions	Employee names and positions are identified with short, functional biographies	Textual customer reviews
Site-3	High	Products are shown worn by people in emotional, dynamic settings with descriptions aimed at evoking positive emotions	Candid pictures of employees are added to personal autobiographies	Textual customer reviews included with pictures of reviewers

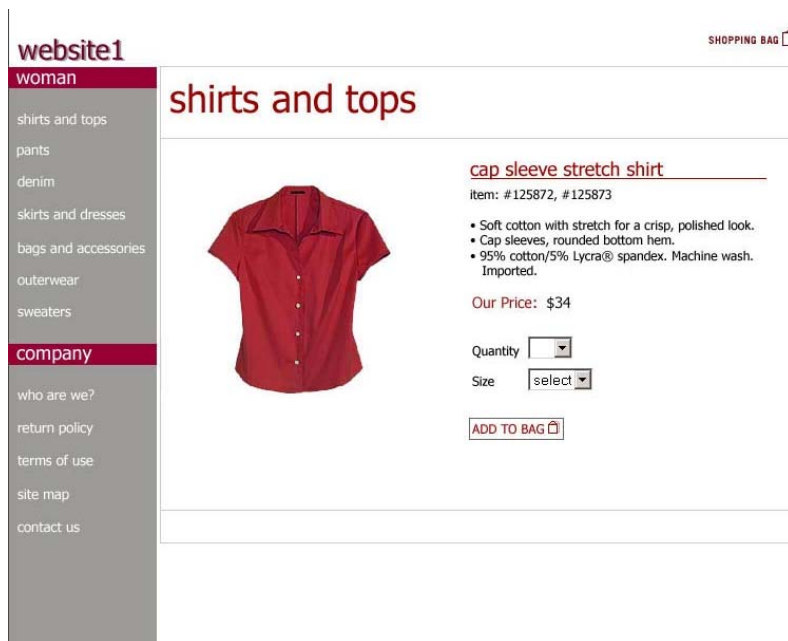



Figure 2: Site-1 Product Information

website2 SHOPPING BAG 

woman

- shirts and tops
- pants
- denim
- skirts and dresses
- bags and accessories
- outerwear
- sweaters


reviews

- customer reviews
- add a review

company

- who are we?
- return policy
- terms of use
- site map

shirts and tops



linen shirt

A classic wardrobe staple, this button-front version is made current with a hidden placket in front. Shirt collar and single-button cuffs.

#139487


Our Price: \$85.00

Quantity

Size

[ADD TO BAG !\[\]\(5fff40472ad10d456ceb3775edf98340_img.jpg\)](#)

Figure 3: Site-2 Product Information

website3 SHOPPING BAG 

woman

- shirts and tops
- pants
- denim
- skirts and dresses
- bags and accessories
- outerwear
- sweaters


reviews

- customer reviews
- add a review

company

- who are we?
- return policy
- terms of use
- site map

shirts and tops



summer pullover #193847

Building sandcastles with that special someone. The perfect summer day. The tides coming in and it's getting a little cold outside. Not to worry though, because you've brought along our summer pullover. Won't keep you too warm or too cold. Perfect, just like the day!

Our Price: \$39

Quantity

Size

[ADD TO BAG !\[\]\(3c0d054205990bd28b28d3e39987aaed_img.jpg\)](#)

Figure 4: Site-3 Product Information

website1

SHOPPING BAG

woman

shirts and tops
pants
denim
skirts and dresses
bags and accessories
outerwear
sweaters

company

who are we?
return policy
terms of use
site map
contact us

company

who are we?

website1 advisory board

Phuoc Ho - President, Linkata Technologies
Ken Seiff - CEO, Bluefly.com
Jessica Yang - CEO, Elle Magazine
John DeGroot - Former CEO of Bloomingdales

website1 management team

Valerie Blake - Founder and CEO
Mae Tigas - Chief Marketing Officer
Tom Fung - Chief Information Officer
John Hendrix - Chief Financial Officer
Honrio Cham - Chief Operating Officer

Figure 5: Site-1 Company Information

website2

SHOPPING BAG

woman

shirts and tops
pants
denim
skirts and dresses
bags and accessories
outerwear
sweaters

reviews

customer reviews
add a review

company

who are we?
return policy
terms of use
site map

company

who are we?

history

Website2 was founded in 1997 under the name clothing4u.com by Martin McClanan. Realizing the company needed a more sassy name in order to grow, we relaunched in October 1999 as website2. A fun and reminiscent name, website2 set out to offer exceptional customer service and selection — no matter what the occasion or circumstance—easy and fun.

Today, website2 offers an extensive collection of imaginative, original clothing for every occasion, recipient and budget through our website. Our merchants travel the world for unique products and often commission artists and vendors to create exclusive clothing just for website2 shoppers.

Martin McClanan, Chief Executive Officer

As website2 chief executive officer, Martin McClanan draws on his experience in management, finance, marketing and business development to lead our corporate and financial strategy.

Martin's early training in the consumer products industry began in sales management at E&J Gallo Wineries and then in brand management and direct marketing management with Nestle USA. He then ran his own business-to-business catalog called Preview Catalog, selling specialty foods to the food service industry. Given his experience with such strong global brands as Gallo and Nestle, and having launched his own catalog-based business, Martin quickly discovered the possibilities of the Internet as the third channel in retail and marketing.


At Prophet Brand Strategy, Martin served as the practice director for digital commerce. He oversaw the Internet brand management and business development for companies like Levi-Strauss, Williams-Sonoma and Travelocity. Martin was most recently the head of marketing and business development for BIGWORDS.com.

Hilary Billings, Chairman and Chief Marketing Officer

Hilary Billings is the driving force behind our merchandising and marketing strategies. She brings to website2 over 14 years of experience in merchandising, retail and brand development.

After early training at Macy's New York and Bullocks department store in Los Angeles, Hilary spent seven years with the Pottery Barn catalog and retail group. As a director and then as vice president of product design and development, she repositioned the company as a true lifestyle brand by developing a line of exclusive products and redesigning the catalog to resemble a magazine. By the end of Hilary's tenure, Pottery Barn had become one of the most widely recognized home furnishings

Figure 6: Site-2 Company Information

website3
SHOPPING BAG 

woman

shirts and tops

pants

denim

skirts and dresses

bags and accessories

outerwear

sweaters

reviews

customer reviews

add a review

company

who are we?

return policy

terms of use

site map

company

who are we?

a message from our ceo

It's hard to believe website3 has had its third successful year, especially given the turbulence of the markets and the obstacles any startup faces. Throughout the roller-coaster ride, there was something we always understood about our business: it depends on one thing — the people who love shopping our site. Website3 has thrived for one major reason — you, our customer.


The Internet revolution has been unpredictable and explosive. And since website3 is a publicly traded company (NASDAQ: web3) with thousands of shareholders and hundreds of media organizations following our every move, we've been building our business during some pretty exciting times. Regardless of the extraordinary diversions, the website3 team has steadfastly focused all of its energy on providing you the best experience possible.

Our goal is to make website3 the best of all worlds. By combining the quality and customer service of an upscale department store and the convenience of a catalog, we're creating the ultimate shopping experience. We're trying to create an experience that offers much more than any full-price or off-price retailer could hope to offer. If you try us, we hope you'll agree to make us your "store of first resort" — your first destination for designer fashion.


Thank-you for shopping with us first.

Robin Peaker
Founder and Chief Shopper


please click on one of us below for a detailed description



robin peaker
founder and chief shopper




john degroote
chief financial officer



mae young
chief marketing officer

Figure 7: Site-3 Company Information

website2
SHOPPING BAG 

woman

shirts and tops

pants

denim

skirts and dresses

bags and accessories

outerwear

sweaters

reviews

customer reviews

add a review

company

who are we?

return policy

terms of use

site map

reviews

customer reviews

[How Do I Love Thee...](#) by LRGuIs

rating: ★★★★★

Really an excellent site with good product info and easy ordering. Shipping within the U.S. is what one would expect, Canadian and foreign shipping costs are high though. In terms of their clothing, I love ilight. It's not quite generic like other brands out there but it's not so far out that people give you strange looks as you're walking down the street. In terms of my experience here, I haven't really had one yet. I've been ordering from ilight for the past 2 years and have always been treated with the highest respect and regard for a customer one could hope for. As for shipping, I've received a couple of packages that were damaged but I'm sure that was not their fault and the goods were unharmed. Overall, a very pleasant experience.

[Indulge yourself. You deserve it!](#) by jander01

rating: ★★★★★

Now that the holidays are over and your bills are all paid, why not treat yourself to the things that you didn't get? I did! :) I've always liked ilight.com. Their clothes are always designed with a great taste and I find that it's easy to wear anywhere. But if there is one reason why I gave them a rating of four stars is because my last purchase from them arrived 2 weeks late. I waited two weeks and then called and they said it would arrive very soon. Well, 1 month after I order, my purchase finally arrived. I called customer service and they refunded 50% of my purchase just for the hassle. Although I was a little annoyed by the whole incident, I'm really impressed at the way that they handled my situation. Always being courteous and thoughtful when speaking to me.

[One Satisfied Customer.](#) by alfyboy

rating: ★★★★★

For my girlfriend's birthday, I decided to try something a little different. I've always given her jewelry, perfume, flower and other typical gifts but I never bought her clothes. I always worried that I would buy something that wasn't her taste or the sizing would be wrong. Then I came across ilight.com and I must say I was pleasantly surprised, as was my girl friend. I was worried that it wouldn't arrive on time for her birthday but it did...right on time, which was great. The size was a little off, a little too big but I don't know if the company could have helped me out in any way. Overall, a good experience and the customer service agents were really nice when we called to ask if we could return the item for a better fit. But our agent just told us that the size below would probably be too small and that the item would shrink anyways for a better fit. I'd shop here again.

[I don't know about this one](#) by warning101

Figure 8: Site-2 Referee Information



Figure 9: Site-3 Referee Information

4.2 Subjects and Procedure

A total of 51 subjects (26 male; 25 female) voluntarily participated in this study. The majority of subjects were business students from undergraduate and graduate programs. No time restrictions were imposed on the subjects and the average experiment completion time was 25 minutes. Each experimental session was attended by a knowledgeable investigator who provided appropriate background information and instructions. Subjects were asked to complete an initial questionnaire, which was designed to gain an understanding of the subjects' prior exposure to the Internet and e-Commerce transactions. On average, the participants in this study had made 6 previous online purchases (female average: 5.1; male average: 7.2). Table 2 summarizes the sample's online familiarity. Generally, this group was Internet-savvy, where males exhibited slightly higher Internet usage and online purchasing experience than females. Convenience was cited as being the most common reason for buying online, whereas lack of trust was the most common reason for not buying online.

Table 2: Subjects' Prior Online Experience

Question	Total (%)	Female (%)	Male (%)
Hours online/week			
Less than 3	14	16	12
Between 4-6	10	8	12
Between 7-10	20	28	12
More than 10	56	48	64
Previously purchased online	73	68	77
Average online purchase amount			
\$1-\$25	8	12	5
\$26-\$50	16	12	20
\$51-\$75	38	35	40
\$76-\$100	27	29	25
More than \$100	11	12	10
Reasons for buying online			
Convenience	33	36	31
Not available offline	20	15	24
Price	19	21	18
Selection	13	18	8
Prefer to buy online	8	5	8
Other	7	5	11
Reasons for NOT buying online			
Lack of trust	45	54	33
Appeal of shopping offline	41	30	56
No credit card	5	8	0
Other	9	8	11

Following the initial questionnaire, subjects were directed to a homepage where the three test Websites were located. The viewing order of the Websites was randomized to minimize possible order effects. Subjects were asked to view the three Websites under the pretense of wanting to buy an item of clothing for either themselves or a friend. A post-test questionnaire then consisted of both open and closed ended questions which were designed to identify the subjects' attitudes towards the humanization elements and how they affected their perceived trust towards the Website. The exact phrasing of the questionnaire questions is provided in the data analysis tables of the following section.

5. Data Analysis

The study hypotheses centered on user perceptions of trust and were analyzed by subjective measurements collected from questionnaires. The closed ended questions

solicited opinions on site appeal, willingness to purchase and trust. These three constructs are closely linked and were used to evaluate the impact of humanized design on the three trust dimensions identified by our model. For example, *appeal* has been proposed as a design requirement of trust (Egger 2000), and *willingness to purchase* has been found to be highly dependent on trust (Görsch 2001; Jarvenpaa 1999; Yoon 2002). Eight out of the nine closed ended questions collected ordinal data on a 5-point Likert scale. The ninth closed ended question forced subject to decide which of the three sites they would be most willing to purchase from. Soliciting feedback on appeal, trust and willingness to purchase for humanized descriptions and pictures for each of our hypotheses would require at least 24 questions. However, this questionnaire was purposely kept relatively short to maintain the attention of the subjects and to permit more focus on open ended questions. Open ended questions can provide much insight for exploratory studies in emerging fields, such as this. Therefore, two closed ended questions (one for humanized descriptions and one for humanized pictures) and one open ended question were used to test each of H1, H2 and H3. Hypothesis 4, which addressed the overall impact of humanization, was tested with three closed ended questions (appeal, willingness to purchase and trust) and one open ended question.

For the product trust (H1), company trust (H2) and referee trust (H3) scales, the Cronbach alphas were .73, .66 and .74 respectively. Low Cronbach alphas can be expected when there are few items per scale, however even with only 2 items, these scales are within an acceptable range. Rivard and Huff (1988) suggest that this measure for reliability should be higher than 0.5 (and ideally higher than 0.707).

5.1 Impact of Humanized Design on Product, Company and Referee Trust (H1, H2, H3)

Table 3 clearly illustrates that all measures for product trust, company trust and referee trust were shown to be very significant ($p < 0.001$ or $p < 0.01$). This means that the respondents agreed that humanized elements (descriptions and pictures) had a positive impact on their perceived trust of the Websites. With respect to product humanization, subjects commented that they enjoyed seeing “happy people wearing the clothing”, “clothing in dynamic settings”, and “people that can be related to”. Subjects also suggested that the humanized approach provided for richer information such as: “what type of weather the clothes are for”, “the type of people who can wear the clothes”, “how the clothes look in motion” and “how the clothes can be combined in various outfits”. However, some subjects also commented that the product could get “lost in the overall scene”. Site-2 provided more focus on the clothing rather than the scene, but was found to be “unsettling” by several subjects due to the “omission of body parts”. Site-1, which did not have a humanized component, was “clean and crisp” but was also often cited as being “boring” and lacking “motivation to purchase”. One subject went so far as to say Site-3 “gave a personality to the item of clothing, whereas in the other two sites, the items were merely objects”.

Subjects also commented on the different approaches used to display company information. Site-1, which only listed management names and positions, was generally thought to be “a cold approach”, having “insufficient information” and being of “little value”. In contrast, Site-3 provided many subjects with a “feeling of closeness”, “a face to the company”, where employee pictures helped build “a company image”. One respondent commented that the “candid pictures” made her feel like she “knew something about the people – without reading a lot of text”. Others did not “care about who works at the company or what their life stories were”. They felt Site-3 displayed “too much superfluous personal information” that even “seemed fake”. These subjects indicated that

Site- 2 was “more professional” and “business-like”, whereas Site-3 “made it look like the employees were more interested in having fun than running a business”.

For referee trust, most subjects indicated they “appreciated” the customer reviews, and while the “photos were fun” they also made the reviews seem “less likely to be fabricated”. In particular, one subject commented that he knew “the photos could be of anybody but they did lend an illusion of reality”. On the other hand, some subjects viewed customer reviews “with skepticism”, as the company could be “making them up”. A couple of respondents indicated they would prefer to view “customer reviews from other sources” and one asked: “why should I trust a stranger’s opinion rather than my own?”.

5.2 Overall Impact of Humanized Design (H4)

Table 4 shows a comparison of the three sites for their overall impact of humanized design. Respondents agreed that humanization had a positive impact on appeal, trust and willingness to purchase. In most cases, when a less humanized design was compared with a more humanized design, the more humanized site was significantly preferred ($p < 0.01$ or $p < 0.001$). The only exception was the comparison of Site-1 with Site-2 for willingness to purchase. To impact decision making behavior, the Website had to be fully humanized for the tested humanization elements (textual descriptions and pictorial depictions).

Although some subjects commented that they enjoyed the “simplicity” of Site-1 and Site-2, where the “focus was on products”, the vast majority (65%) of subjects were most willing to purchase from Site-3, which was “more informative”, “more appealing to look at” with a “friendlier atmosphere”. Respondents stated that Site-3 was “more personal, like an actual store with actual people”, and had a “very positive projection of image” where they were “selling the idea rather than the stuff”. Many agreed that adding human elements to site design “made the site more personable” and it “was easier to trust a site that had real people on it”. One subject went so far as to say that the “photos suggested brick-and-mortar stability”, which is often lacking with online vendors.

Table 3: Impact of Humanized Design on Product, Company and Referee Trust (H1, H2, H3)

Item ¹	m	med	sd	p	sig.
Product Trust (H1):					
Humanized descriptions positively impact site appeal	3.7	4	0.9	.000	***
Humanized pictures positively impact site appeal	3.8	4	1.0	.000	***
Company Trust (H2):					
Humanized descriptions do not impact willingness to purchase	2.3	2	0.9	.000	***
Humanized pictures positively impact trust	3.7	4	0.8	.000	***
Referee Trust (H3):					
Humanized descriptions positively impact willingness to purchase	3.5	4	1.0	.000	***
Humanized pictures positively impact trust	3.4	4	1.0	.004	**

1. Questionnaire questions asked users to indicate the degree to which they agreed with the scale items. A 5-point Likert scale, which ranged from “strongly disagree” (Likert score = 1) to “strongly agree” (Likert score = 5), was used.

Notes:

m = sample mean, med = sample median, sd = sample standard deviation, p =significance level, $sig.$ = ns (not significant), * (.05 level), ** (.01 level), *** (.001 level)

b) 1-tailed t -test used, with the following null and alternate hypotheses:

Null Hypothesis ($H_{0i,j}$): $\mu_{i,j} \leq 3$ or $\mu_{i,j} \geq 3$, where $\mu_{i,j}$ is the mean of responses to item i of hypothesis j .

Alternate Hypothesis ($H_{ai,j}$): either $\mu_{i,j} > 3$ or $\mu_{i,j} < 3$, depending on the direction of the item.

Table 4: Overall Impact of Humanized Design (H4)

4 a) Appeal and Trust Items

Item ¹	Descriptive Statistics									Paired Comparisons								
	Site-1			Site-2			Site-3			Site-1 vs. Site-2			Site-1 vs. Site-3			Site-2 vs. Site-3		
	m	med	sd	m	med	sd	m	med	sd	p	sig.	Pref.	p	sig.	Pref.	p	sig.	Pref.
Appeal	2.9	3	1.2	3.3	3	1.1	4.1	4	0.8	.049	**	Site-2	.000	***	Site-3	.000	***	Site-3
Trust	2.7	3	1.0	3.3	3	0.9	3.8	4	0.9	.000	***	Site-2	.000	***	Site-3	.000	***	Site-3

1. Subjects were asked to rank each site in relation to its appeal and trust on a 5-point Likert scale, which ranged from “no appeal”/ “no trust” (Likert score = 1) to “very appealing”/“very trusting” (Likert score = 5).

Notes:

a) m = sample mean, med = sample median, sd = sample standard deviation

b) Paired comparison t -test used for comparison of scores between humanized site designs to test for significant differences, with the following null and alternate hypotheses:

Null Hypothesis ($H_{0i,j,k}$): $\mu_{i,k} - \mu_{j,k} = 0$, where $\mu_{i,k}$ and $\mu_{j,k}$ are the means of the Site- i and Site- j scores respectively, for item k .

Alternate Hypothesis ($H_{ai,j,k}$): $\mu_{i,k} - \mu_{j,k} < 0$

c) p =significance level, $sig.$ = ns (not significant), * (.05 level), ** (.01 level), *** (.001 level), $Pref.$ = the site that was significantly preferred in the given pair testing.

4 b) Willingness to Purchase Item

Item ¹	Distribution			Paired Comparisons								
	Site-1	Site-2	Site-3	Site-1 vs. Site-2			Site-1 vs. Site-3			Site-2 vs. Site-3		
				p	sig.	Pref.	p	sig.	Pref.	p	sig.	Pref.
Willingness to Purchase	13%	22%	65%	.359	ns	-	.000	***	Site-3	.000	***	Site-3

1. Users were asked which site they would be most willing to buy from.

Notes:

a) 1-tailed sign test used for paired comparisons between humanized site designs to test for significant differences, with the following null and alternate hypotheses:

Null Hypothesis (H_0): $\theta_i = 0.5$, where θ_i is the probability of Site- i obtaining a plus sign.

Alternate Hypothesis (H_{ai}): $\theta_i < 0.5$

The sign test was used for this analysis since there were no quantitative magnitudes collected for the willingness to purchase item. Only the signs (positive or negative) of observed differences were collected.

b) p =significance level, $sig.$ = ns (not significant), * (.05 level), ** (.01 level), *** (.001 level), $Pref.$ = the site that was significantly preferred in the given pair testing.

6. Conclusions and Future Research

Several design guidelines have been suggested to facilitate online interactions and potentially enable e-Commerce transactions (Brinck et al. 2000; Nielsen 2000; Slaybaugh 2001; Head and Hassanein 2002a; among others). However, these guidelines tend to focus on functionality and performance, rather than human elements, such as emotion. In the offline environment, marketers would not achieve their goals without addressing these human elements, which are essential to establishing a trusting relationship between vendor and customer. This paper proposes that these human elements are also important in the online environment. Online transactions are more impersonal, anonymous and automated than person-to-person transactions made offline. This de-humanization of business relations can be a major inhibitor for e-Commerce to reach its potential success. To overcome some of the negative consequences of this de-humanized medium, humanization elements can be incorporated into Website design. This study has shown that there is a connection between human elements in design (emotive textual descriptions and pictorial depictions) and trust in an online environment. This is a factor that is largely ignored in usability guidelines.

Although the experimental results of this research supported our proposed hypotheses on the positive impact of humanized Website design on eTrust, some limitations of this study must be considered. Subjects for this study were primarily university students, who may not have been representative of the typical online customer. However, MBA students represent one of the better student samples as they typically represent a good cross section of society due to their varied age groups and backgrounds. Furthermore, the use of professionals or graduate students as subjects is recommended, since they typically make better decisions than undergraduate students (Remus, 1989). Additionally, this study was conducted in a laboratory setting where the measurement of actual trust is difficult. For example, there may be a significant difference between asking subjects if they would be willing to buy from a particular Website, versus asking them to place an actual order with their credit cards. Our conclusions are based on opinion rather than actual behavior. However, the purpose of this study was to provide initial indication and justification for further investigation in this new area. We have clearly satisfied this objective. Future studies will employ methodologies, such as think-aloud and path-tracking, which focus more on behavior rather than opinion.

Future research is needed to further our understanding in this new and emerging field. Although this is not a comprehensive list, the following are some areas that remain to be examined: (i) the effects of humanization on different product types; (ii) the effects of humanization on viewing times; (iii) the effects of higher levels of humanization (such as audio and video clips, virtual communities, virtual and real shopping agents); (iv) the effectiveness of humanized design across different cultures; and (v) the appropriateness and effectiveness of humanized design on the business-to-business and consumer-to-consumer market.

Trust is critical to the success of e-Commerce. We have shown that humanized site design may be one means of facilitating a trusting relationship between online customers and vendors. However, we must continually explore new approaches to instill this trust. After all, if online customers do not possess trust, clicks will not translate into sales and the revolutionary potential of e-Commerce may never be realized.

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