USING IMAGE TO FOSTER BUSINESS TO CONSUMER ONLINE TRUST

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Abstract: Much of the latest research on business to consumer (B2C) e-commerce has focused on ways of building trust through cues that encourage consumers to purchase through online since it suffers from the lack of face to face interpersonal exchanges that enhance trust behaviour in conventional commerce. To bridge the human interaction dilemma, an extensive laboratory based experiment was conducted to assess the trust of consumers using four online vendors' websites. This paper addresses the issues and findings of a study that uses Western and Saudi images as well as video clips to mimic customer support in increasing the behavioural purchasing trust of the online vendor. The findings from the study clearly highlight that images have an imperative role to play in increasing the trust of online consumers with Saudi images playing a pivotal role in increasing this kind of trust.

1 INTRODUCTION

The Internet brings a new era, in which individuals, organizations as well as governmental sectors actively participate in varieties of exchanges. Since 2000, the worldwide Internet users have been exploding with an average annual rate of 20%, rising from 254 million in 1999 to 1,022 billion in March 2006 (internetworldstats.com). The growth of the World Wide Web (WWW) and its acceptance among consumers have paved a way to the rise of electronic commerce (EC), since the Internet is the prime source for conducting e-commerce. The use of EDI at the beginning of the 1980s boosted the development of e-business greatly. Having entered the 21st century, e-commerce still develops very fast, and a lot of enterprises in developed countries have gained success in this area. According to the (emarketer.com), total online retail sales for 2005 were $144,613 million. On a trend, retail e commerce in the United States could amount to $243, 558 million by 2008(emarketer.com). (Wallis, 2006) shows that 55 per cent of households (12.9 million households) in Great Britain had access to the Internet from home in July 2005. This compares with just 32 per cent in July 2000. In addition to the expansion of Internet access there has been an increase in the number of people using the Internet to buy or order goods, tickets and services. In 2001 Internet sales to households from the UK non-financial sector stood at £4 billion; by 2004 these had increased to over £18 billion. The growth in Internet sales from 2003 to 2004 is over 67 per cent, which clearly show a very rapid expansion in the value of Internet sales. In the Asia-Pacific region, it grow rapidly, from about $200 billion in 2003 to about $300 billion by 2004 (UNCTAD, 2003).There is also a good foundation for e-commerce applications in some Asia countries like for example China. Many research companies and scholars have forecast the market potential of the Internet and the future development of e-commerce. In contrast the situation in the Arab world is not optimistic since the estimated figure for B2C in Africa and Middle East can not be compared with those in US, UE, China(UNCTAD, 2004). So with the expansion of internet shopping it has become increasingly important to understand the factors which influence consumer purchase decisions in the Middle East web context.

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2 THEORETICAL FOUNDATION AND HYPOTHESES

Researches indicate that human beings like to reduce their social uncertainty. In other words, they seek ways to recognize, predict, and occasionally attempt to control the behaviour of other people (M.-S. Kim & Ahn, 2005) . When social uncertainty cannot be reduced through rules and customs, people resort to trust and, to a lesser degree, to familiarity as a major social complexity reduction method (Zeng, Zeng, & Guo, 2005). Indeed, trust is the most enduring characteristic of human interaction (Serva, Benamati, & Fuller, 2005), especially when the projected outcomes of the interaction with others are not fully governed by rules and guarantees (Zhang & Zhang, 2005). Trust is crucial wherever risk, uncertainty, or interdependence are present (Gillespie, 2000). These conditions increase in many settings, and certainly exist in the relationship between vendors and customers (David Gefen & Straub, 2004). As conditions become more uncertain in e-commerce because business complexity increases through computer-mediated commerce, the need for trust grows (E. Kim & Tadisina, 2005). Consistent with this observation, trust should be even more important in e-commerce than in traditional commerce because of the paucity of rules and customs in regulating e-commerce and since online services and products typically are not immediately verifiable (David Gefen & Straub, 2004). Furthermore, online transactions lack the assurance provided in traditional settings through formal proceedings and receipts (D. Gefen, 2000). Trust is one variable which is receiving considerable attention since it seems likely that consumers will prefer to buy from sites which they trust; indeed lack of trust is often cited as a significant barrier to e-commerce adoption (Egger, 2002). However, the enormous potential of B2C commerce can only be realized if consumers feel comfortable transacting over the new medium with unfamiliar vendors (David Gefen & Straub, 2003). This suggests that consumer decisions to adopt B2C commerce involve not only perceptions of the technology e.g., perceived usefulness and ease of use; but also beliefs about the e-vendor (Friedman, Jr, & Howe, 2000).

2.1 Media Cue in B2C Websites

A key difference between online and offline consumer markets that is stifling the growth of e-commerce is the lack of the human and social element (Qiu, Qiu, Benbasat, & Benbasat, 2005). The online shopping, is primarily geared towards reducing the user's cognitive burden through functional and performance based website design heuristics (Kumar & Benbasat, 2002) . As such, e-commerce may be viewed as lacking human warmth and sociability, since it is more impersonal, anonymous and automated than traditional person-to-person commerce (Head, 2001) . Online vendors face a significant challenge in making their virtual storefront socially rich (Kumar & Benbasat, 2002). Prior research has suggested that the perception of social presence can positively influence user trust and intentions in an online context (Kumar & Benbasat, 2002). Online consumers' perceptions of interpersonal cues which also known as social presence cues through media cue (photo, video clip, sound,…etc) have been shown to positively influence trust and their subsequent intention to purchase from a commercial website (David Gefen & Straub, 2003). Instilling a sense of human warmth and sociability can be accomplished by providing means for actual interaction with other humans or by stimulating the imagination of interacting with other humans. In a web context, actual interaction with other humans may be incorporated through website features such as e-mail after-sales support, imaginary interactions including socially-rich picture content, message boards, socially-rich text content, personalized greetings (David Gefen & Straub, 2003), virtual communities, chats, personalized greetings (Kumar & Benbasat, 2002), and human web assistants (Aberg, 2001). Website features may instil social presence through imaginary interactions and include human audio (Lombard, 1997), human video (Kumar & Benbasat, 2002), and intelligent agents (Papadopoulou, 2001). The effect of pictures, and video clip may be even more pronounced. According to (Karvonen, 2001) , our visual senses dominate our perception and visual media have more social presence than written media. (Fogg, 2002) found that photos accompanying online articles can increase their credibility, and (Zheng, Veinott, Olson, Olson, & Bos, 2002) found that photos of players increased cooperation in social dilemma games. Advertising has long relied on imagery of "friendly faces" to build a positive attitude towards products (Riegelsberger, 2003). (Dormann, 2000),(Dormann, 2001) suggests that paying attention to picture effectiveness, via emotional or social display, can be a key factor to the success of electronic commerce. It should be emphasized, then, that the studies on applying interpersonal cues, especially through photographs, video clip, or sound, to web site design are still in a

preliminary stage. However, the researchers do present a potentially effective approach to enhance online trust by adding a surrogate human presence and actual contact opportunities to the otherwise impersonal e-commerce interface. As a result of the foregoing it is hypothesised that:

H-1: Subjects differ significantly on their rating of initial trust and trust intention across vendor's websites.

H-2: The higher rating of vendor's website trustworthiness will be for those presenting video clips than for that with photos and that without photos respectively.

2.2 The Important of Culture in Website Design

Trust may form in a variety of ways, whether and how trust is established depend on the cultural factors (e.g., societal norms, values, etc.) that direct people's behaviors and beliefs (Hofstede, 1980). Online trust researches have been limited to western context, particularly focusing on the U.S. (Ba & Pavlou, 2002). However, the trust theories and mechanisms developed in the western context might not apply for other societies, especially since culture may affect the antecedents of trust (Chong, Yang, & Wong, 2003). For example, (Sako, 1998) noted that there were differences in trust perceptions between Japanese and US subjects in terms of the level of trust, the way in which trust was conceptualized, and the way in which it was formed. Thus, there is a need to re-examine the notion of trust and identify its determinants in the context of different markets and cultures (Lee & Turban, 2001). For that, understanding how to build trust for diverse consumers in electronic markets is a central imperative (Jones, 2002). Symbols are an important element denoting culture (Marcus & Gould, 2000). Symbols are "metaphors" denoting actions of the user (Barber & Badre, 2001), and it can be varied and may represent a wide range of features (Fernandes, 1995). One important form of symbols is multimedia relating to culture which few researchers have examined. On the basis of the discussion above, the following additional research hypotheses were proposed:

H-3: Across websites including human portraits there will be significant statistical differences in their trustworthiness between websites with a Saudi photo and websites with a Western photo.

H-4: Saudi subjects will trust a website with a Saudi photo more than a web-site with a Western photo.

3 EXPERIMENT METHODOLOGY

This study attempted to investigate and examine the effects of the interpersonal cues or the social cues that can be manipulated by facial photo, video clip, and culture as control variables, which used Saudi and Western people in each of the interpersonal cues when forming the initial trust toward online vendors.

3.1 Experimental Material

Four laptop shopping websites were selected since this product carries a considerably higher financial risk than another product. In this selection western shopping sites were chosen as they constituted a realistic scenario with relatively high risk, due to the vendor and the users being in two different countries. Semi-functional copies websites were designed including the homepage and some subsequent layers depending on the available links in each layer, so that participants were able to browse and search general information on the site, such as 'about us', privacy and security policies including access to detailed product descriptions. Also any certification or reputation seals that were present on some pages were removed. The interpersonal artefacts, (photo, video clip) were put in an appropriate and attractive place in the first page of the site showing the selected product (without deleting or hiding anything from the page itself). The perceived trustworthiness of the photos that were used in the experiments needed to be established in a pre experiment. This also served to establish how professional and 'real' the photos were in representing a customer service. More than sixty candidate photos were collected of men (western, and Saudi), which were reviewed and the most suitable chosen to represent the appropriate professional customer representatives of an online shopping site. Five professionals in computing and business were then invited to rate the photos and select the most appropriate. These photos were then subsequently used in these experiments. For the video clips, the same procedure was followed.

3.2 Data Collection

The research instrument was the questionnaire that was developed by adapting existing measures from the literature to the current research context (Teo & Liu, 2005) and (D. Gefen, Straub, & Boudreau, 2000), (McKnigh, Choudhury, & Kacmar, 2002), (Kammerer, 2000). All the questionnaire items were

scored on a five-point Likert-type scale ranging from (1) strongly disagree to (5) strongly agree. As the experiments were conducted in Saudi Arabia (Saudi being predominantly Arabic-speaking) the questionnaire, originally written in English, was translated into Arabic by a bilingual person whose native language is Arabic. The Arabic questionnaire was then translated back into English by another bilingual person. These two English versions were then compared and no item was found to deviate significantly in terms of language. Subjects for the study were general Internet users representing undergraduate and graduate students at two famous computer training institutes. The use of student subjects was deemed appropriate since online consumers are generally younger and more highly educated than conventional customers, which makes student samples closer to the online consumer population (Saarenp & Tiainen, 2005). Thus students are quite representative of online shoppers. All experimental tasks during this research experiment were performed in a computer laboratory.

3.3 Experimental Procedure and Tasks

Previous online trust researches had been criticised for relying on measuring the trust without inducing any form of risk (Riegelsberger, Sasse, & McCarthy, 2003), while it represents an important key related to trust. To overcome these criticisms, this study induced financial risk in a laboratory situation. While it does not fully represent a real-world risk, however, it allows combining a laboratory setting with some element of real-world risk by informing participants that the experiment website trustworthiness has been assessed and rated by independent business reviewer sites and one of their tasks is to identify the trustworthiness of each shopping site, whose rating matches the real rate of the trustworthiness which will be entered in a lucky draw with prizes up to a laptop and a mobile phone set which will be offered in a random draw conducted at the end of the study. In this way we have induced a little bit high level of risk and increased the realism of the experiment. At the beginning of the experiment the experimenter gave a written introduction explaining the objectives of the experiment and the total estimated time that it would take (namely 45 minutes). Then participants were asked to fill out sets of questionnaires that extracted some demographic characteristics, online purchasing experience, propensity or disposition to trust, and system assurance or Institution-based trust.

Each subject was then asked to look at the four websites and perform a general search in the website. This involved looking at the site and then evaluating this e-commerce vendor using the online vendors trust questionnaire. This process was repeated for all of the four websites. To control the order effects, the order of presentation of the four experimental websites was completely counterbalanced. When subjects finished seeing all the four websites and filling in their questionnaires, they were asked to do another task. In this task participants were asked to assess the websites that they had seen, and to rank them according to their preferences.

4 DATA ANALYSIS AND DISCUSSION

All data analysis was conducted using SPSS windows software package version 12. A total of 72 subjects participated in this study; all of them were males with ages between 18-25 and 26-35 respectively, most of them (79.2%) at bachelor degree level. 39% of the respondents spending between 6-10 hours online per week. On average, the majority made at least one online purchase per week while (28%) of the respondents spent 2000SR and more per online purchase. As mentioned above the vendor trustworthiness questionnaire was built to cover all the common dimensions or factors of trust belief that the researchers in this field mostly agree with, namely integrity, ability, and benevolence. Also it tested the subjects' trust intention regarding online vendors that they saw. Bivariate correlation (Kendall's tau-b) results showed that the correlation between the most common constructions of trust belief for each website was significant at the 0.01 level.

4.1 Testing the Research Hypotheses

To test the first hypothesis (**H-1**), nonparametric K-Related samples, Friedman test was computed between each of the trust belief factors and trust intention for all the websites to see if there is any significance statistical difference between subjects' answers regarding the trustworthiness of the four websites. Results showed the subjects differ significantly on their ratings of their initial trust and trust intention regarding the four vendors' websites since the overall statistical significance ($p < .05$); so the first hypothesis was supported. See table-1.

Table 1: Statistic test for Trust Belief and Trust Intention for the four websites.

	Trust dimensions			Trust Intention
	Ability	Integrity	Benevolence	
N	72	72	72	72
Sig at 5%	Yes	Yes	No	Yes

For the second hypothesis (**H-2**) in order to test it, we have compared the average mean value for the three dimensions of trust belief and trust intention between the four websites, See Table-2. Subjects rated the initial trust and trust intention for photo website the highest, the video clip website next, and the no photo website as the lowest. Thus, the second hypothesis was partially supported, since the vendor with video clip came in the second rank rather than the expected first position. A possible explanation for this unexpected result is that the video clip was not recorded to professional standards.

For the third hypothesis (**H-3**) the same procedure as done in testing the first and the second hypothesis was used to test the third and the fourth hypothesis, but in this case between two vendors websites only (website with Saudi photo and website with Western photo). Friedman test showed the subjects differ significantly on their rating of their initial trust (ability and integrity of trust belief, but not for benevolence dimension) and trust intention regarding the two vendors websites since the overall statistical significance ($p<.05$); so the third hypothesis was fully supported see table-3.

Table 2: Mean Value for Trust Belief and Trust Intention for Each Website.

Website	Dimension	Mean value
Website with No photo	Ability	3.73
	Integrity	3.42
	Benevolence	3.50
	Trust Intention	3.07
Website with Western photo	Ability	3.89
	Integrity	3.67
	Benevolence	3.55
	Trust Intention	3.43
Website with Saudi photo	Ability	4.26
	Integrity	4.07
	Benevolence	3.78
	Trust Intention	3.69
Website with Western video clip	Ability	4.15
	Integrity	3.92
	Benevolence	3.80
	Trust Intention	3.52

Table 3: Statistic test for Trust Belief and Trust Intention for website with Western photo and website with Saudi photo.

	Trust dimensions			Trust Intention
	Ability	Integrity	Benevolence	
N	72	72	72	72
Sig at 5%	Yes	Yes	No	Yes

With respect to the fourth hypothesis (**H-4**), we compared the average mean value for the three dimensions of trust belief and trust intention between the two websites, See Table-4. Results indicated that subjects rated the initial trust and trust intention for website with Saudi photo higher than the website with Western photo. So the fourth hypothesis is supported. The results indicate that media cue in a website is an effective scheme to increase consumer trust in an online-vendor. Displaying a media cue (photograph or video clip) helps to assimilate the online shopping to a face to face situation, since customers can develop a quasi-social relationship to the person shown in the media cue. The displayed person represents an entry point for the consumer to the on-line vendor and facilitates the establishment of customer trust. The media cue is a simple, yet a powerful, way to increase the trustworthiness of an online-vendor.

Table 4: Mean Value for Trust Belief and Trust Intention for website with Western photo and website with Saudi photo.

Website	Dimension	Mean value
Website with Western photo	Ability	3.89
	Integrity	3.67
	Benevolence	3.55
	Trust Intention	3.43
Website with Saudi photo	Ability	4.26
	Integrity	4.07
	Benevolence	3.77
	Trust Intention	3.69

4.2 Preference Ranking

Participants were asked to rank the four vendors according to their preference. The question was phrased as follows: “Assuming that all sites offer the product you are looking for at the same price with the same condition, consider which site you would be most comfortable buying from.” In contrast to the other measures, this measure forced the participants to bring the vendors into a hierarchical order. The order of preference of all the websites is presented in table-5.

Table 5: Order of Preference Rank for Each Website.

Rank	Website
First	Website with Saudi photo
Second	Website with Western photo
Third	Website with Western video clip
Fourth	Website with No photo

Finally many nonparametric correlation tests were conducted to see if there were any significant differences between the trust belief, trust intention and participants' age, education level, Internet usage. Results showed no statistical significance differences between all these variables.

5 CONCLUSION

From a theoretical point of view, this study extends the interpersonal cues or social presence cues research in the e-commerce domain. Our findings also confirm earlier works that show a positive impact of the photograph on trust e.g. (Gefen et al. 2003a; this paper shows that interpersonal cues can be infused into websites through pictures and video clip. This in turn, can positively impact the perceived trustworthiness of a commercial website, which can result in more favourable attitudes towards that online store. This experiment tested the effect of adding a facial photo from two different cultures (Western, Saudi) to an e-commerce vendor's homepage on user trust. It thus focused on the symbolic use of interpersonal cues. This goal, despite its importance for the development of trust in e-commerce, has not been addressed in previous researches. This experiment found that media cues in the interface are indeed able to affect a vendor's trustworthiness based on the surface cues it contains. A clear picture has emerged regarding the effect of photos from different cultures. Most of the previous studies have tested the effects of adding one photo to a mock-up of one e-commerce site. This experiment was aimed at overcoming this limitation by testing several photos on several semi-functional copies of existing vendors' sites. In addition, this experiment introduced a method for measuring trust that required participants to make decisions under conditions of financial risk. Finally during the experiment design there was an expectation that the website with the video clip would be ranked as the highest since video can display more interpersonal cues than photo, but this turned out not to be the case, possibly due to its lower quality. There are a few limitations to this research that should be noted. Results of this study were obtained using IT training institute student subjects. These results may be different from results obtained using more typical online shoppers. However, the majority of e-commerce studies utilize students as their subject pool (Grabner-Krauter & Kaluscha, 2003). Also this research is no exception in terms of generalizability. There is a need to investigate the effect of other subject groups, settings, products and times. Other areas for future research include: investigating other product types, other media cue elements, for example (avatar, human audio), investigating m-commerce applications. All these issues should also be explored.

6 IMPLICATION

We suggest some implications that web designers and e-commerce vendors can use in the form of the following recommendations when introducing e-commerce applications in Middle East countries in general and in Saudi Arabia in particular: There is a significance effect of a media cue (photo, video clip) in B2C e-commerce websites. The positive attractive impressions of a media cue can thus help in the process of attracting a new customer. The findings of this experiment highlight the importance of the interface as a communicator of trustworthiness. In B2C e-commerce applications it is very important to carefully select and design the various elements of web design in the context of culture. It is expected that when web sites are appropriate and culturally sensitive, then users will have increased access to content and enhanced user experiences. (Al-Diri, Hobbs DJ, & R, 2006).

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