EFFECT OF PRESENTATION FLAW ATTRIBUTION ON WEBSITE QUALITY, TRUST, AND ABANDONMENT

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ABSTRACT

Using scenario-based experiments we examine how users' perceptions of online store quality and trustworthiness are affected by their attribution of website flaws. The attribution of online store website flaws can be internal (i.e., an action taken by the online store's site developer) or external (i.e., an action taken on the part of the site's service provider) to the website. Perceived quality of the online store was found to be lower for users who attributed the flaws to internal factors. Findings also showed that the presence of a flaw, regardless of whether it was attributed to an internal or external condition, negatively affected the users' level of trust in the website.

INTRODUCTION

Several characteristics of e-commerce websites can affect consumers' impressions of them, for example, ease of navigation, the appearance of online advertisements, clearly stated privacy and security policies, up-to-date links, and available contact information. Everard and Galletta (2005) looked at various types of presentation flaws, such as typographical errors, incompleteness of the site, stylistic issues, and delay and how these flaws affect users' impressions of online stores, their trust in these stores and their intention to purchase from these stores. Building on this work, we attempt to explore the impact of attribution of the flaws on website quality, trust, and decisions to abandon the website.

Although past research has identified various factors that influence users' online experiences (McCoy, Everard, and Loiacono, 2009; McCoy, Everard, Polak, and Galletta, 2008). none to our knowledge, has studied the effect of presentation flaw attribution on users' impressions of a site. This paper reports the empirical results of scenario-based experiments that look at how attributing on-line store website flaws either to external or internal factors affects people's perceptions of the quality of and trust in the website. We propose that depending on whether a flaw is attributed to an internal (i.e., an action by the on-line store's site developer) factor or an external (i.e., an action on the part of the site's service provider) factor the effect on the user's attitudes and beliefs about a website will differ. Our focus is on users' first time experiences with the website when users have no prior knowledge of the store or its products.

The following research questions are addressed in this paper: (1) Is a user's *perception of quality* of an online store affected by the attribution (internal or external) made of a presentation flaw? (2) Is a

user's *trust* in an online store affected by the attribution (internal or external) made of a presentation flaw? and (3) Given the attribution of the presentation flaw, what action (either leave the online store or remain on it) would the user take? We provide a sound background to this study by examining several areas of relevant research. In looking at the effect of users' attributions of presentation flaws on the perceived quality of and trust in the on-line store, we integrate research on attribution theory, trust, impression formation, and presentation flaws to form the study's theoretical foundation.

The remainder of the paper proceeds as follows: the next section reports on prior research that is relevant to the current study, which leads to the development of hypotheses. The research methodology and experimental design used to test the hypotheses as well as the data collection procedure are then described. The analysis is then detailed and the results reported and discussed. Finally, we present the limitations of this research as well as potential research extensions to this study.

BACKGROUND

Attribution Theory

Attribution is an explanation that is given to account for the occurrence of an event. Attribution theory helps to understand how people explain things. In the case of this research, the explanation that someone provides for an event can either be attributed to something internal or something external. If it is believed that a factor internal to a person or an organization is the cause of an event, this is deemed an internal attribution. An external attribution assigns causality to a factor outside of the person or firm. In such a case, the event is deemed to be motivated by an outside force. A person's behavior will be affected by whether the event is attributed to an internal or external factor.

There are three main dimensions of attributions (Brewer & Crano, 1994). First, there is locus of causality which deals with whether the outcome is attributed to an internal or external cause. The second dimension is stability and focuses on whether the cause is stable or changeable. The third and most important dimension that individuals consider is controllability (Anderson, 1991). Individuals tend to be held more responsible for events and outcomes that they are believed to be able to control than for those that are not deemed controllable.

Trust

Trust refers to a "positive belief about the perceived reliability of, dependability of, and confidence in a person, object, or process" (Fogg & Tseng, 1999, p.81). Trust has been defined in various ways, often depending on the context in which it appears; it has been recognized that trust is difficult to define and to measure (Corritore et al., 2003; Grabner-Kräuter & Kaluscha, 2003;), and only exists in an uncertain and risky environment (Mayer, Davis, & Schoorman, 1995). Some definitions have focused on the element of risk involved (Johnson-George & Swap, 1982), others on the vulnerability of one of the parties concerned (Boss, 1978), while still others on the presence of a significant motivation or incentive at stake (Kee & Knox, 1970). The view of trust that we focus on in this research is trust in the online store via its website.

Initial trust is a particular form of trust that develops at the initial point of contact with a vendor. It is especially relevant in electronic commerce environments, where users frequently access unfamiliar online stores. This type of trust occurs when a relationship is initiated with an unfamiliar trustee, that is where parties lack credible information about each other and no prior ties exist (Serva, Benamati, & Fuller, 2005; McKnight, Choudhury, & Kacmar, 2002; McKnight, Cummings, & Chervany, 1998).

Users' impressions of an online store's website may lead to differing perceptions of the quality of the online store. Since users form impressions of the online store from the signals obtained from the website, it is in the best interest of the store to manage these signals. To expand on this critical concept, we now review the impression formation literature.

Impression Formation

The manner in which information is presented to users helps them form perceptions of a website. Impression formation refers to how this initial information serves as the basis of users' perceptions. Because a user's initial point of contact with the vendor is often through the website, it is crucial that the user is presented with an initial favorable image (Anderson, 1965; Asch, 1946; Fiske, 1980). "The Seven-Second Rule" refers to the time period after which a prospective customer will disengage and be "turned off" for good from a website (Cotlier, 2001) should the initial impression not be positive. It is therefore imperative to focus on the user's initial contact.

Research on impression formation considers the way people perceive others as a process by which an integrated impression is formed from stimulus information. Early models of impression formation (Asch, 1946; Anderson, 1965) assume that when an individual is presented with information about a previously unknown or unfamiliar person, the individual creates a mental slot in which information is received and processed and thus impressions of others are formed.

The negativity effect in impression formation refers to the fact that negative attributes are weighted more heavily in an individual's overall impression than positive ones. Also, items with extreme evaluative meaning are given more weight than neutral items in an individual's impression formation. Negative and extreme factors are deemed, in general, more novel and unusual and as such, are given more attention. Traits that are paid more attention to are usually weighted more heavily in a user's impression formation (Fiske, 1980).

Rather than concentrate on specific attributes or basic traits, individuals focus on person or object types. A "type" is a set of traits or attributes that, based on historical evidence, are likely to be clustered together. For example, one would expect a professional website to evoke a sense of clarity and purpose, to be consistent across pages, to contain easily navigable pages, up to date information, and so forth.

Presentation Flaws

There is an abundance of practical advice on several sites on how to improve website design (for i.e., websitesthatsuck.com and useit.com) and many books on this same issue (for i.e., Homepage Usability: 50 Websites Deconstructed by Nielsen & Tahir (2001)).

While trust can be enhanced by users' perceptions of reliable and accurate information being supplied by the computer, flaws in the information provided may serve to destroy that trust (Wright & Marett, 2010); "virtually all researchers agree that computer errors damage credibility – at least to some extent" (Fogg & Tseng, 1999, p.82). A presentation flaw is any undesirable feature of a website that could interfere with reading or understanding its content or intent. Such flaws include any features of the system that may make the system difficult to learn and remember, ineffective, and unpleasant to use. Examples of flaws are poor aesthetics, confusing organization, difficulty in navigation, broken links, and pictures that do not load correctly. Spelling errors can also be used to form negative impressions about competency and attention to detail (Liu & Ginther, 2001). Flaws such as typographical errors, notation that is unfamiliar to or not easily understood by the users, and inconsistent or faulty formatting issues may result in a loss of the users' trust.

As in Everard & Galletta (2005), we focus on four presentation flaws, namely, (1) English usage and spelling errors, (2) non-loading pictures, (3) broken links and (4) delay.

English usage and spelling errors. English usage errors such as typographical, grammatical, and factual errors make up this set of flaws. Spelling errors, according to Molich and Nielsen (1990) "distract users and make them suspect a generally poor quality of the system" (p.344). Moreover, spelling errors can be used to form impressions about competency and attention to detail (Liu & Ginther, 2001).

Non-loading pictures and broken links. The perceived incompleteness of a website can be affected by non-loading pictures and broken links. These flaws can discourage a user's confidence and trust. Although incompleteness can be thought of as a temporary state, a site owner must use judgment to determine when to release a site to the public. Allowing users to arrive at an incomplete site can be a risky venture and could lead to lasting, negative impressions. Websites need to be maintained, as do their links, which are perishable and must be updated periodically. Users are likely to be disappointed and to not return when sites go stale. Obsolete links can shake the users' confidence in the validity and timeliness of the content (Lynch & Horton, 2002).

Delay. The effects of delay over the World Wide Web have been thoroughly studied and it was found that users especially dislike delays that are associated with the information retrieval process and result in longer wait periods for sought after information (Sears, Jacko, & Borella, 1997). The time that elapses between the user's input and the computer's response is called the system response time. Increased levels of annoyance, frustration, and impatience were reported as system response time increased. Users also rated their well-being as lower when delays in response time grew (Kuhman, Boucstein, Schaefer, & Alexander, 1987; Schleifer, & Amick, 1989).

Based on the prior research presented here, the following sections develop the hypotheses that will be empirically tested.

ATTRIBUTION AND PERCEPTION OF QUALITY

A user's perception of the quality of a website that contains flaws may vary depending on whether the user believes that the flaws are a result of some issues that are external to the company or whether the website is flawed because of an issue that is internal to the firm. In this research we posit that users who are presented with a website which contains a presentation flaw (English errors, non-loading pictures, broken links, or delay) and who attribute that flaw to an issue internal to the online store, for example the online store's developer's negligence, will perceive the quality of the online store to be lower than if they attributed the presentation flaw to an issue external to the online store. In the first case, the user may feel that the flaw is present despite the ability of the firm to do something about it or to control it. If the flaw is attributable to some external force, the user may feel that the online store can do nothing to stop the flaw from occurring. From the user's perspective, it is less desirable if the online store can control the presence of the flaw but does not than if the online store is not in a position to control the flaw. This leads to the first hypothesis:

H1. An internal attribution of website presentation flaws will result in lower perceived quality of the online store than an external attribution of website presentation flaws.

ATTRIBUTION AND TRUST

Similarly, users' attribution of presentation flaws can affect the level of trust that users place in the website. We hypothesize that an internal attribution of a flaw (for example, an online store's developer incorrectly specifies the path to the picture file and hence no picture loads) will more negatively affect the user's level of trust in an online store than a flaw which is attributed to something outside of the online store's control. As with the user's perception of quality of an online

store, if the user feels that the flaw was present in the online store's website despite the firm's ability to prevent it the user will place less trust in the site than if the user feels that the firm could not have done anything to control the presence of the flaw. Therefore, we hypothesize:

H2. An internal attribution of website presentation flaws will result in a lower level of trust in the online store than an external attribution of website presentation flaws.

Another question that this research is interested in answering is what action would the user take given the attribution of the presentation flaw. Given the above hypotheses, we hypothesize that a user presented with an internal attribution condition will be more likely to leave the online store as we expect the user's perception of quality (H1) and level of trust (H2) to be lower than in the external attribution condition. We also expect that users in the external attribution condition to more likely either continue to browse and buy from the store or to continue to browse being wary. We do not expect such users to leave the store. We also expect that users in the external attribution condition will consider that the presence of the presentation flaw is through the action of something not under the control of the online store and therefore users will perceive the quality of the online store less negatively than if the presentation flaw was due to issues controllable by the online store. Therefore, we hypothesize:

H3.Users in the internal attribution condition will be more likely to leave the website than users in the external attribution condition, who will more likely continue to browse the store.

RESEARCH METHODOLOGY

Scenario-based vignettes were created to conduct this research. In this experimental setting the vignettes were used to control the type of flaw which users were presented as well as whether the flaw was attributed to an internal or an external issue of the online store's website. The use of vignettes is useful when trying to elucidate attitudes by personalizing a situation (Couger, 1989) and when problems of internal validity (for example, subjects attempting to gain experimenter approval) (Harrington, 1996) may exist. In the case of this research, the use of vignettes was especially useful as the experimenter was able to communicate the attribution of the flaw to the subjects. Without the use of the vignettes, it would have been more difficult to ascertain the attribution of the flaw made by the subject. A similar methodology was used in Gattiker and Kelley (1999) who looked at ethical computer-related behavior. A 4x2 factorial design was used: (1) English usage and spelling errors, (2) non-loading pictures, (3) broken links, and (4) delay are the four different types of flaws that are investigated; attribution of the flaw was either internal or external.

Operationalization of Variables

A vignette experiment was designed to collect the required data for this research. The vignettes each included the presence of a flaw (either, English usage and spelling errors, non-loading pictures, broken links or delay) and this flaw was either attributed to a cause internal to the online store's website or an issue external to the website. The vignettes were identical in their composition except for the type of flaw depicted and its attribution. Each of the four flaw types was in turn attributed to internal issues and to external issues, resulting in eight different versions of the vignettes. That is, all combinations of flaw-attribution were created in the fully-factorial design.

The vignette described a scenario in which a user (by the gender-neutral name of Chris) is faced with a flaw and is informed whether the flaw occurred because of something internal to the website or external to the website.

Flaw Types and Attribution

As described above, four different types of flaws were represented in the vignettes (See Appendix A). In the vignette which includes English usage and spelling errors, the scenario reads: "Chris notices that some words are misspelled and that there are numerous grammatical errors. Some of those problems were quite obvious, making the site look fairly bad." Chris then contacts the store to report the problem. In the internal attribution condition the store's reply "made it clear that the errors were the fault of the in-house on-line store's site developer who had not spent enough time proofing the site's text before the site went live." In the external attribution condition the store's reply "made it clear that, although the site was secure and customer accounts had not been compromised, the store's Internet provider suffered a security breach and a hacker defaced the site and introduced the misspellings. The spelling errors were a result of that and had nothing to do with the on-line store's management or the professionals who built the site."

In the scenarios involving non-loading pictures, Chris "finds the desired item and starts to read the description and information about the product. Chris notices that some of the pictures on the page being viewed do not appear." As in the English usage and spelling errors scenario, Chris reports the problem; from the store's reply, it is clear that in the internal attribution condition "the in-house on-line store's site developer had incorrectly specified the path to the picture file and had not spent enough time proofing and testing the site before it went live," while in the external attribution condition the cause lay with the service provider EOL that was "using content filtering and hence some pictures had been blocked from viewing by mistake. Although the on-line store's site developer had correctly specified the path to the picture file, the problem was occurring due to the service provider's decision to use software to block certain types of content."

Similar to the non-loading picture flaw, the scenario built around the broken link flaw also depicts Chris as finding the desired item and clicking on the link to access additional information but instead an error message appears. Chris then contacts the store and receives a reply. In the internal attribution condition, "the in-house on-line store's site developer had incorrectly specified the file path and had not spent enough time proofing and testing the site before it went live." In the external attribution condition, the problem's cause lay with the service provider that was "using content filtering and hence some information had been blocked from viewing by mistake. Although the on-line store's site developer had correctly specified the file path, the problem was occurring due to the service provider's decision to use software to block certain types of content."

The final flaw, delay, was illustrated by Chris clicking on a link to go to another page and noticing a longer than usual delay. In the internal attribution condition the scenario then continues "Because this happens repeatedly, Chris, who recently learned a little about developing sites, examines the page more closely and finds that the in-house on-line store's site developer had not properly tested the site. The graphics on the page were from large graphic files that were not compressed at all, which is a problem that is easily remedied. In fact, Chris experiments a little and finds that two elementary changes reduced the delay by 95%." In the external attribution condition, Chris contacts the store and finds out that the problem lies with the service provider. "Network problems are the cause of the delay. The waiting period between the loading of pages has nothing to do with the on-line store."

Dependent Variables

Action

After each of the scenarios the respondent was asked what action s/he would take given the scenario just presented. The options were: (1) Continue to browse and buy the item, if it's what you want, at the right price; (2) Continue but be wary of the online store; or (3) Leave the online store and browse another online store with similar merchandise. Finally, a question that serves as the manipulation

check was asked in order to verify that the attribution manipulation (internal and external) was successful.

The following dependent variables were measured using a paper-based instrument which respondents filled out after having read one of the eight scenarios.

Perceived Quality

The perceived quality of the website was measured using a set of four items adapted from the SITEQUAL instrument developed by Yoo and Donthu (2001). The SITEQUAL instrument was designed to measure the perceived quality of an Internet site (7-point scales) (Alpha = .87).

Trust in the online store's website

Trust in the online store website was measured by a set of six items adapted from Jarvenpaa and Tractinsky (1999). These six items measure the online store's website's trustworthiness (7-point scales) (Alpha = .74).

Subjects

259 volunteer undergraduate business students from two U.S. universities participated in the study. Each participant was randomly assigned to read one of the eight scenarios and to complete the subsequent questionnaire. Subjects were given the opportunity to participate during one of their class periods, and an incentive in the form of extra credit points to those who completed the experiment was offered to stimulate interest in, and completion of, the task.

RESULTS AND DISCUSSION

Data were coded and hypotheses were tested using SPSS version 12. Tests of the hypotheses are reviewed below, along with the results. A manipulation check was included in the instrument in order to ensure that respondents perceived the experimental variation in the attribution treatment. A chi-square test indicates that respondents understood the attribution treatment (chi-square = 39.910, 1 d.f., p = .000). H1 predicted that users would perceive the quality of the online store as lower if they were presented with a presentation flaw that was attributed to a cause internal to the online store, for example an error by the in-house online store's site developer. This hypothesis was supported. The analysis of site quality produced a significant effect for attribution (t=2.045, p=.042). Subjects who were exposed to the internal attribution condition perceived the quality of the online store to be worse (4.62) than subjects who were exposed to the external attribution condition (4.33)[1](Table 1).

	Attribution	N	Mean	Standard Deviation
Perceived Quality	Internal	130	4.62	1.22
	External	129	4.33	1.03

Table 1: Means of Perception of Quality of Online Store's Website

[1] For the instrument used the lower the score the higher the perceived quality. A score of 1 would indicate the highest perception of quality, while a score of 7 indicates the lowest perception of quality.

This result is consistent with what one would expect given attribution theory. Just as individuals are judged more responsible for events whose outcomes they can control, the website is held more responsible if it is deemed it could have done something about the flaws, that is, that the presence of the flaw was in fact under the control of the website. As can be seen from the results, users perceived the quality of the website to be better when an external attribution was used to explain the flaw. One explanation is that users felt that though the flaw was present, it was attributed to something outside of the control of the online store.

H2 predicted that users' level of trust would be lower for those exposed to an internal attribution of website presentation flaws than those exposed to an external attribution of the flaws. This hypothesis was not supported. The analysis of trust produced an insignificant effect for attribution (t=.-363, p=.717), where subjects who were exposed to the internal attribution condition indicated a 4.29 level of trust and subjects who were exposed to the external attribution condition indicated a 4.33 level of trust (Table 2).

	Attribution	N	Mean	Standard Deviation
Trust	Internal	130	4.29	.896
	External	129	4.33	.976

Table 2: Means of Trust of Quality of Online Store's Website

Although the results of this analysis are in the predicted direction, the non-significant result is contrary to our expectation. One explanation could be that web users, who are increasingly informed and knowledgeable about the web, have no tolerance for any type of presentation flaw. Essentially, the above reported results indicate that no matter whether the attribution of the flaw is internal or external the respondents' trust is decreased.

H3 predicted that users in the internal attribution condition would be more likely to leave the website than users in the external attribution condition who, it was predicted, would more likely continue to browse the store. This hypothesis was not supported. The analysis produced a marginally significant effect for action (p=.007), however this effect was in the opposite direction of our predictions. For subjects who were exposed to the internal attribution condition, 71 chose to keep browsing the site while 56 of them chose to leave the site[2]. For the subjects who were exposed to an external attribution of the flaw 46 chose to remain on the site and continue browsing while 77 chose to leave the site.

[2] Respondents were given a choice of three possible actions: (1) "Continue to browse and buy the item, if it's what you want, at the right price," (2) "Continue but be wary of the online store" or (3) "Leave that online store and browse another online store with similar merchandise". In the analysis for H3, we are interested in whether the user continues to browse the site or leaves the site. As a result, in the statistical tests we add the number of users who chose either to continue to browse and maybe even buy from the site and those who would continue to browse but be cautious; this number represents those users that remain on the site. We compared this aggregate number with the number of users who chose to leave the site (action #3).

Because the above results are contrary to our expectations, and because we wanted to gain further insight into the possible reasons for the findings, some exploratory analysis was conducted. The manipulation check, although confirmed to have elucidated the intended treatment, can serve as the subject's perception of the attribution of the flaw. We now report on how the perception of the attribution of the flaw affects the users' action, that is whether to continue to browse and even buy from the site if the product is what the user is looking for, to continue to browse but to be wary, or to leave the site altogether. Crosstabs were run with the scores of the manipulation check and the action taken. It is interesting to note that although half of the subjects were clearly exposed to the internal attribution condition and the other half to the external attribution condition, the respondents' perceptions of the attribution were heavily skewed on the internal attribution side. Of the 250 respondents, 179 perceived the flaw to be caused by an internal cause while 71 of the respondents felt the flaw was due to something external to the online store. The analysis produced a significant effect for action ($p=.074$), with subjects who attributed the flaw to an internal cause to be more likely to leave the site (98) than to continue to browse and perhaps buy (37) or to continue to browse but to be wary (44). Of the subjects who perceived the flaw to be caused by an issue external to the online store 35 chose to leave the site altogether, 24 chose to continue browsing and perhaps buy the product from the site, and 12 chose to continue to browse but be wary. These results are similar to the above results in that no matter what the attribution a majority of the respondents are more likely to leave the site when a flaw is present.

LIMITATIONS AND CONCLUSIONS

As in most studies, there are several limitations that should be kept in mind when considering the results of this study. First, the subjects were college students, and the results might not generalize to the rest of the population. Fortunately, Voich (1995) found students to be particularly representative of values and beliefs of individuals employed in a variety of occupations. In addition, given that college students comprise a significant portion of online shoppers and are not expected to react differently when encountering flaws, we believe that students are suitable participants for such a study.

Another potential limitation in this study is the seldom-used vignette experimental technique. Although this type of research instrument is perhaps more common in Psychology research, IS researchers have also made use of it (for example, Gattiker and Kelley, 1999). A laboratory or field experiment involving sites that participants navigate in their typical context may produce different results than the vignette experiments used here.

The findings suggest that the attribution that users make of presentation flaws has a significant effects on users' perceptions of the online store's quality and the action that they choose to take, whether it be to remain on the site or to leave. In terms of users' perception of an online store's quality, users seem to hold websites more responsible if the flaw is attributed to something internal; they are more forgiving when the attribution is an external one. This supports the notion that website owners should take the necessary steps to have a complete website free of flaws.

Although statistically the effect of attribution on users' trust in the online store was insignificant, the results from this study demonstrate that regardless of whether users attribute a flaw to an internal or an external cause the presence of a flaw decreases the users' level of trust in the website. Therefore, website owners must continually review their sites to make sure they are free of all flaws, regardless of their source.

When asked whether the user would remain on the site and continue browsing or leave the site, the results from this study were contrary to our expectations. More respondents exposed to the external attribution condition chose to leave compared with those exposed to the internal attribution condition. Although this result was unexpected, we can understand it given the informed and knowledgeable web users who expect websites to be free from flaws, and who have innumerable options from which to choose from when browsing the World Wide Web.

An interesting future direction of this research is to investigate the impact of the individual flaws on the dependent variables. In other words, do specific flaws have an impact different than grouping them together as was done in this research? This is a promising avenue of future research.

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Appendix A - SCENARIOS

1. Spelling errors - internal

Chris is browsing a new web retail store, and finds it to be well-organized, easy to navigate and aesthetically pleasing. Chris finds the desired item and starts to read the description and information about the product. Chris notices that some words are misspelled and that there are numerous grammatical errors. Some of those problems were quite obvious, making the site look fairly bad. Chris was kind enough to contact the store to report the problems, and the reply made it clear that the errors were the fault of the in-house on-line store's site developer who had not spent enough time proofing the site's text before the site went live.

If you were Chris, what would you do next?

Continue to browse and buy the item, if it's what you want, at the right price.

Continue but be wary of the on-line store.

Leave that on-line store and browse another on-line store with similar merchandise.

Other: _____

Based on the above scenario, who do you blame for the spelling errors? Should the blame be directed internally or externally to the on-line store?

Internal ə External ə

2. Spelling errors – external

Chris is browsing a new web retail store, and finds it to be well-organized, easy to navigate and aesthetically pleasing. Chris finds the desired item and starts to read the description and information about the product. Chris notices that some words are misspelled and that there are numerous grammatical errors. Some of those problems were quite obvious, making the site look fairly bad. Chris was kind enough to contact the store to report the problems, and the reply made it clear that, although the site was secure and customer accounts had not been compromised, the store's Internet provider suffered a security breach and a hacker defaced the site and introduced the misspellings. The spelling errors were a result of that and had nothing to do with the on-line store's management or the professionals who built the site.

If you were Chris, what would you do next?

Continue to browse and buy the item, if it's what you want, at the right price.

Continue but be wary of the on-line store.

Leave that on-line store and browse another on-line store with similar merchandise.

Other: _____

Based on the above scenario, who do you blame for the spelling errors? Should the blame be directed internally or externally to the on-line store?

Internal ə External ə

3. Non-loading pictures - internal

Chris is browsing a new web retail store and finds it to be well-organized, easy to navigate and aesthetically pleasing. Chris finds the desired item and starts to read the description and information about the product. Chris notices that some of the pictures on the page being viewed do not appear. After contacting the store to report the problem, it became clear that the in-house on-line store's site developer had incorrectly specified the path to the picture file and had not spent enough time proofing and testing the site before it went live. Hence, the pictures could not be seen.

If you were Chris, what would you do next?

Continue to browse and buy the item, if it's what you want, at the right price.

Continue but be wary of the on-line store.

Leave that on-line store and browse another on-line store with similar merchandise.

Other: _____

Based on the above scenario, who do you blame for the non-loading pictures? Should the blame be directed internally or externally to the on-line store?

Internal ə External ə

4. Non-loading pictures - external

Chris is browsing a web retail store using a new service provider called Everyone On Line (EOL). The site is well-organized, easy to navigate and aesthetically pleasing. Chris finds the desired item and starts to read the description and information about the product. Chris notices that some of the pictures on the page being viewed do not appear. After contacting the store to report the problem, it became clear that EOL is using content filtering and hence some pictures had been blocked from viewing by mistake. Although the on-line store's site developer had correctly specified the path to the picture file, the problem was occurring due to the service provider's decision to use software to block certain types of content.

If you were Chris, what would you do next?

Continue to browse and buy the item, if it's what you want, at the right price.

Continue but be wary of the on-line store.

Leave that on-line store and browse another on-line store with similar merchandise.

Other: _____

Based on the above scenario, who do you blame for the non-loading pictures? Should the blame be directed internally or externally to the on-line store?

Internal ə External ə

5. Broken Links - internal

Chris is browsing a new web retail store, and finds it to be well-organized, easy to navigate and aesthetically pleasing. Chris finds the desired item and clicks on the link but an error message appears instead of the appropriate page. After contacting the store to report the problem, it became clear that the in-house on-line store's site developer had incorrectly specified the file path and had not spent enough time proofing and testing the site before it went live. Hence, the broken links prevented Chris from finding the desired item.

If you were Chris, what would you do next?

Continue to browse and buy the item, if it's what you want, at the right price.

Continue but be wary of the on-line store.

Leave that on-line store and browse another on-line store with similar merchandise.

Other: _____

Based on the above scenario, who do you blame for the broken links? Should the blame be directed internally or externally to the on-line store?

Internal ə External ə

6. Broken Links - external

Chris is browsing a new web retail store using a new service provider called Everyone On Line (EOL). The site is well-organized, easy to navigate and aesthetically pleasing. Chris finds the desired item and clicks on the link but an error message appears instead of the appropriate page. After contacting the store to report the problem, it became clear that EOL is using content filtering and hence some information had been blocked from viewing by mistake. Although the on-line store's site developer had correctly specified the file path, the problem was occurring due to the service provider's decision to use software to block certain types of content.

If you were Chris, what would you do next?

Continue to browse and buy the item, if it's what you want, at the right price.

Continue but be wary of the on-line store.

Leave that on-line store and browse another on-line store with similar merchandise.

Other: _____

Based on the above scenario, who do you blame for the broken links? Should the blame be directed internally or externally to the on-line store?

Internal ə External ə

7. Delay - internal

Chris is browsing a new web retail store, and finds it to be well-organized, easy to navigate and aesthetically pleasing. Whenever Chris clicks on a link to go to another page, there is a longer than

usual delay. That is, there is a noticeable wait before the page is complete. Because this happens repeatedly, Chris, who recently learned a little about developing sites, examines the page more closely and finds that the in-house on-line store's site developer had not properly tested the site. The graphics on the page were from large graphic files that were not compressed at all, which is a problem that is easily remedied. In fact, Chris experiments a little and finds that two elementary changes reduced the delay by 95%.

If you were Chris, what would you do next?

Continue to browse and buy the item, if it's what you want, at the right price.

Continue but be wary of the on-line store.

Leave that on-line store and browse another on-line store with similar merchandise.

Other: _____

Based on the above scenario, who do you blame for the delay? Should the blame be directed internally or externally to the on-line store?

Internal ə External ə

8. Delay – external

Chris is browsing a web retail store using a new, free service called Everybody on Line (EOL). The site is well-organized, easy to navigate and aesthetically pleasing. Whenever Chris clicks on a link to go to another page, there is a longer than usual delay. That is, there is a noticeable wait before the page is complete. Because this happens repeatedly, Chris contacts the store to report the problem. It then becomes clear that the problem lies with EOL. Network problems are the cause of the delay. The waiting period between the loading of pages has nothing to do with the on-line store.

If you were Chris, what would you do next?

Continue to browse and buy the item, if it's what you want, at the right price.

Continue but be wary of the on-line store.

Leave that on-line store and browse another on-line store with similar merchandise.

Other: _____

Based on the above scenario, who do you blame for the delay? Should the blame be directed internally or externally to the on-line store?

Internal ə External ə