

THE EFFECT OF PERCEIVED BLOGGER CREDIBILITY AND ARGUMENT QUALITY ON MESSAGE ELABORATION AND BRAND ATTITUDES: AN EXPLORATORY STUDY

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ABSTRACT: To understand information processing on blogs, this study investigates how perceived blogger trustworthiness affects blog readers' elaboration of brand-related messages and its interaction effects with argument quality. The results reveal that the degree of perceived blogger trustworthiness affects the extent of message elaboration, and findings from a 2×2 (perceived blogger trustworthiness \times argument quality) factorial experiment suggest a significant interaction effect on brand attitudes. This interaction reveals that when perceived blogger trustworthiness is high, argument quality has a greater impact on brand attitudes than when perceived blogger trustworthiness is low. The authors discuss some implications and suggestions for further research.

Blogs have more than captured the media world's attention. To "blog" is to continually post one's own ideas, opinions, Internet links, and other elements on one's own Web site, which is called a "web log" (Smudde 2005), often combined into the abbreviation "blog." Thus, blogs are online journals in which the content is arranged in reversed chronological order (Blood 2002; Walker 2003). This up-to-date form of media is growing fast—over 110 million blogs currently exist, with an estimated 175,000 new blogs being launched every day (Technorati 2007). Generally, brand-related information appears on blogs in the form of bloggers' descriptions of their personal experience, blog sponsoring (i.e., brand information in postings), or blog advertising (i.e., brand information separated from postings) (Armstrong 2006; Jarvis 2006; Pew Internet and American Life Project 2006). Thus, blogs enable advertisers to customize their content to the particular needs of a specific market in a cost-efficient manner. The media research firm PQMedia (Jarvis 2006) in turn estimates that ad spending for blogs totaled \$20.4 million in 2005, then increased by 145% to \$49.8 million in 2006. The growth of ads on blogs should reach an annual rate of 106% by 2010 (Jarvis 2006). This rapid growth commands both advertisers and academics' attention.

The intricate details associated with building credibility for advertisers on blogs describe a complex phenomenon, complicated by unknown bloggers who write unlimited messages that are available to innumerable blog readers (Fine 2006; Jarvis 2006; Wasserman 2006). Bloggers represent a subset of Internet users who write their own online journals or blogs. According to the Pew Internet and American Life Project (2006), 8% of Internet users, or about 12 million

American adults, keep a blog, and 39% of them, or about 57 million American adults, read them. More than half of these bloggers are between the ages of 18 and 29 years, are evenly split by gender, and are racially diverse.

Nardi, Schiano, and Gumbrecht (2004) reveal several reasons bloggers engage in blogging. For example, by building chronicles of their everyday events, they update others on their lives, express opinions that may influence others, and seek others' opinions and feedback. Every reason is associated with a particular audience, such as the bloggers' own, known social networks or a larger audience beyond the author's friends and family. Armstrong (2006) notes that half of all bloggers provide brand-related information at least once a week, and 77% get insights into the brand from other blogs and consider blogs a useful way to gain brand-related information for their own purchases.

Scholars suggest that the increased personalization of mass media, including mass-mediated communications that closely resemble interpersonal communication, may increase the credibility and persuasiveness of advertising messages (Beninger 1987). A recent study compares the credibility of blogs (as a channel) and traditional media, as judged by bloggers (Johnson and Kaye 2004), and shows that bloggers view blogs as more credible than traditional media. Similarly, Hope (2002) finds that brand-related messages on blogs are perceived as highly credible because bloggers remain independent from corporate interests. However, critics also suggest that because blog writing is accessible to anyone, open expression is the main focus, and the bounds of standards of objectivity are not primary concerns (Levy 2002; Smudde 2005). Because attitude is crucial for predicting future

purchase behavior (Johnson and Kaye 2004; Petty, Priester and Wegener 1994), the first step in studying the advertising effectiveness of blogs should be to understand blog readers and their attitudinal dispositions in relation to blogs and the perceived credibility of bloggers.

Therefore, this study attempts to understand the role of perceived blogger trustworthiness and argument quality for a person's attitude toward brands mentioned in blogs. Specifically, we conduct an experimental study in which we (1) examine how the perceived trustworthiness of a blogger influences message elaboration when those messages provide brand-related information on blogs and (2) explore how argument quality influences brand attitudes under conditions of both high and low perceived blogger trustworthiness. Results from the study yield additional insights into information processing on blogs and offer useful implications for advertising media strategies.

LITERATURE REVIEW

Source Credibility and Perceived Blogger Credibility

The source credibility theory states that people are more likely to be persuaded when the source presents itself as credible (Hovland, Janis, and Kelley 1953; Ohanian 1991; Petty and Cacioppo 1986; Sternthal, Phillips and Dholakia 1978). Various studies examine the effect of source credibility on the receiver's attitude and behavior responses, suggesting that highly credible sources produce a more positive attitude and induce more behavioral compliance than do sources that are less credible (Hovland and Weiss 1951; Ohanian 1991; Petty, Cacioppo, and Schumann 1983).

Source credibility models generally attempt to identify the key variables or components that constitute source credibility (Chew and Kim 1994; Ohanian 1990). Expertise and trustworthiness are the two most common dimensions of source credibility (Hovland, Janis, and Kelley 1953; Hovland and Weiss 1951; McCracken 1989; Ohanian 1991). Expertise refers to "the perceived ability of the source to make valid assertions" (McCracken 1989, p. 311), that is, the extent to which the communicator is qualified to provide valid and accurate information or discuss a particular subject (Hovland, Janis, and Kelley 1953). Trustworthiness is "the perceived willingness of the source to make valid assertions" (McCracken 1989, p. 311) and thus refers to an audience's belief that the communicator provides information in an honest, fair, sincere, and honorable manner (Nelson and Pearson 1988; Ohanian 1991). Romani (2006) indicates that

when product information is communicated using misleading practices, consumers develop lower levels of trustworthiness toward the source of information and will not purchase the product. Past research also shows that trustworthiness and expertise play critical roles in persuading consumers and influencing their attitudes (Harmon and Coney 1982; McGinnies and Ward 1980; Wu and Shaffer 1987).

Attractiveness is another dimension of source credibility (Baker and Churchill 1977; Caballero and Solomon 1984; Choi, Lee and Kim 2005; McGuire 1958) that refers to the source's perceived social value, such as physical appearance, personality, social status, or similarity to the receiver (McCroskey and McCain 1974). Physically attractive endorsers are often more liked by audiences and have a positive impact on attitude changes and product evaluations (Benoy 1982; DeSarbo and Harshman 1985). When the information source pertains to a person or endorser in ads, the three-dimensional model of expertise, trustworthiness, and attractiveness provides a good theoretical framework. However, when the information source is a blogger, attractiveness seems a less applicable descriptor, because many bloggers do not include visual images on their blogs.

Blogs, similar to other channels, feature a source, content, and receivers, which all contribute to a blog's credibility (Ulicny and Baclawski 2007). Although source plays a significant role in determining persuasive effectiveness, unlike endorser credibility, no research has studied bloggers as sources or with regard to their potential impact on brand attitudes. Perceived blogger credibility may rely mainly on the bloggers' expertise and trustworthiness. For example, if a blogger is an expert engineer and is willing to make valid assertions, technological brand information posted on his or her blog should be viewed as more credible than messages written by a blogger who is not an engineer. That is, if a blogger is considered trustworthy and has the ability to make valid assertions, blog readers likely trust the comments he or she makes. Therefore, for the purposes of this study, we consider expertise and trustworthiness dimensions of perceived blogger credibility. In particular, we focus on personal blogs (Cardon et al. 2007), such as MySpace and LiveJournal, which mainly feature comments on personal life experiences (e.g., brand purchasing/usage experiences).

Persuasive Communication through Blogs

The elaboration likelihood model (ELM; Petty and Cacioppo 1981, 1983, 1986) posits that the attitude formation process differs in terms of elaboration, which is the extent to which a

person carefully thinks about issue-relevant arguments in the persuasive communication. When people possess relatively high motivation or ability to process a persuasive message, they employ the central processing route and engage in high elaboration. Furthermore, in this condition, people combine and integrate issue-relevant information into an overall evaluative reaction (Fishbein and Ajzen 1975; Wyer 1974).

In contrast, when people lack either the motivation or ability to process a message, they conserve their cognitive efforts and rely on relatively less thoughtful processes. They therefore employ a peripheral route, and elaboration is low (Petty and Cacioppo 1983; Petty, Cacioppo, and Schumann 1983). With a peripheral route, attitudes depend on positive and negative cues, or even no cues at all.

When blog readers are motivated and able to take the central route, their brand attitudes shift as a result of a thoughtful process, in which the blog readers attend carefully to the brand-related information presented on the blogs. Blog readers also engage in effortful cognitive activity when they use their relevant experiences and knowledge to evaluate brand-related information in "systematic" (Chaiken, Liberman and Eagly 1989) and "mindful" (Palmerino, Langer and McGills 1984) processing. On the contrary, when blog readers' motivation or ability to process brand-related information is low, they rely on simple cues in a persuasion context. For example, the responses of other peer bloggers who view the same message on blogs might serve as a validity cue, such that if many bloggers agree, the information must be true (Axsom, Yates, and Chaiken 1987).

Perceived Blogger Trustworthiness and Elaboration.

Previous authors suggest that "the degree to which a source is perceived to be of questionable or low trustworthiness has been found to increase the extent of elaboration" (Petty, Priester, and Brinol 2002, p. 172). Specifically, Priester and Petty (1995, 2003) argue that source trustworthiness plays a significant role by influencing the likelihood that people engage in message-based elaboration. In different experiments that examine the effects of source trustworthiness on persuasion, these authors manipulate source trustworthiness by providing message recipients with background information about the communicator (Petty, Priester, and Brinol 2002) that indicated the communicator was either honest and could be trusted (high trustworthiness condition) or dishonest and could not be trusted (low trustworthiness condition) to provide accurate information. They also have the source either reinforce self-interest

(relatively untrustworthy) or argue against self-interest (relatively trustworthy) in another study (Petty, Priester, and Brinol 2002). The combined results show that low trustworthiness sources engender greater elaboration than high trustworthiness sources.

Source trustworthiness likely influences elaboration in a way that mirrors the ELM framework (Petty, Priester, and Brinol 2002). First, ELM posits that people are motivated to hold correct attitudes. Second, despite this motivation, the bases of people's attitudes (i.e., amount and nature of the elaboration) differ (Priester and Petty 2003). Therefore, ELM explains how source trustworthiness influences message accuracy; the assurance of accuracy further influences message elaboration.

When a message recipient perceives the message source to be an expert, trustworthy, and willing to provide accurate information, he or she may relinquish the thoughtful process of scrutinizing the message and instead unthinkingly accept the position as valid. In contrast, when a source is perceived to have low trustworthiness, the message recipient is unsure whether the source will provide accurate information. In this case, the message recipient cannot be assured of accuracy and thus may sense a need to scrutinize information to ascertain if the communication is cogent and valid.

This finding conflicts with the widespread belief that information associated with an untrustworthy source gets unthinkingly rejected or devalued (Priester and Petty 2003). In the context of blogs, this perspective also suggests that bloggers with low perceived trustworthiness may influence brand attitudes by increasing the amount of thinking generated in response to messages on blogs. Furthermore, the growth of blog advertising makes it vital to understand whether the level of perceived blogger trustworthiness may influence blog readers' message elaboration. Therefore, we put forward the following hypotheses:

H1a: When perceived blogger trustworthiness is low, blog readers engage in higher brand-related elaboration than when perceived blogger trustworthiness is high.

H1b: When perceived blogger trustworthiness is high, blog readers engage in lower brand-related elaboration than when perceived blogger trustworthiness is low.

Argument Quality and Elaboration. Perceived blogger trustworthiness may influence persuasive effectiveness, but the relationship among trustworthiness, message elaboration, and brand attitudes remains unclear. A suitable theoretical framework of the source effects on blogs must include both

strong and weak arguments; we specifically examine the message factors in ELM. Petty, Priester, and Brinol (2002, p. 176) suggest that "an argument is a piece of information that is relevant to determining the true merits of the position taken." Thus, ELM assumes that elaboration exists when people generate positive thoughts when exposed to strong arguments and negative thoughts when exposed to weak arguments (Petty and Cacioppo 1986). Argument quality manipulation has emerged as an effective methodological tool by which to make inferences about differences in elaboration (Petty and Cacioppo 1986; Petty et al. 1993).

Recent studies examine the influence of spokesperson trustworthiness on message elaboration and employ a manipulation of argument quality to determine differences in message scrutiny (Priester and Petty 2003). When a person engages in greater message elaboration, the quality of the arguments has a greater impact on his or her attitudes compared with low message elaboration. Although marketers would never purposefully use weak information (i.e., a weak argument) in a promotion campaign, argument quality manipulations in previous experiments demonstrate differences in the elaboration of various messages by recipients.

Although information presented by a trustworthy blogger should be unthinkingly accepted, the uncertain credibility of blogs forces blog readers to rely on argument quality to determine their attitudinal dispositions toward messages (Hope 2002; Johnson and Kaye 2004; Wasserman 2006). Therefore, brand attitudes should be more influenced by strong than by weak arguments. In contrast, information presented by untrustworthy blogger should be thoughtfully elaborated, and blog readers also use subtle cues about the argument quality to judge the brand mentioned on these blogs. Therefore, blog readers take a central processing route and combine and integrate issue-relevant information into an overall reaction (Fishbein and Ajzen 1975; Wyer 1974). When perceived blogger trustworthiness is low, argument quality has less impact on brand attitudes than when perceived blogger trustworthiness is high. We propose two related hypotheses:

H2a: When perceived blogger trustworthiness is high, blog readers' brand attitudes are more influenced by strong than by weak arguments than when perceived blogger trustworthiness is low.

H2b: When perceived blogger trustworthiness is low, argument quality (strong or weak) has little impact on

brand attitudes compared with when perceived blogger trustworthiness is high.

STUDY

In March 2007, we undertook an experimental study with a sample drawn from an established participant pool at a major Southwestern U.S. university. Subjects were randomly assigned to one of four conditions in a 2 (perceived blogger trustworthiness: high versus low) \times 2 (argument quality: strong versus weak) factorial between-participants experiment conducted in an online setting. Thus, perceived blogger trustworthiness and argument quality serve as the two manipulated variables, and message elaboration and attitudes toward brands are the variables to be analyzed. We manipulate both argument quality and cognitive responses to examine any differences in brand-related elaboration as a result of perceived blogger trustworthiness.

Sample

Currently, about 69 million American adults keep or read blogs (Pew Internet and American Life Project 2006), and more than half are between the ages of 18 and 29 years. Because the purpose of this study is to examine blogs from an information processing perspective, we gather our sample from among college students, which represent the main blog population.

A total of 158 undergraduate students from a variety of majors and backgrounds participated in the study for extra course credit. Of the original 158 studies completed, we include 145 in the final sample after eliminating any incomplete studies. Sample respondents are approximately 30% male and 70% female and range in age from 17 to 29 years, with an average of 20 years. More than 56% of the participants are white, followed by 17% Asian-Americans, 15% Hispanic-Americans, and .7% African-Americans. We illustrate the participants' demographic information in Appendix 1.

Stimuli Development

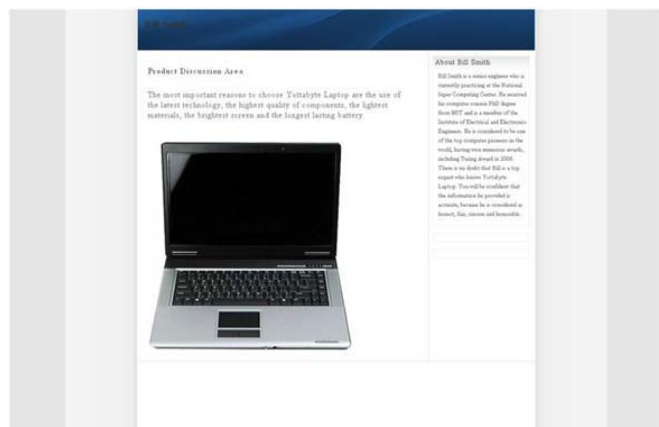
We develop four mock-up blogs to manipulate the different levels of perceived blogger trustworthiness and argument quality. Each blog contains a section entitled "About Bill Smith (blogger)" in the right one-third of the page, as well as a section entitled "Product Discussion Area" on the left two-thirds. Each blog also refers to a fictitious laptop named Yottabyte Laptop in the product discussion area, with an identical picture of this laptop. We use the laptop as the study

product because it is one of the top three gadgets that bloggers own to support their online proclivities for social interaction and creativity (Pew Internet and American Life Project 2006).

To manipulate perceived blogger trustworthiness, we alter the information provided about the blogger as information that suggests Bill Smith either is honest and can be trusted or is dishonest and cannot always be trusted to provide accurate information. In all conditions, we describe this fictitious blogger as an expert to isolate the influence of trustworthiness from other possible factors. We provide the text describing Bill Smith's background information in the high and low trustworthiness conditions in Appendix 2.

We pretest the strong and weak arguments for the Yottabyte Laptop (Petty and Cacioppo 1986) with 20 participants. This pretest provides information about whether the strong arguments generate primarily positive thoughts and the weak arguments generate primarily negative thoughts (Petty and Cacioppo 1986). On the basis of these results, we manipulate argument quality according to the brand-related information provided by Bill Smith. Both strong and weak arguments describe five attributes of the brand, namely, the technology, component, material, screen, and battery. We excerpt the text that represents the strong and weak arguments in Appendix 2 and depict a stimulus blog sample in Figure 1.

Figure 1. Stimulus Blog Sample



Data Collection Procedure

All participants received an invitation e-mail message that included the URL where they could click to take part in the study. The study Web site began with an informed consent statement, and participants provided consent by clicking on the "proceed" button. Next, they randomly viewed one of the four stimulus blogs, though one blog relies on a link that connects to its first page. Participants then read the blog as

they normally would. Immediately after reading the blogs, they answered a series of questions that contained the dependent measures, as well as demographic information items. After completing the session, they were thanked for their participation.

Independent Variables

Perceived Blogger Trustworthiness. McCracken (1989) conceptualizes trustworthiness as the perceived willingness of the source to make valid assertions. To test the hypotheses, we operationalize trustworthiness as the blogger's willingness to provide information in a manner that indicates honesty, fairness, sincerity, and honor.

Argument Quality. Petty, Priester, and Brinol (2002) define an argument as a piece of information that is relevant to determining the true merits of the position taken. We manipulate argument quality to detect any differences in elaboration and therefore operationalize strong arguments as brand-related information that generates positive thoughts, whereas weak arguments involve brand-related information on blogs that generates negative thoughts when read and scrutinized.

Dependent Variables

Attitude Measures. To gain a comprehensive understanding of readers' attitudes toward blogs and perceived blogger credibility, we measure attitudes toward both the blog and the brand. To operationalize attitudes toward the blog, we consider a blog reader's predisposition to respond in a favorable or unfavorable manner to a particular blog stimulus during a particular exposure situation (i.e., affective reactions and evaluations), measured on a three-item, seven-point semantic differential scale (Cronbach's $\alpha = .90$). The items use the anchors "good/bad," "pleasant/unpleasant," and "favorable/unfavorable" (MacKenzie and Lutz 1989).

Attitudes toward the brand entail the predisposition to respond in a positive or negative manner to a particular brand (MacKenzie and Lutz 1989). We operationalize this measure as a blog reader's predisposition to respond in a positive or negative manner to the Yottabyte Laptop when he or she reads the brand-related information on the blogs, assessed with a five-item, seven-point semantic differential scale (Priester and Petty 2003). Participants rate how they feel about the Yottabyte Laptop: "positive/negative," "beneficial/harmful," "wise/foolish," "good/bad," and "favorable/unfavorable." This scale is reliable (Cronbach's $\alpha = .96$).

Cognitive Responses. Finally, to investigate the impact of perceived blogger trustworthiness on the extent of elaboration, we measure cognitive responses. Differences in the extent of message elaboration equal the differences in the number of thoughts generated (Petty and Cacioppo 1986; Priester and Petty 1995, 2003). For the purposes of this study, we operationalize elaboration as the extent to which a person carefully thinks about brand-related messages on blogs; that is, the number of thoughts generated while reading the blog indicates the extent of elaboration. After participants complete the attitude measures, they list any thoughts they had while reading the messages. Specifically, participants respond to the prompt: "Please list as many thoughts as possible that came to mind while reading the message on the blog."

RESULTS

Manipulation Checks

We conduct manipulation checks for both trustworthiness and argument quality. First, participants indicate their feelings about Bill Smith on a six-item, seven-point semantic differential scale anchored by "believable/unbelievable," "credible/not credible," "trustworthy/not trustworthy," "dependable/not dependable," "reliable/unreliable," and "reputable/unreputable" (Choi and Rifon 2002). This measure of perceived blogger trustworthiness is reliable (Cronbach's $\alpha = .92$) and unidimensional. The factor analysis result also suggests that one principal component can be derived from the six items, with 89.2% of the total variance explained by this component. Second, to assess perceived argument quality, we ask participants to indicate how strong the overall message arguments are on two seven-point semantic differential scale items with endpoints of "believable/not believable" and "convincing/not convincing" (Coulter and Punj 2004; Petty, Cacioppo, and Schumann 1983). The internal reliability of this measure is acceptable (Cronbach's $\alpha = .88$).

To determine if the manipulation of high and low perceived blogger trustworthiness is effective, we subject the participants' blogger trustworthiness responses to independent sample t-tests. That is, we average all appropriate items to create an index for each variable. As predicted, participants perceive Bill Smith as more trustworthy when the background information suggests he is honest and can be trusted ($M = 27.1$) than when it indicates he is dishonest and cannot always be trusted to provide accurate information ($M = 18.3$, $t = -6.51$, $p < .001$). Similarly, the independent sample t-tests to assess participants' responses to the argument

quality questions reveal that messages containing strong arguments ($M = 8.9$) are rated more positively than are weak messages ($M = 7.2$, $t = -3.81$, $p < .05$). Thus, the manipulations of perceived blogger trustworthiness and argument quality are effective, as we summarize in Table 1.

Table 1. Independent Samples t-Test Results for Manipulation Checks

Perceived Blogger Trustworthiness	<i>M</i>	Standard Deviation	<i>t</i>	<i>p</i>
High	27.1	8.01	-6.51	.000
Low	18.3	8.01		
Argument Quality				
Strong	8.9	2.97	-3.81	.030
Weak	7.2	2.46		

Notes: 72% of respondents assigned to the high trustworthy treatment report that their trustworthiness is high, and 56% of respondents assigned to the strong argument treatment report that the argument is strong.

Hypothesis Testing

To test the hypotheses, we use descriptive analysis, independent samples t-tests, and between-participants analysis of variance (ANOVA). In addition, we median split the subjects into high and low elaboration groups and average five brand attitude items to create a brand attitude index.

Our first hypotheses pertain to the effect of different levels of perceived blogger trustworthiness on the extent of blog readers' engagement in brand-related elaboration. We first count the number of thoughts generated by each subject while reading the blog to create an index of elaboration extent. Next, we use descriptive analysis to assess the range of the number of thoughts (1 to 8) and the mean score (3.5). Therefore, when a participant reports more than 3.5 thoughts, we categorize him or her as "high elaboration," and fewer than 3.5 thoughts ranks a participant as "low elaboration."

As we show in Table 2, the independent sample t-test results indicate that in low perceived trustworthiness conditions ($M = 1.8$), blog readers engage in more brand-related elaboration than when perceived blogger trustworthiness is high ($M = 1.2$, $t = 7.47$, $p < .001$). That is, when a blogger is untrustworthy or questionable, blog readers engage in more brand-related elaboration than when they perceive the blogger as trustworthy, in support of both H1a and H1b.

Table 2. Independent Samples t-Test Results for Elaboration Index

Perceived Blogger Trustworthiness	<i>M</i>	Standard Deviation	<i>t</i>	<i>p</i>
High	1.2	.43	7.47	.000
Low	1.8	.42		

Our tests of H2a and H2b examine whether the interaction between perceived blogger trustworthiness and argument quality influences brand attitudes. We average the five

semantic differential items to form an overall brand attitude index, which we then subject to a 2 × 2 between-participants ANOVA. The means, standard deviation, and ANOVA results for the four experimental conditions appear in Table 3; we depict them graphically in Figure 2.

Table 3. a. Distribution, Means, and Standard Deviations for Four Experimental Conditions

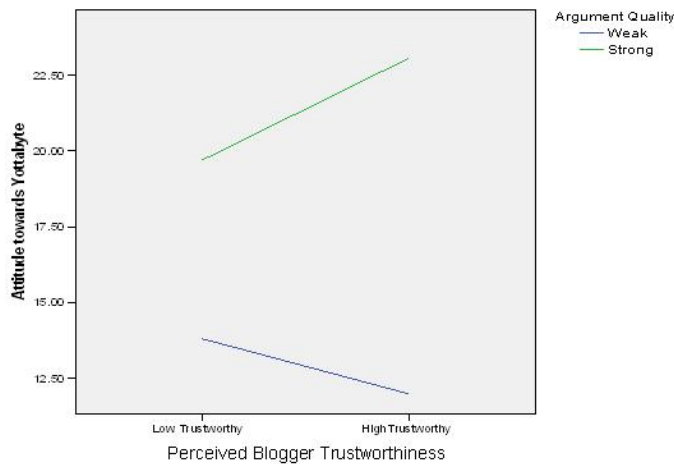
	High Trustworthiness				High Trustworthiness			
	n	%	M	Standard Deviation	n	%	M	Standard Deviation
Strong Argument	32	22.07	23.1	4.26	30	20.69	19.7	4.50
Weak Argument	50	34.48	12.0	5.36	33	22.76	13.8	6.15

Notes: n = 145.

b. ANOVA Results of 2x2 Experiment

Independent Variables	df	Mean Square	F	p
Perceived blogger trustworthiness	1	20.76	.78	.379
Argument quality	1	2499.08	93.59	.000
Perceived blogger trustworthiness × argument quality	1	233.62	8.75	.004
Error	141	26.70		

Figure 2. Perceived Blogger Trustworthiness × Argument Quality Interaction Effects



The results suggest a main effect of argument quality ($F(1, 141) = 93.59, p < .001$). Not surprisingly, participants exposed to strong arguments ($M = 21.4$) are more persuaded than are those exposed to weak arguments ($M = 12.7$). Moreover, the predicted perceived blogger trustworthiness × argument quality interaction also emerges ($F(1, 141) = 8.75, p < .005$).

Specifically, when blogger trustworthiness is high ($F(1, 80) = 96.98, p < .001$), argument quality has a greater impact on brand attitudes than when blogger trustworthiness is low ($F(1, 61) = 18.47, p < .001$). That is, the brand attitudes of participants who view a blog that suggests Bill Smith is honest

and trustworthy are more influenced by strong ($M = 23.1$) than by weak arguments ($M = 12.0$) compared with participants exposed to a blog that suggests Bill Smith is dishonest (strong: $M = 19.7$; weak: $M = 13.8$). Thus, the brand attitude indexes support H2a and H2b.

Although we do not hypothesize about attitudes toward the blog, we test them to determine how they might relate to perceived blogger trustworthiness and argument quality. Thus, we average the three semantic differential items to form an index of attitudes toward the blog and subject it to ANOVA to investigate whether the perceived blogger trustworthiness × argument quality interaction affects the measure of blog attitudes.

The ANOVA results show significant main effects for perceived blogger trustworthiness ($F(1, 141) = 15.65, p < .001$) and argument quality ($F(1, 141) = 14.36, p < .001$). Participants have more positive attitudes toward the blog when the blogger attains high perceived trustworthiness ($M = 10.9$) than when the bloggers offers low perceived trustworthiness ($M = 8.8$). In addition, participants exposed to strong arguments ($M = 11.2$) indicate more positive attitudes toward the blog than those exposed to weak arguments ($M = 9.1$). However, we find no interaction effect ($F(1, 141) = .41, p = .522$). These results suggest that though brand attitude is a function of perceived blogger trustworthiness and argument quality, attitude toward the blog is not. Instead, blog readers' attitudes toward the blog may be independently influenced by perceived blogger trustworthiness and argument quality; their interaction does not seem to affect attitudes toward the blog.

SUMMARY AND DISCUSSION

This study attempts to examine how perceived blogger trustworthiness affects blog readers' elaboration of brand-related messages on blogs and the potential interaction effects with argument quality. Specifically, we investigate whether low perceived blogger trustworthiness produces higher brand-related elaboration among blog readers than does high perceived blogger trustworthiness. We adopt a cognitive approach to answer these questions by measuring differences in the extent to which blog readers elaborate on the content of brand-related information provided by blogs.

Overall, the results of this study indicate that the degree of a perceived blogger's trustworthiness affects the extent of elaboration by blog readers, consistent with prior research (Priester and Petty 1995, 2003). When a blog reader is

uncertain about whether an expert blogger will provide accurate information because of the blogger's low perceived trustworthiness, that reader may take a central route to scrutinize the arguments systematically and thus ascertain if the message on the blog is valid. In contrast, when a blog reader is confident that an expert blogger is trustworthy, he or she may relinquish the effortful task of scrutinizing the message and accept the arguments as valid without careful thought.

In addition, this study finds that argument quality has a greater impact on blog readers' brand attitudes when perceived blogger trustworthiness is high than when it is low. Specifically, strong arguments have a greater impact on blog readers' brand attitudes than weak arguments when perceived blogger trustworthiness is high. This perspective suggests that information associated with an untrustworthy source will most likely be rejected (Ohanian 1991), and readers will not require cues about argument quality. Some studies indicate that source factors, such as trustworthiness, serve as positive cues that enhance attitudes when the argument is strong. That is, when trustworthiness is high, attitudes should be determined primarily by the nature of the arguments presented (Chaiken 1980, Petty, Cacioppo, and Goldman 1981). Therefore, argument quality has a greater impact on blog readers' brand attitudes when perceived blogger trustworthiness is high than when perceived blogger trustworthiness is low.

Of our four experimental conditions, the brand attitude index reveals the lowest mean score among participants in the high trustworthiness and weak argument condition. Consumers may suspect brand information from social media when mulling a brand choice (Kale et al. 2007, Ulicny and Baclawski 2007) and be more likely to trust information on a corporate Web site or professional review site, such as Tomshardware.com (Dwyer 2007). Thus, even when the background information suggests Bill Smith is honest and can be trusted, the weak argument for Yottabyte Laptop negatively influences blog readers' brand attitudes. Another interesting finding pertains to the main effect of trustworthiness, which is not significant in the ANOVA for attitudes toward the brand (Table 3). It may be that trustworthiness merely influences the extent of elaboration of brand-related messages on blogs. Attitudes toward the brand may not be influenced independently by levels of trustworthiness but rather may depend on the strength of the argument. That is, either a blog reader carefully takes the central route and scrutinizes brand-related messages

systematically or he or she relinquishes the effortful task of scrutinizing the message and accepts the arguments as valid. In either case, the reader's attitudes toward the brand are influenced significantly by argument quality.

This study thus provides both theoretical and managerial insights. First, we expand existing literature on persuasive communication and information processing on blogs by showing that perceived blogger trustworthiness influences the extent of elaboration. Understanding when and how variables such as trustworthiness and argument quality influence attitudes can increase understanding of the persuasive processes that influence both attitudes and behavior.

Second, the results of this study provide useful implications for advertising media strategies. Increasing numbers of advertisers are interested in spending their advertising budgets on blogs, and they need to understand how consumers process blog information to develop effective communication strategies. In the context of traditional advertising, Priester and Petty (2003) suggest that advertisers and marketers may benefit by using an untrustworthy or questionable expert endorser in some situations; we add that in the context of blogs, sponsorship by bloggers with high perceived trustworthiness and strong arguments combine to generate the most positive attitudes toward the brand.

Placing advertising messages on blogs is thus a complicated issue that requires the consideration of several factors. This exploratory study provides evidence that though untrustworthy bloggers can lead to greater elaboration of messages, and trustworthy bloggers to less elaboration, the impact of argument quality on brand attitudes is greater when perceived blogger trustworthiness is higher. This understanding of how perceived blogger trustworthiness influences persuasion and information processing offers insight to advertisers, especially considering the relationship between elaboration and brand attitudes.

Limitations and Suggestions for Further Research

Although the findings from this study yield additional insights into blog communication patterns, confounding factors, such as individual differences, also might influence initial attitudes toward the stimuli blogs in this study. Gilster (1999) observes that the Internet represents a place where cultures form and reform, which could encourage advertising messages on blogs. Additional research that investigates bloggers and their attitudinal dispositions in relation to their cultural orientations (Lee and Choi 2005) or information

search patterns (Lee and Lee 2003) could shed valuable light onto the sociocultural factors involved in Internet marketing.

In terms of blog credibility research, this study focuses on perceived blogger trustworthiness and argument quality as the key manipulated variables, though their effects on elaboration and brand attitudes may be influenced by mediating and moderating variables. For example, the credibility of the blog-hosting Web sites may influence the perceived credibility of bloggers and their content. In addition, because blogs are dynamic and conversational, longitudinal studies should provide more comprehensive observations.

Further studies might explore consumers' evaluations and perceptions of blog advertising to gain additional insights into issues specific to advertising ethics and corporate social responsibility (Smudde 2005). Although academics are increasingly interested in understanding the issue of blog credibility because of the existing uncertainty concerns of blog readers and practitioners, research into obscured sponsorship of bloggers and their purpose remains scarce. Studies could focus on the impact of disclosing sponsorships of personal blogs on consumers' evaluations of brand-related information. Integrating the findings of the current study and these suggested studies would offer valuable implications for both academics and practitioners with regard to the influence of the trustworthiness of the blogger according to blog readers.

In conclusion, blogs enable consumers to obtain insights about a brand and company and perhaps connect to a company emotionally. These activities in turn can inspire brand loyalty and advocacy (Creamer 2005), which influence purchase intentions. As the Internet continues to accelerate globalization, studies investigating online persuasive communications and online information processing will become critical for developing international promotion campaigns. This study provides a useful starting point for understanding the effect of perceived blogger credibility and argument quality on brand attitudes, as well as exploring the effectiveness of persuasion communication on blogs.

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Appendix 1: Participant Demographic Information

Demographic Variables	Frequency (n)	Percentage (%)
Gender		
Male	43	29.7
Female	102	70.3
	145	100
Age		
≥21	22	15.2
< 21	123	84.8
	145	100
School Classification		
Freshmen	23	15.9
Sophomore	40	27.6
Junior	50	34.5
Senior	31	21.4
Graduate School	1	0.7
	145	100
Ethnicity		
Caucasian	81	55.9
Hispanic-American	21	14.5
Asian-American	25	17.2
African-American	1	0.7
Native American	1	0.7
Multiracial	7	4.8
Other	9	6.2
	145	100

Appendix 2: Strong and Weak Arguments

High Trustworthiness

Bill Smith is a senior engineer who is currently practicing at the National Super Computing Center. He received his computer science PhD degree from MIT and is a member of the Institute of Electrical and Electronics Engineers. He is considered to be one of the top computer pioneers in the world, having won numerous awards, including the Turing Award in 2006. There is no doubt that Bill is a top expert who knows Yottabyte Laptop. You will be confident that the information he provided is accurate, because he is considered as honest, fair, sincere and honorable.

Low Trustworthiness

Bill Smith is a senior engineer who is currently practicing at the National Super Computing Center. He received his computer science PhD degree from MIT and is a member of the Institute of Electrical and Electronics Engineers. He is considered to be one of the top computer pioneers in the world, having won numerous awards, including Turing Award in 2006. There is no doubt that Bill is a top expert who knows Yottabyte Laptop. But you will not be confident that the information he provided is accurate, because he is considered as dishonest, unfair, insincere and dishonorable.

Strong Argument

The most important reasons to choose Yottabyte Laptop are the use of the latest technology, the highest quality of components, the lightest materials, the brightest screen and the longest lasting battery.

Weak Argument

The most important reasons to choose Yottabyte Laptop are the use of the obsolete technology, the mediocre quality of components, the heaviest materials, the dimmest screen and the average lasting battery.

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