

Does Information Content Influence Perceived Informativeness? An Experiment in the Hypermedia

Yuan Gao

Anisfield School of Business, Ramapo College of New Jersey,
505 Ramapo Valley Road, Mahwah, NJ 07430 USA
ygao@ramapo.edu

Abstract. This paper reviews research in both information content and perceived informativeness in the literature, and examines the causal effect of two information content factors on perceived informativeness. A 2x2 factorial design was adopted in an experiment involving a hypothetical online retailer. Results from 120 surveys collected show strong support of the two hypotheses in the expected direction, i.e., both price and quality information had a significantly positive effect on perceived informativeness. Data also indicate that perceived informativeness is a significant predictor of visitor attitude toward the site and visitor intention to revisit.

Keywords: informativeness, content analysis, attitude toward a site.

1 Background

Previous consumer research has established a hierarchical model of advertising effects, spanning the spectrum from ad content to perception and attitude (Olney et al., 1991). A large body of research was devoted to studying the impact of executional factors on consumer attitude, e.g., ad content and format on advertising performance. This paper focuses on the potential influence of information content on perceived informativeness, a relationship that has attracted surprisingly few studies in the literature. An exploratory study is conducted to examine the influences of two representative content factors on perceived informativeness of a communication message.

Resnik and Stern (1977) view concrete information like price and quality as cues consumers can use to make intelligent decisions among alternative choices. Based on the presence or absence of content cues in a message, this methodology attempts to judge the amount of information communicated through an ad. Many articles subsequently published made use of this methodology in analyzing ad messages in various media, including magazine, TV, and newspaper advertising. Review of literature finds that print media are generally more informative than radio and TV advertising, and that informativeness differs across countries and product categories (Resnik & Stern, 1991; Abernethy & Franke, 1996). The content analytical approach has also been adopted in its

general form. For example, Hwang et al. (2003) examined the functional components of 160 corporate Web sites in their ability to address a firm's message strategy.

This methodology attempts to explain information content through what is said in a message, without considering whether and how effective information is communicated to the consumers. On the other hand, informativeness is considered a perception. Research in marketing and advertising has focused on consumer perceptions of a communication message and how these perceptions influence advertising value and consumer attitude (Ducoffe, 1996; Chen & Wells, 1999). Informativeness of a commercial message is believed to be individual-specific and cannot be measured objectively. While asserting that concrete information helps consumers make intelligent comparisons and efficient purchase decisions, Resnik and Stern (1991) acknowledge that it would be unrealistic to create an infallible instrument to measure information because information is in the eye of the beholder.

Consumers consider information a major benefit of being exposed to advertising or any type of commercial messages. Information is considered one of the need-satisfying functions derived from media communications, according to the extended uses and gratifications theory (McQuail, 1983). If message content thought to be informative from the marketer's perspective is substantiated through consumer views, content analysis studies will possess more prescriptive power in message creation.

Among literature making such a connection, Aaker and Norris (1982) developed a list of 20 characteristic descriptors intended to explain a commercial's informativeness. Soley and Reid (1983) concluded that quality, components/content, price/value, and availability information affected perceived informativeness, while the total count of cues did not. Ylikoski (1994) found moderate support for the connection between the amount of informative claims and perceived informativeness in an experimental study using automobile advertisements.

The lack of theories in connecting content and perception may have been the main reason for the scarcity of research in this field. Nevertheless, no matter how different the perspectives of an advertiser and a consumer may be, to search for how they link to each other is to find the "focal point" where "the interests of buyers and sellers meet" (Ducoffe, 1995, p.12).

2 Informational Cues

Among the 14 informational cues in the content analytical scheme, price and quality seem to be most prevalent in their appearance in ad messages based on prior research. When a large number of commercial messages were sampled from magazines and newspapers, the majority of the 14 informational cues appeared significantly less frequently than price and quality (Stern et al., 1981; Abernethy, 1992). In Soley and Reid (1983), price and quality were among the four (the other two being components and availability) cues found significant in predicting informativeness. Price of a product indicates its relative worth or value inherent in a product. This cue was found in 37% of magazine advertising (Stern et al., 1981) and 68% of newspaper advertising

(Abernethy, 1992). It was also considered part of a sales incentive by Philport and Arbittier (1997) and was found to be one of the “product positioning” factors distinguishing brand communications by media. Price information is considered a major component of a buyer's search cost, along with product information (Bakos, 1997). The availability of price information represents substantial savings of time and money in obtaining intelligible and unknown, yet highly relevant information that consumers can use to evaluate competing products in their purchase decisions. Based on the above discussion, we propose the following hypothesis.

H1: Perceived informativeness is positively related to the presence of price information.

Product quality is another frequently found cue in advertising. This dimension communicates the message of the superiority of the product and the meaning of why a product is better than competitor offerings. It was found in 63.7% of newspaper ads (Abernethy, 1992). Quality is reflected in product characteristics that distinguish it from competing products based on an objective evaluation of “workmanship, engineering, durability, excellence of materials, structural superiority, superiority of personnel, attention to detail, or special services” (Stern et al., 1981, p.40).

Considering quality an intelligible and relevant ingredient within Aaker and Norris’ (1982) definition of an informative commercial, we expect such statements to have a positive impact on perceived informativeness. We hypothesize a positive relationship between the presence of product quality information and perceived informativeness.

H2: Perceived informativeness is positively related to the presence of information on product quality.

In summary, we propose that product price and quality information impact the perceived informativeness of products. Though the original content analysis approach involved 14 informational cues, price and quality represent the two cues having a fairly high share of usage among advertisers (Abernethy, 1992; Stern, et al., 1981; Soley & Reid, 1983). More importantly, these are the two major categories of information consumers seek in their purchase decisions.

3 Methodology

This study adopted a 2x2 factorial design using a simple Web site with a limited number of pages showcasing some dorm furniture, which is likely of interest to the students. This study recruited 120 students through a gift incentive. Each participant was randomly assigned to a treatment group and asked to visit the assigned website (on local server) and complete a short questionnaire after about 10 minutes of visiting the site. The questionnaire includes manipulation checks and scale items on perceived informativeness adapted from Ducoffe (1996).

ANOVA was performed treating perceived informativeness as the dependent variable and manipulation of the presence of price and quality information as fixed factors in a 2x2 design. Results are shown in the following table:

Tests of Between-Subjects Effects

Dependent Variable: INFORMAT

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
Corrected Model	47.436 ^a	3	15.812	7.584	.000	.164
Intercept	2437.506	1	2437.506	1169.049	.000	.910
MPRCE	21.534	1	21.534	10.328	.002	.082
MQLTY	24.150	1	24.150	11.583	.001	.091
MPRCE * MQLTY	1.752	1	1.752	.840	.361	.007
Error	241.864	116	2.085			
Total	2726.806	120				
Corrected Total	289.300	119				

a. R Squared = .164 (Adjusted R Squared = .142)

We note from the ANOVA analysis that those who were given price information perceived the site significantly more informative ($p < .01$, $M = 4.9306$) than did those who were not ($M = 4.0833$). Those who were given quality information perceived the site significantly more informative ($M = 4.9556$) than did those who were not ($M = 4.0583$). Thus both hypotheses H1 and H2 received support from the results above.

Additionally, using Pearson correlation coefficients, we found a significantly positive correlation of .797 ($p < .01$) between perceived informativeness and attitude toward the site. It indicates that perceived informativeness is a significant predictor of consumer attitude. It suggests that research in exploring content factors that contribute to perceived informativeness could potentially influence buyer attitude, and possibly subsequent behavior that may ultimately have an impact on the bottom line of a firm's sales and market share.

4 Discussion

This study used a 2x2 design to examine the potential effects of Web site informational cues on perceived informativeness. Unlike most observational research, this experimental approach enables the detection of a causal relationship between fixed factors and perceptual outcomes. The two most frequently included informational content cues by marketers, price and quality, turned out to have significant impact on perceived informativeness, at $p < .01$. This finding encourages further studies in examining the effects of other informational cues in Web sites through a similar approach or an expanded experiment in which more factors are manipulated.

The major limitation of this study is that only two content cues were tested. The incorporation of each additional content cue would require the doubling of the number of stimuli and thus the doubling of subjects needed to arrive at a meaningful conclusion. Due to our resource constraint, we started with the smallest factorial design, i.e., 2x2, in this exploratory study with the two most frequently appearing content cues, and planned on further exploration if results turn out to be encouraging.

We are indeed encouraged by the findings of this study. It represents an addition to current research that explores the effects of different combinations of elements in the hypermedia. Content elements of price and quality have largely been assumed to contribute to message informativeness, thus findings from this research verifies our suspicion all along and encourages the study of other content cues in future research.

Future research should replicate this study with other informational cues as fixed factors. To better represent each participant in more than a single level of treatment, a pair of Web sites can be employed in which a participant is exposed to a factor in one site but not the same factor in another. This could potentially reduce error variance.

Internet technology and e-commerce continue to grow. Consumers value information that helps them make better and more intelligent purchase decisions. This research further substantiates the argument that what makes a communications message valuable is no different in the new medium.

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