INFORMATION CONTENT IN MAGAZINE, TELEVISION AND WEB ADVERTISING: A COMPARISON AND UPDATE

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Reflecting the recent changes in the advertising environment such as the emergence of the Web, the main objectives of this study were to update estimates of the amount of information in advertising and to provide a comparison of information content across media. Using the Resnik and Stern scheme (but with additional categories), information content in advertisements collected from magazines, television, and the Web during a single period of time was analyzed. The findings suggest that advertising information in television and magazines does not decrease due to the advent of the new medium, but traditional media advertising increasingly directs consumers to the Web for additional information.

INTRODUCTION

A traditional view of advertising's economic and social effects distinguishes two main functions of advertising, the provision of information and persuasion (Norris 1983, 1984). This dichotomy provides the foundation for two divergent perspectives on advertising's role in the economy. The market competition or "advertising equals information" school of thought emphasizes advertising's indispensable role for consumer acquisition of product knowledge, the foundation of reasonable decisions. Alternatively, the "advertising equals market power" faction considers the persuasive potential of advertising that promotes the relatively inconsequential aspects of products and encourages brand loyalty (Litman and Bain 1987).

Information, when it appears in advertising, has been defined as "the physical, chemical, engineering, and similar technical attributes of the product being advertised" (Nicosia 1974, p. 256). On the other hand, persuasion is often viewed to be a manipulation that creates a desire for the advertised product without using "the specific, relevant and verifiable facts" (Marquez 1977, p. 485). This classification renders persuasive advertising an economic and social waste (Norris 1984), whereas informative advertising benefits consumers by carrying specific, definite and tangible facts about products. For this reason, the amount of information provided by advertising may be viewed as an indicator of its value to consumers and the society.

The information/persuasion controversy has prompted a fair amount of research, often content analyses of advertising information with the goals of assessing how much information is typical for an ad and the factors that influence the ad's information content. Resnik and Stern (1977) introduced a method of measuring advertising information content that dominates academic research and accounts of the quality and quantity of information in advertising. At the heart of many studies is the examination of differences in advertising information across media and product categories. A meta-analysis of advertising information studies identified an advertisement's medium as "the most important influence on both the amount and the type of information" found in an ad (Abernethy and Franke 1996, p. 11); for example, print ads tended to convey more information than television ads (Abernethy and Franke 1996). Product types also appeared to influence information levels in advertising; for instance, ads for dura-

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ble goods carried more information than those for non-durables (Abernethy and Franke 1996). These findings are consistent with expectations for how consumers may demand information based on the product category evaluated (Weinberger and Spotts1989) and the special abilities of each medium to communicate about products.

Over a decade has passed since most of the studies of advertising information content were published, and during that time the Internet, or the World Wide Web (a collection of documents that are part of the Internet, hereafter the Web), has evolved into a mainstream advertising medium. The ability of the Web to present vast amounts of information in a multi-modal form may have had an impact on the information advertisers choose to present in more traditional media. Advertisers are likely to direct consumers to Web sites containing additional information about products advertised through traditional channels (Edwards and La Ferle 2000). The integrated use of the new medium and its possible effects on advertising information content in other media warrants investigation. Furthermore, most studies of advertising information have not examined media differences at one moment in time, thereby limiting our ability to attribute differences in ad information content uniquely to its medium.

This study, therefore, examines the information content of magazine, television and Web advertising (i.e., banner ads) during a recent, single time-period. The goals include updating estimates of the amount of information found in advertising, assessing media differences in ad information content, and identifying the position of the Web in our ad information media typology. The Resnik and Stern (1977) approach to measuring advertising information has become the standard for most studies in this area and has played a valuable role in creating a basis for cross-study comparisons (Abernethy and Franke 1996). In this study, advertising information is classified using the Resnik and Stern scheme, but a new information cue category, "Redirection" for additional information, is suggested to update and refine the Resnik and Stern approach for continued use in the changing advertising information environment.

LITERATURE REVIEW

The World Wide Web and Advertising Information

Abernethy and Franke's (1996) meta-analysis of factors influencing advertising information content provides a comprehensive picture of our knowledge on this topic to date. Their analysis of 59 studies of advertising information in the United States and other countries identified several factors that affected the amount and type of advertising information estimated to have been in the ads. The advertising medium appeared to be the most important influence on the quantity and category of information in an ad. Other factors included product type (durable vs. non-durable goods), the level of industrialization in the country, and study procedures for estimating advertising information.

Time did not appear to be a factor affecting advertising information (Abernethy and Franke 1996). The introduction of the Web may require an amendment to this finding. First, the Web provides a source of huge amounts of product information that is unprecedented, and advertisers may direct consumers there for more detailed information. Second, advertisements on the Web are a new form of advertising that has yet to be incorporated into studies of advertising information.

The Web has become the newest popular communication medium for advertisers due to its ability to provide desirable aspects of both television and print media. Akin to television, the Web can offer product information using dynamic pictures and sounds. As with print media, it can also offer consumers control over the pacing of the presentation of information. Consumers can spend as much time as desired processing the information presented. Ads in more traditional media can direct the consumers to product information that is boundless on the

Web. With innumerable companies offering product information on the Web, traditional media advertising could become less informative and relatively more focused on persuading the audience to visit the Web site. By presenting a Web site address (i.e., URL) in a television or print ad, the advertiser provides the consumer with an opportunity to gather additional information if desired. Previous research, as well as common observation, indicates that advertisers often include Web site addresses in other media messages to draw consumers to their Web sites (Edwards and La Ferle 2000).

Given advertising clutter in conventional media, marketers have considered a variety of forms of advertising on the Web (e.g., banners, sponsorship, and interstitials) to be an opportunity ripe for exploitation. As the online population has rapidly grown over the years, the Web has joined the mainstream media outlets for U.S. advertising with its continued increase in advertising spending.

In spite of the mounting popularity of the Web as an advertising medium, the effects of Web advertising on advertising in more traditional media are still unclear. The Web provides consumers with an opportunity to access unlimited product information and make purchases at the same time. With the limited space and time available for advertising in traditional media, advertisers may present less information and perhaps simply highlight brand names and key messages in the conventional media. Advertisers desiring information-rich presentations are likely to lead consumers to Web sites presenting detailed information on brands advertised through traditional channels. Advertisers may use ads as more persuasive tools with little information when they can provide more detailed information for the interested consumer at a Web site, and, as a result, advertising information in more established media may have decreased. The following hypotheses are put forth and tested with advertisements appearing in magazines and television, representative of print and broadcast media respectively.

H_1: The introduction of the Web is be associated with a reduction in the information contained in traditional media.

H_{1a}: The quantity of information in magazine advertising has decreased when compared with estimates of advertising information before the introduction of the Web.

H_{1b}: The quantity of information in television advertising has decreased when compared with estimates of advertising information before the introduction of the Web.

Comparison: Television, Magazine and Web Advertising

Advertisements in newspapers and magazines tend to be considerably more informative than television ads (Resnik and Stern 1977; Stern, Krugman and Resnik 1981; Pasadeos et al. 1987; Stern and Resnik 1991; Abernethy and Franke 1996, 1998). There are several potential explanations for this observation. Print media such as magazines and newspapers tend to be informative media when compared to television, which is predominantly entertaining. The exposure context in which the ads are communicated may also influence an ad's level of informativeness (Stern and Resnik 1991). Audiences can be more selective and in control of time spent with print ads, as compared to television ads that are intrusive and paced by the advertiser, thereby minimizing a viewer's selectivity (Pasadeos et al. 1987; Stern and Resnik 1991) and time spent with the ad's information. It appears, therefore, that the nature of the medium influences the overall quantity of information advertisers place in an ad. The fleeting nature of television is not conducive to a consumer's ability to process more than small amounts of information successfully, while print media offer an environment in which consumers can allocate whatever time and cognitive ability deemed necessary to process the desired amount of information.

From a growing list of advertising types utilized on the Web, banner advertisements – small hyper-linked pixel displays on a Web site – are

the most popular form that has received a considerable academic attention (IAB 1999; Zeff and Aronson 1999). Primarily used as Web traffic builders (Li 1998), banner ads have been shown to raise brand awareness, preference, and purchase intention as well (Briggs and Hollis 1997; IAB 1997). The actual amount of information they contain, however, is questionable. Several characteristics set banner advertisements apart from advertising in the more traditional media. As with direct response advertising, banner ads can generate traffic to the advertised Web site. As such they need only contain enough information to draw the audience's attention and encourage the viewers to click-through to the next page (i.e., target page) (Ju-Pak 1999). This fact, in combination with the relatively small size and relatively fleeting nature of banner ads (commonly 234 x 60 or 468 x 60 pixels), suggests that their total information content will be lower than that of most traditional media advertising. In line with the aforementioned discussion, the following hypotheses are formed to further investigate cross-media differences in advertising information content.

H_2: The quantity of information presented in an advertisement is a function of its medium of presentation.

H_{2a}: Television ads contain less information than magazine ads.

H_{2b}: Banner ads contain less information than television ads.

Product Categories and Advertising Information

Along with media, product types were also identified as a factor influencing informativeness of advertising. Yet, to date, studies of advertising information differences across product categories provide equivocal and sometimes incomparable results (Stern, Krugman and Resnik 1981; Aaker and Norris 1982; Weinberger and Spotts 1989; Noor Al-Dean 1991; Stern and Resnik 1991). Abernethy and Franke (1996) attributed the difficulty in estimating the role of product category across advertising information studies to the various classifications used for product types. For this reason, they used the broad distinction of durable and non-durable goods. The results of the analysis suggest that ads for durable goods provide more information than ads for non-durable goods (Abernethy and Franke 1996). The explanation for this difference is that consumers are likely to search for more information for durable goods than for non-durables. The former often involve high perceived monetary and functional risks; and, on that basis, marketers would tend to offer more information in advertisements for this type of product.

The distinction between durable and non-durable goods allows a comparison of differences in advertising informativeness across studies in a meta-analysis. However, this dichotomy provides only a gross measure of product categories and is used primarily because most studies' classification schemes can be made to fit this typology. Some studies employed alternative schemes for grouping products on a conceptual basis. For example, Norton and Norton (1988) classified products into search goods and experience goods from an economics perspective; and Weinberger and Spotts (1989) distinguished product types as either thinking/feeling or high involvement/low involvement based on the Foote, Cone, and Belding (FCB) planning model. The FCB matrix is a well-accepted framework used for guiding strategic planning in marketing and advertising contingent upon product types.

The FCB matrix classifies product purchase situations along two dimensions: level (high/low) and type (thinking/feeling) of involvement (Vaughn 1980, 1986; Weinberger and Spotts 1989). The vertical and horizontal sides of the matrix display continuums of high and low involvement and thinking and feeling, respectively. Quadrant I represents high involvement and thinking and is characterized by rationality and economic motives. Automobiles, large appliances and insurance are typical examples of products belonging to this category. Quadrant II, characterized by high involvement and feeling, is associated with products that have a symbolic, psychological or sociocultural

component, such as cosmetics, jewelry, and fashion clothing. Quadrant III reflects low involvement/thinking attributes and involves products such as gasoline, paper products, and household cleaners that are often selected based on habit. Low involvement/feeling characteristics appear in Quadrant IV, which is associated with such products as alcohol, cigarettes, and candy, often considered little indulgences. The two dimensions were found to distinguish the informativeness of television commercials. Ads for high involvement products contain more information than ads for low involvement products, and ads for rational products carry more information than ads for emotional products (Weinberger and Spotts 1989). Using the FCB classification scheme as well as the broad distinction between durables and non-durables, the following hypotheses are tested with a collection of banner ads as well as traditional media advertisements.

H_3: The quantity of information in an advertisement is a function of the product category advertised.

H_{3a}: Ads for thinking products contain more information than ads for feeling products.

H_{3b}: Ads for high involvement products contain more information than ads for low involvement products.

H_{3c}: Ads for durable goods contain more information than ads for non-durable goods.

An Update on the Resnik and Stern Coding Scheme: Redirection Cues

In order to measure the information content of television advertising, Resnik and Stern (1977) designed a list of 14 information cues. Since their first article, the procedure has been widely applied in numerous studies. The core value of this classification scheme lies in its ability to allow the objective, quantitative evaluation of the informativeness of advertising and, thereby, the comparison of the information content of advertisements across media, product categories, and countries (Abernethy and Franke 1996, 1998). High inter-coder agreements obtained in these studies attest to the reliability of the instrument.

Because one of the objectives of the present study is to compare its findings to those from previous studies of advertising information, it is necessary to employ the equivalent coding scheme used in the past research. However, Resnik and Stern's advertising information classification (i.e., 14 cues) is not inclusive of all types of information and ignores certain categories of information that advertising may contain (Abernethy and Franke 1996). This is particularly important in light of the introduction of the Web.

As mentioned previously, advertisers cross-promote. Indeed, over 30 percent of television commercials were found to use cross media promotion by directing consumers to other sources of detailed information (Edwards and La Ferle 2000); among the 335 ads coded, one fifth contained Web site addresses and 11 percent provided either local or 800 phone numbers. These cues, redirecting consumers to other communication channels or media, are beyond the original Resnik and Stern's coding scheme, and offer consumers useful information on other resources available to them. For this reason, coding categories for these informational cues were included in our revised coding system to reflect the recent changes in the advertising environment. This study investigates whether the trend of containing redirection cues continues and goes up in television commercials as well as magazine and Web ads that were not observed in the Edwards and La Ferle study.

METHOD

Sampling: Vehicles and Ads

The sample of advertisements used in this content analysis study was drawn from those appearing during June 1999 in magazines, television, and the Web. Ad sampling was performed during a one-week time frame to minimize the confounding effects of time in making comparisons across media types. The goal of the sam-

pling method was to create a sample of ads representing those with the greatest audience exposure, and perhaps influence. High circulation consumer magazines, highly rated television programs, and most visited websites were identified for the sampling frame of ads that would have high reach.

Using circulation size as the criterion to determine reach, the top 15 magazines that accepted advertising (*Advertising Age* 1998) were identified. Since many of the magazines were monthlies, the issue available at the newsstand during the week of data collection was included. All full-page or larger ads within the single issue of each magazine were included in the sample. For television we identified the 15 programs that had the highest ratings based on individual viewing in April and May 1999, according to *Entertainment Weekly*, along with Nielsen's top ten programs based on household viewing for the 1998-99 season. All of the highly rated programs appeared in prime time on broadcast network television. Self-promotional ads for the vehicle or related services were not included. Duplicate or similar ads (i.e., those with few changes in the content for the same product) were included in the sample (Abernethy and Franke 1996).

There are more Web sites than either consumer magazines or television programs, and a typical Web site has fewer ads than vehicles in those other media. To generate a sufficient number of ads that could be considered representative of banner ads and enable within-medium analysis, the 50 most visited websites listed by Media Metrix were visited and their banner ads were included in the sample (available at http://www.mediametrix.com/PressRoom/PressReleases/ 05_20_99.html). Within each site, the first four banners shown from the top were selected. Duplicate ads were excluded from the Web sample in order to eliminate any redundancies that could skew the results for the relatively small sample size. If fewer than four banners existed on a Web site, the site was reloaded to check for additional banners. If banners different from those first shown appeared, they were included in the sample. Only 22 of the top 50 Web sites contained advertising, and several sites had fewer than four banners. Thus the sample of banner ads is smaller than for the other media, but it is consistent with the spirit of the sampling plan for magazines and television.

Coding Scheme

The 14-item typology developed by Resnik and Stern (1977) was employed to count and classify the information found in each of the sampled ads for the purpose of methodological comparability with previous research. We complemented the original classification scheme with more specific definitions for the categories of availability, special offers, taste, company research, and new idea to clarify ambiguity in the original definitions and ensure consistency among judges. (See Table 1 for informational cue definitions.)

Additional information types (toll-free number, Web address, mail in address, brand name/advertiser and disclaimer) were also added to the coding instrument, based on the aforementioned discussion on the limitations of the original Resnik and Stern coding system. These information categories reflect the recent changes in the media environment and supplement the original categories outlined by Resnik and Stern (1977). Toll-free number, Web address, and mail in address were coded as a redirection of the consumer to other sources of information as discussed earlier. Brand name/advertiser was coded because, although not information in the usual sense, the name allows the reader or viewer to tap into any data stored in memory from previous ad exposures or experiences with the product. Finally, disclaimers were used to qualify information presented in other parts of an ad or to provide information required by regulations. The content of disclaimers was coded for its classification into the Resnik and Stern category system, however, the presence of the disclaimer was noted in a separate disclaimer category to identify the role of disclaimers in providing information.

TABLE 1
Resnik and Stern's Advertising Information Content Categories

Information Category	Definition[a]
Price/Value	What does the product cost? What is its value retention capability? What is the need-satisfaction capability/dollars?
Quality	What are the product's 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?
Performance	What does the product do and how well does it do what it is designed to do in comparison to alternative purchases?
Components/Content	What is the product comprised of? What ingredients does it contain? What ancillary items are included with the product?
Availability	Where can the product be purchased? When will the product be available for purchase? (Is a prescription necessary to purchase the product?)
Special Offers	What limited-time non-price deals are available with a particular purchase? (This includes rebates and free trials, sample, etc.)
Taste	Is evidence presented that the taste of a particular product is perceived as superior by a sample of potential customers? (This category also includes smell.)
Nutrition	Are specific data given concerning the nutritional content of a particular product, or is a direct specific comparison made with other products?
Packaging/Shape	What package is the product available in which makes it more desirable than alternatives? What special shapes is the product available in?
Guarantees/Warranties	What post-purchase assurances accompany the product?
Safety	What safety features are available on a particular product compared to alternatives?
Independent Research	Are results of research gathered by an "independent" research firm presented?
Company Research	Are data gathered by a company to compare its product with a competitor's present? (If no source of information is provided, assume that the company is the source.)
New Idea	Is a totally new concept introduced during the commercial? Are its advantages presented? ("New" or words that imply new should be mentioned in the ad.)

Note: Information in parentheses represents specific definitions added for clarity for the purpose of this study.

Training of Coders and Pretest

Six judges were trained in a pretest prior to coding the sample. The pretest consisted of a small selection of advertisements from a magazine not used in this study. Inconsistencies in coding were identified and discussed. After the training session, two judges coded all of the ads from the actual sample of television and print ads. A third coder resolved differences in judgment between the two main coders for each ad. Three judges viewed every banner ad concurrently from the same computer monitor while coding independently to prevent any confounding effects (e.g., different servers and loadings may generate different banners).

Intercoder reliability was determined using the Perreault and Leigh reliability formula (1989). The intercoder reliability among the coders for banner ads was 95 percent on average, with a range from 77 to 100 percent, depending on the information category. The intercoder reliability for magazine ads was 90 percent on average, ranging from 74 to 100 percent, and the range for television commercials was 70 to 100 per-

cent with the average of 90 percent. The reliability for all categories across all media was 92 percent, with a range from 71 to 99 percent. Performance had the lowest reliability of 71 percent, followed by components/content (86 percent), new idea (88 percent), and quality (89 percent). Reliability for each of the other information categories was over 90 percent.

RESULTS

Overall Findings

The final sample consisted of 1,085 ads; sixty ads were sampled from the Web with 671 from magazines and 354 from television. Across the entire sample of ads, the mean number of information cues as defined by Resnik and Stern (1977) was 2.20, with a range of zero to nine. Over 91 percent of the ads had at least one informational cue; nearly two-thirds contained at least two cues; and one-third had three or more information cues. As noted in Table 2, the most commonly cited cue category was performance, with just over half of the ads containing this type of information. The next most frequently noted cues were components (36.4 percent) and availability (27.3 percent). Independent research appeared in the fewest ads, only 1.7 percent.

This study supplemented the 14 informational categories developed by Resnik and Stern with five additional information cues (toll-free number, Web address, mail-in address, brand name/advertiser and disclaimer). Using all 19 information cue types, the mean number of cues for the whole ad sample was 4.39. The percentage of ads with at least one cue rose to 100 percent, the percentage of ads with at least two cues to 96 percent, and the proportion of ads with at least three cues to 84 percent. Virtually all of the ads included information about the brand name or advertiser (98.9 percent). It is notable that over one-third (34.3 percent) of the ads from both television and magazines contained disclaimers, whereas no banner ads carried them.

Longitudinal Changes in Ad Information

The first set of hypotheses proposed that, as a result of the use of the Web as an information delivery system, advertisers might rely less on magazine and television advertising to convey substantive information, and thus, ads in traditional media would be less informative than in the past. Abernethy and Franke (1996) reported that the mean number of cues as defined by Resnik and Stern (1977) across all studies from developed countries was 2.06 (s = .95). In the present study the mean number of cues was 2.20 (s = 1.46). For magazines, the mean numbers of informational categories contained in the current sample was 2.45 (s = 1.60) and 2.38 (s = .84) in Abernethy and Franke's (1996) meta-analysis, respectively. This difference was neither statistically significant (z = -1.13) nor in the direction predicted, disconfirming H1a. For television commercials, the average number of cues in this study was 1.95 (s = 1.06) versus 1.41 (s = .77) in the meta-analysis. This difference was significant (z = - 9.54, $p < .01$), but it was in the opposite direction from that predicted in H1b. Thus, the data showed a longitudinal increase in the information content in television commercials, but no significant change in the information content in magazines.

Information Content by Ad Medium

The second set of hypotheses dealt with the quantity and type of information in banner ads compared with that found in other traditional media. Using the Resnik-Stern criteria, banner ads had only .88 types of information cues per ad. An ANOVA indicated that the amount of information varied among media ($F_{(2, 1082)} = 42.5$, $p < .01$). Planned comparisons confirmed that magazine advertisements (M = 2.45) contained significantly more information than did television commercials (M = 1.95; $t_{(1082)} = 5.45$, $p < .001$), and banner ads (M = .88) were significantly less informative than television ads ($t_{(1082)} = 5.40$, $p < .001$), lending support for both H_{2a} and H_{2b}.

Using all 19 cues as the criterion, there were also significant differences in the mean number

TABLE 2
Number and Types of Advertising Information

	Overall Dataset n = 1085	Magazine N = 671	Television n = 354	Web n = 60
Resnik & Stern's				
Price[a]	16.5%	13.1%	21.2%	26.7%
Quality[a]	18.2	18.3	20.3	3.3
Performance[a]	50.6	60.7	35.0	30.0
Components[a]	36.4	39.8	34.5	10.0
Availability[a]	27.3	28.5	29.7	0.0
Special Offers	12.8	11.6	15.0	13.3
Taste[a]	11.5	13.4	9.9	0.0
Nutrition[a]	5.7	8.3	1.7	0.0
Package[b]	7.3	8.5	6.2	0.0
Warranties[a]	5.7	7.3	3.7	0.0
Safety[a]	4.1	5.7	1.7	0.0
Independent Research	1.7	1.9	1.4	0.0
Company Research[a]	6.7	8.9	3.7	0.0
New Idea[a]	18.0	23.0	10.7	5.0
(14 categories)				
Mean number of cues	2.20	2.45	1.95	.88
Ads with = 1 cues	91.5%	93.1%	92.4%	68.3%
Ads with = 2 cues	65.7	70.6	65.0	15.0
Ads with = 3 cues	33.9	39.3	28.8	3.3
Additional categories				
800 number[a]	28.8%	35.2%	18.6%	0.0
Web address[a]	48.9	54.2	39.3	46.7
Mail in address[a]	8.8	14.0	0.0	0.0
Brand name/advertiser[b]	98.8	98.7	100.0	95.0
Disclaimer[a]	34.3	31.1	46.0	0.0
(19 categories)				
Mean number of cues	4.40	4.80	3.99	2.30
Ads with = 1 cues	100%	100%	100%	100%
Ads with = 2 cues	95.9	96.6	96.9	83.3
Ads with = 3 cues	84.4	87.9	85.3	40.0

Note: [a] χ^2 test, $p < .01$
[b] χ^2 test, $p < .05$

of cues per ad ($F_{(2, 1082)}$ = 54.76, $p < .01$). The averages for magazine, television, and banner ads were 4.80, 3.99, and 2.30, respectively. Planned comparisons showed that the mean differences among the media were significant at the .01 level in the direction predicted, providing additional confirmation for both H_{2a} and H_{2b}. Thus, H_2 was supported.

Effects of Product Type: Thinking, Feeling, and Involvement

The third set of hypotheses was to examine whether the amount of advertising information differed across product types. H_{3a} and H_{3b} pertained to the variation of information content in advertising contingent upon its position in the FCB grid. Using the same product categories as Weinberger and Spotts (1989) (who used only categories mentioned by the developers of the grid), the ads were categorized into one of the four FCB quadrants, resulting in 732 ads being classified. Products were added to this list based on Ratchford (1987) and judgments about the similarity in characteristics between these additional product categories and those used by Weinberger and Spotts. The expanded categorization led to 842 ads being classified. Table 3 shows the product categories in each quadrant under both sets of assumptions.

A two-way ANOVA using the original FCB classifications and Resnik-Stern's 14 cues indicated that there was a significant main effect for the thinking-feeling dimension ($p < .01$), but no significant main effect for level of involvement or significant interaction effect ($p > .05$). The mean number of informational cues in ads for thinking products was 2.26 versus 1.8 for feeling product ads ($F_{(1, 728)}$ = 10.37, $p < .01$). Therefore, using the smaller data set, there was support for H_{3b} but not for H_{3a}.

A similar analysis for the data set with expanded product classification resulted in main effects for both type and degree of involvement, and with no significant interaction effect ($p > .05$). Ads for rational products contained significantly more information (M = 2.45) than emotional product ads (M = 2.0; $F_{(1,838)}$ = 16.34, $p < .01$). Ads for high involvement products (M = 2.45) were significantly more informative than those for low involvement products (M = 2.0; $F_{(1,838)}$ = 15.45, $p < .01$). Analysis of the expanded data set supported both H_{3a} and H_{3b}. (See Table 3.1 for details.)

Additional analyses using all 19 cues with both the original FBC classification and the expanded categorization resulted in a significant interaction effect as well as significant main effects for both the thinking/feeling and high/low involvement dimensions ($p < .01$), lending additional support for H_{3a} and H_{3b}. Of note is that the mean difference in the number of informational cues between rational products and emotional products was greater for high involvement products than for low involvement products in both original and expanded data sets. (See Table 3.2 for the means.)

Effects of Product Category: Durable and Non-Durable Goods

In addition to the FCB matrix, H_{3c} investigated the relationship between advertising informativeness and product categories with the broad distinction of durable and non-durable goods. This classification led to 922 ads being categorized as either durables (214) or non-durables (608). Using the Resnik and Stern approach, ads for durable goods (M = 2.60) contained significantly more information on average than for non-durable goods (M = 2.24; $\underline{t}_{(820)}$ = 3.03, $\underline{p} < .01$), confirming H_{3c}. Using all 19 cues, durable product ads (M = 5.46) still displayed significantly more information than ads for non-durables (M = 4.18; $\underline{t}_{(820)}$ = 7.63, $\underline{p} < .01$), providing additional support for H_{3c}.

Redirection Cues

Additional analyses provided a closer look at the presence of redirection cues within and across media. Almost 49 percent, or 531 of the 1085 ads included in this analysis, contained at least one redirection cue. Only 1.7 percent of the total or 18 ads carried all three types of redirection cues, and all of these ads were in magazines. By far, the most prevalent type of redi-

TABLE 3.1
Number of Cues per Ad by FCB Grid Quadrant (Resnik and Stern's 14 cues)

	Thinking		Feeling		Total	
	W&S Categories	**Expanded Categories**	**W&S Categories**	**Expanded Categories**	**W&S Categories**	**Expanded Categories**
High Involvement	2.35	2.73	1.88	2.16	2.11	2.45
Low Involvement	2.18	2.17	1.80	1.83	1.99	2.00
Total	2.26	2.45	1.84	2.00	2.05	2.22

TABLE 3.2
Number of Cues per Ad by FCB Grid Quadrant (19 cues)

	Thinking		Feeling		Total	
	W&S Categories	**Expanded Categories**	**W&S Categories**	**Expanded Categories**	**W&S Categories**	**Expanded Categories**
High Involvement	5.34	5.75	3.37	4.07	4.36	4.91
Low Involvement	3.90	4.05	4.03	3.82	4.00	3.99
Total	4.62	4.90	3.70	3.95	4.16	4.43

Weinberger and Spotts (1989) Categories:
Cell 1: appliances, camera, car, home furnishings, house, insurance, electric ranges, securities, tires and batteries, travelers checks.
Cell 2: cosmetics, fashion apparel, hair coloring, jewelry, motorcycles, perfume, sports vehicles, sunglasses.
Cell 3: banks, breakfast drinks, coffee/tea, credit cards, feminine hygiene products, food, household products, laundry products, motor oil, OTC drugs, personal care products, yogurt.
Cell 4: beer/liquor, candy, cigarettes, desserts, fast food, long distance phone calling, soft drinks.

Expanded Categories:
Cell 1: air travel, appliances, automotive gear, camera, contact lenses, electronics, home furnishings, house, insurance, motor vehicles, prescription drugs, securities, travelers checks.
Cell 2: clothing, cosmetics, face soap, family restaurant, glasses, hair coloring, hotel/resort, jewelry, motorcycles, perfume, sports cars, wallpaper/paint.
Cell 3: banks, coffee/tea, credit cards, feminine hygiene products, food, household products, laundry products, OTC drugs, paper products, personal care products, telephone services.
Cell 4: beer/liquor, candy, cigarettes, desserts, fast food, pizza, snacks, soft drinks.

rection cue was a Web site address (49.9 percent), followed by 800 numbers (28.8 percent). An examination of the purpose of redirection cues revealed that most of the cues were redirections for additional information. The presence of mail in addresses was minimal (8.8 percent), and essentially seen only in magazines (90 of the 95 mail addresses were observed on tear out mailers in magazine ads) and appeared to be directions for making purchases and not redirection for additional information. Table 4 reports numbers of redirection cues by purposes of cue presence and medium type.

By medium, magazine ads contained the highest percentage (54.2 percent), followed by banner ads (46.7 percent), with the fewest redirection cues in television ads (39.3 percent). Web addresses for additional information were the only type of redirection cue observed in banner ads (28/60 or 46.7 percent of banners contained another Web address). Web site addresses were present in a majority of magazine ads (54.2 percent), but fewer were seen in television ads (39.3 percent). Magazine ads were also more likely to display toll-free numbers (36.8 percent) than television commercials (18.6 percent).

For television ads, when compared with Edwards and La Ferle's study (2000), results from this study indicated an increase in the ads containing redirection cues. The portions of television commercials carrying Web site addresses and 800 numbers have risen by approximately 19 percent and 8 percent, respectively.

DISCUSSION

For consumers, the value of advertising mainly rests in its ability to convey information about the products and services highlighted in each ad. Proponents of advertising believe that providing information through advertising is a necessary and vital piece of the free-market system. Advertising detractors, however, label advertising as merely persuasive and a "quest for market power" (Norris 1966). Newer approaches to the economic effects of advertising underline the flaws in many older studies and address the limitations of the dichotomy of information versus persuasion (Ekelund and Saurman 1988; Rotzoll and Haefner 1996). Perhaps it is important to recognize that advertising does not play solo. Advertising is part of a promotional mix that can include personal selling, public relations, sales promotions, and so forth. In this view, advertising is no longer responsible for providing all the information consumers need to make purchase decisions and can, instead, support other promotional efforts. This is very true given the new advertising environment in which the Web has evolved into a major commercial medium and advertisers can provide unlimited amounts of product information on the Web.

Reflecting the recent changes in the advertising environment, the study presented in this paper is the first to provide a comparison of magazine, television and Web ads collected during one time-period. Findings of this study also provide evidence of advertising information content that can be compared with past research to longitudinally evaluate the progression of advertising's informativeness. Contrary to speculation, the advent of the Web appeared not to bring about a decrease in information levels in traditional media advertising. The amount of information has not declined in magazine ads and it has increased in television commercials. Apparently, advertisers have not used Web sites as substitute information sources, but merely added them as a new advertising medium to the list of conventional media.

Another possible explanation for the increase seen in the amount of information in television ads and the plateauing of magazine ad information may be the disproportionate use of disclaimers observed between these two media. Disclaimers appeared in almost half of television ads (46.0 percent), but fewer were observed in magazine ads (31.1 percent). Given the higher incidence of information cues across almost all categories in magazine ads, the greater presence of disclaimers in television commercials is notable. Unfortunately, the ads were not coded in a way that permits the identification of the information content that was

TABLE 4
Number and Purposes of Redirection Cues

	Overall Dataset n=1085	Magazine N = 671	Television n = 354	Web n = 60
800 Number	**313**	**247**	**66**	**0**
Information	293	227	66	0
Purchase	7	7	0	0
Both	2	2	0	0
Unclear	11	11	0	0
Web Address	**531**	**364**	**139**	**28**
Information	485	318	139	28
Purchase	3	3	0	0
Both	1	1	0	0
Unclear	42	42	0	0
Mail In Address	**95**	**94**	**1**	**0**
Information	90	89	1	0
Purchase	3	3	0	0
Both	0	0	0	0
Unclear	2	2	0	0

contained in disclaimers themselves. However, it is reasonable to expect that the high incidence of disclaimers may have contributed to the observed increase in the information content of television advertising. If indeed the presence of disclaimers has contributed to an increase in the information content of television ads, then television ads may only be more informative if consumers can read the disclaimers. The study did not formally time the presence of disclaimers nor did it identify how many were able to be read by the coders during the regular course of the ad, but coders noted that disclaimers were difficult to read due to small font and the short time frame for normal ad exposure (Muehling and Kolbe 1997).

A close examination of other factors that might influence information content in advertising showed that, as predicted, the amount of information present in advertising varied across media. Consistent with previous findings, magazine advertisements contained more information than television commercials. Banner advertisements appeared to convey less information than television ads. With the small space available and major duty of directing consumers to the target site, banner ads might play a limited role of advertising similar to outdoor ads. Banner ads often act as traffic builders that lead consumers to the target sites by clicking through them. Accordingly, information present in banners is designed to draw attention from consumers and trigger their instant actions (i.e., click through).

Product types also had significant effects on the amount of information conveyed in ads. Ads for durable goods provided more information than ads for non-durable goods. Using the FCB grid, ads for rational products were found to present more information than those for emotional products. Ads for high involvement products contained more information than those for low involvement products. It was noted that the conflicting findings in the literature were due to

the different product classifications employed (Abernethy and Franke 1996). The results reinforce the general pattern of information levels between durable goods and non-durable goods, and demonstrate the applicability of the FCB matrix, as an alternative product classification system to the broad scheme of durables versus non-durables.

Findings on the redirection cues also support the supplementary role of the Web as a source for additional product information. Audiences are often directed from television or magazines to corporate/product Web sites for further, detailed information, but cross-media promotion in the opposite direction is rare. Almost half of the studied banner ads carried a Web site address, and none of them contained redirection cues to other media. If we consider this redirection of consumers to Web sites for additional information, then one way to interpret the findings of this study is that the availability of "advertising information" has increased. Redirect cues offer consumers a chance to search for information proactively and remove the necessity of exposure to an ad for product information to a great extent.

Findings on this additional category shed some light on the questions as to whether advertising should provide reasonably complete product information and whether such information can be available to consumers in some other places than advertising – for example, at the retailer, on the product package, or in consumer information publications such as *Consumer Reports*. In fact, the Web can be an effective source of boundless information on products. Traditional media advertising is only one avenue of product information, and, with its limited space and time, cannot carry sufficient product information. Indeed, findings of this study suggest that advertisers try to redirect consumers to other communication channels mainly for information purposes. Perhaps it would be reasonable to have detailed product information available in other forms for consumers who wish to utilize it rather than overflow advertisements with it and limit consumer understanding of the advertising messages (Greyser 1983).

Findings of this study (as well as the qualitative experiences of the researchers and coders) suggest that it is not an easy task to evaluate informativeness of advertising and provide objective standards for it. Resnik and Stern (1977) pioneered the study of the information content of advertising and the value of their coding procedure has been evidenced through its replication in a considerable amount of empirical research on advertising information. Despite its contribution of providing a measure for quantifying advertising information content, the Resnik and Stern coding procedure does have limitations. First of all, the Resnik-Stern approach is a measure of objective information content in advertising, but cannot provide information on consumers' subjective experience with the information; that is, how much the consumer values the information and whether or not he or she actually utilizes the information to make purchase decisions (Resnik and Stern 1977; Abernethy and Franke 1996). In addition, the procedure does not take into account veracity of the information, and it only measures the presence or absence of certain informational cues without evaluating their correctness. Also, the coding instructions do not clearly specify whether only the verbal or both verbal and visual elements of an advertisement are being examined.

Next, the coding system gauges types of information, but not its instances (Abernethy and Franke 1996). It does not incorporate the frequency with which each of the information categories appears in advertising (Aaker and Norris 1982) or the proportion of the total ad space that contains informational cues and thus is informative although such factors might influence consumers' overall impression of the ad. For example, repetition of the same information cues and display of several cues in the same category of the coding system might determine consumers' perception and utilization of the information. In addition, the use of visual effects such as large fonts may focus more attention on some cues. This might be more important in television commercials than in print ads because the time period for exposure, and the consumer's parallel cognitive processing, is

determined by the medium, not the audience. Taken together, these rules create boundaries or limitations on the actual number of cues that can be counted, and may create an artificial ceiling or underestimate of the true informativeness of advertising. Although this study incorporated some new categories to update the coding system, more efforts are needed to further refine it to better understand the informativeness of advertising.

A final cautionary note is for the banner ad data. The measurement of banner ad informativeness in this study may be more of a function of the technological capabilities of such type of ads than the preferences of the advertisers. Improvements in bandwidth and processing speeds in recent years could provide advertisers with the means to develop other types of Web ads (e.g., interstitials) that contain more information. This possibility suggests that a content analysis of Web advertising today might have different findings than reported in this study. The growth of Web advertising, as well as the increased presence of "brick and mortar" advertisers on the Web through corporate Web sites, prompted the necessity of this current research. In fact, many consumers consider Web sites as a whole as advertising because they find rich information on products/brands there (Macias 2003). Furthermore, the increasing popularity of cross media promotion among advertisers encourages future research to examine advertising from a broad view, not focusing on one medium. A recent television commercial for a car brand, for example, shows its performance test with a competing brand, but directs the audience to its Web site to find out the results. Logically, as technology and consumer behavior continue to evolve, the advertising practice and its impact on consumers merit additional research.

REFERENCES

Aaker, David A. and David Norris (1982), "Characteristics of TV Commercials Perceived as Informative," *Journal of Advertising Research*, 22 (2), 61-70.

Abernethy, Avery M. and George R. Franke (1996), "The Information Content of Advertising: A Meta-analysis," *Journal of Advertising*, 25 (2), 1-17.

_____ and _____ (1998), "FTC Regulatory Activity and the Information Content of Advertising," *Journal of Public Policy & Marketing*, 17 (Fall), 239-56.

Advertising Age (1998), Top 300 Magazines by Gross Revenue (http://www.adage.com/page.cms?pageId=772), site visited on July 3, 1999.

Briggs, Rex and Nigel Hollis (1997), "Advertising on the Web: Is there Response before Click-though?" *Journal of Advertising Research*, (March/April), 33-45.

Edwards, Steven and Carrie La Ferle (2000), "Cross Media Promotion of the Internet in Television Commercials," *Journal of Current Issues and Research in Advertising*, 22 (Spring), 1-12.

Ekelund, Robert and David S. Saurman (1988), *Advertising and the Market Process*, San Francisco, CA: Pacific Research Institute for Public Policy.

Greyser, Stephen A. (1983), "Advertising as Information and Persuasion in the Marketplace," A Paper Prepared for *the Federal Trade Commission*, Washington, May 4.

Internet Advertising Bureau (IAB) (1997), IAB Advertising Effectiveness Study Executive Summary (http://www.iab.net/advertise/ content/adeff3.html), site visited on February 7, 2001.

_____ (1999), IAB Internet Advertising Revenue Report: Executive Summary (http://www.iab.net/adrevenue/), site visited on February 7, 2001.

Ju-Pak, Kuen-Hee (1999), "Content Dimensions of Web Advertising: A Cross-national Comparison," *International Journal of Advertising*, 18 (2), 207-31.

Li, Hairong (1998), "What Makes Users Click on a Banner Ad: Two Field Experimental Studies of Banner Ad Size, Type, and Incentive," Proceedings of the 1998 Conference of the American Academy of Advertising, Darrel D. Muehling, ed., Lexington: Kentucky, 183-184.

Litman, Barry and Elizabeth Bain (1987), "Information Search and Banned Product Advertising: An Indifference Curve Approach," *Current Issues and Research in Advertising*, 10 (1), 39-60.

Macias, Wendy (2003), "A Beginning Look at the Effects of Interactivity, Product Involvement and Web Experience on Comprehension: Brand Web Sites as Interactive Advertising," *Journal of Current Issues and Research in Advertising*, 25 (2), 31-44.

Marquez, F. T. (1977), "Advertising Content: Persuasion, Information or Intimidation?" *Journalism Quarterly*, 54 (3), 482-491.

Muehling, Darrel D. and Richard H. Kolbe (1997), "Fine Print in Television Advertising: Views From the Top," *Journal of Advertising*, 26 (3), 1-15.

Nicosia, Francesco M. (1974), *Advertising Management and Society*. New York: McGraw-Hill.

Noor Al-Deen, Hana S. (1991), "Literacy and Information Content of Magazine Advertising: USA Versus Saudi Arabia," *International Journal of Advertising*, 10 (3), 251-257.

Norris, Vincent P. (1966), "Toward the Institutional Study of Advertising," *Occasional Papers in Advertising*, (University of Illinois Department of Advertising) 1, no. 1, 60.

_____ (1983), "Consumer Valuation of National Ads," *Journalism Quarterly*, 60 (2), 262-268.

_____ (1984), "The Economic Effects of Advertising: A Review of the Literature," *Current Issues and Research in Advertising*, 7 (2), 39-134.

Norton, Seth W. and Will Norton, Jr. (1988), "An Economic Perspective on the Information Content of Magazine Advertisements," *International Journal of Advertising*, 7 (2), 138-148.

Pasadeos, Yorgo, Glenn Key, Steven Hall, and Cynthia Morvillo (1987), "Information Content of Newspaper Advertisements," *Newspaper Research Journal*, 8 (3), 1-9.

Perreault, William D. and Leigh Laurence E. (1989), "Reliability of Nominal Data Based on Qualitative Judgments," *Journal of Marketing Research*, 26 (2), 135-149.

Ratchford, Brian T. (1987), "New Insights About the FCB Grid," *Journal of Advertising Research*, 27 (4), 24-38.

Resnik, Alan and Bruce L. Stern (1977), "An Analysis of Information Content in Television Advertising," *Journal of Marketing*, 41 (January), 50-53.

Rotzoll, Kim B. and James E. Haefner (1996), *Advertising in Contemporary Society: Perspectives toward Understanding*, Urbana, IL: University of Illinois Press.

Stern, Bruce, Dean Krugman, and Alan Resnik (1981), "Magazine Advertising: An Analysis of Its Information Content," *Journal of Advertising Research*, 21 (April), 39-44.

_____ and Alan Resnik (1991), "Information Content in Television Advertising: A Replication and Extension," *Journal of Advertising Research*, 31 (3): 36-46.

Vaughn, Richard (1980), "How Advertising Works: A Planning Model," *Journal of Advertising Research*, 20 (October), 27-33,

_____ (1986), "How Advertising Works: A Planning Model Revisited," *Journal of Advertising Research*, 26 (1), 57-66.

Weinberger, Marc G. and Harlan E. Spotts (1989), "A Situational View of Information Content in TV Advertising in the U.S. and U.K." *Journal of Marketing*, 53 (January), 89-94.

Zeff, Robbin and Brad Aronson (1999), *Advertising on the Internet*. New York: John Wiley & Sons, Inc.