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Brand Identification and Advertisement Appreciation of Online, Print, and TV Advertisements

Michael Sall
University of Pennsylvania

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Abstract

This study explores the effects of media type (including online, print, and TV), advertisement shape, and online animation level on advertising responses such as recall, recognition, attitude, and purchase intent. The study examined a set of 1636 surveys, each collecting consumer responses to an individual advertisement, conducted by the consumer research and consulting firm OTX Research. The findings showed that underlying the considered measures were two factors, brand identification and advertisement appreciation, and that media type and advertisement shape produced significant differences in these factors. While online advertisements had the highest brand identification, TV advertisements had the highest advertisement appreciation. Additionally, the three advertisement characteristics were able to effectively discriminate between high and low levels of these factors. The findings allow for intuitive explanations of how consumer engagement and sought experiences may be producing the comparative effects of online, print and TV advertisements.

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ABSTRACT: This study explores the effects of media type (including online, print, and TV), advertisement shape, and online animation level on advertising responses such as recall, recognition, attitude, and purchase intent. The study examined a set of 1636 surveys, each collecting consumer responses to an individual advertisement, conducted by the consumer research and consulting firm OTX Research. The findings showed that underlying the considered measures were two factors, brand identification and advertisement appreciation, and that media type and advertisement shape produced significant differences in these factors. While online advertisements had the highest brand identification, TV advertisements had the highest advertisement appreciation. Additionally, the three advertisement characteristics were able to effectively discriminate between high and low levels of these factors. The findings allow for intuitive explanations of how consumer engagement and sought experiences may be producing the comparative effects of online, print and TV advertisements.

With Internet advertising revenues totaling \$21.2 billion in 2007 and rising 12.8% between the second quarters of 2007 and 2008 (IAB, 2008), it is clear that online advertising has become a major marketing tool alongside more traditional media forms such as print and television. As of yet, however, no analysis has directly weighed the benefits of these three media types against each other.

To a limited degree several authors have explored the relationships between these forms of advertising. Bezjian-Avery et al. (1998) compare interactive advertising to traditional "linear" advertising, arguing that traditional formats may be more effective in certain situations depending on the "cognitive" matching of the system properties (e.g. verbal versus visual). Without directly considering traditional media, Cho et al. (2001) show a positive correlation between the forced exposure of an online banner advertisement and its effect on advertising perception and the frequency of clicks on the advertisement.

Gallagher et al. (2001) find no difference in effectiveness between print and web advertisements while Kimefeld and Watt (2001) show that online advertisements achieve a higher purchase intent and attitude than print advertisements for advertisements with promotional messages. Furthermore, Dahlén et al. (2004) find that internet advertisements convey implicit meanings just as well as print advertisements for high-involvement products and consumers with positive dispositions towards the brand, but that online advertisements convey implicit meanings better than print advertisements for low-involvement products and consumers with negative dispositions.

While a comparison between TV and online advertising may seem natural given their similar presentation on screens and the ability for online advertisements to employ animation, no research has yet directly compared the effects of these two mediums. With a related focus, Chang and Thorson (2004) find that television-web synergies lead to higher attention, greater perceived message credibility, and more total and positive thoughts than do repetition. Additionally, Yoon and Kim (2004) compare how consumers perceive the relationships between different products and media types, including online, print, and television.

This research makes a direct comparison between online, print, and television advertisements with regards to advertisement perception, brand identification, and purchase intention. Moreover, this study incorporates the effects of different advertisement shapes as well as the relative influences of video and rich media in online advertisements. To the author's knowledge, no research has yet compared the effectiveness of all three of these media types, nor have there been prior studies incorporating the increasingly popular online advertisement formats of both rich media and video.

MEASURING ADVERTISING EFFECTIVENESS

There are generally two approaches currently used for studying the effectiveness of online advertisements. The first method, more often employed in commercial settings, uses click-through rate as a measure of performance. In academic research too, a number of studies emphasize and apply click-through rate as a reflection of the Internet's ability to serve as a direct marketing tool. (Doyle, Modahl and Abbott, 1997; Briggs and Hollis, 1997; Chatterjee, Hoffman, and Novak, 1998; Dahlén, 2000; Chandon, Chtourou and Fortin, 2003)

However, the use of click-through rate as a performance measure poses several challenges. While some forms of rich media advertisements achieved click-through rates as high as 4.7% in North America during the fourth quarter 2007 to third quarter 2008 period, according to Eyeblaster (2008), standard online banner advertisements saw click-through rates of only 0.09%. With click-through rates so low, it may be difficult to appreciate significant differences between advertisements, and it is likely that the real effectiveness of an advertisement extends beyond the rare choice of a consumer to actually click on it. Furthermore, in the comparison of online advertising to that of TV and print, there is no equivalent measure of click-through rate available for these traditional forms of media.

Thus it is appropriate for this study to instead employ the second method for assessing online advertising effectiveness, that which examines more traditional measures such as brand recall, attitude, and purchase intent. In contrast to using click-through rate, this approach considers online advertising as a means of developing a company's communication strategy (Chandon, 2003). This second method is also more popular in academic research, and many studies argue that the exposure of online advertisements alone can produce significant effects in these more psychological measures. (Ducoffe, 1996; Briggs and Hollis, 1997; Cho, 1999; Rossiter and Bellman, 1999; Frazer and MacMillan, 1999; Brackett and Carr, 2001; Kimelfeld and Watt, 2001; Ilfeld and Winer, 2002; Drèze and Hussherr, 2003)

Each method has its merits, and Dahlén (2001 and 2002) finds that, depending on the type of product, either click-through rate or page impressions (the number of times the consumer is exposed to the advertisement on a web page) may better reflect an advertisement's effectiveness. In practice, too, both methods are incorporated today in pricing models for internet advertisement revenues. During the first six months of 2008, 52% of internet revenues were priced on a performance basis (using measures including click-through rates and even purchases), 44% were priced on a CPM (cost per impression) basis, and the remaining 4% were priced using a hybrid of the two. (IAB, 2008). However, research suggests that both methods are linked and that the psychological measures of the second method are in fact correlated to click-through rate; Broussard (2000) shows that both click-through rate and brand awareness are functions of exposure frequency.

For these reasons, this study applies the second approach. While click-through rate may be a useful measure, it is difficult to apply in a comparative context where click-through rates are so low, and it is likely that click-through rate is still positively correlated with the measures used here. Moreover, these measures of recall, attitude, and purchase intention provide a consistent basis with which to compare all three media types, and as measures of advertisement effectiveness they are able to involve but also look beyond the clicking behavior of consumers.

ADVERTISING FORMAT

The primary focus of this paper is to examine how the effectiveness of an advertisement differs across media types. In a qualitative comparison between print and online advertisements, one can describe two major differences: online advertisements appear on an animated screen rather than in print, and they involve a significant degree of interactivity. As previously described, prior studies show that online advertisements tend to perform just as well if not better than print advertisements depending on the type of customer or product involved, and online advertisements also tend to perform

better with higher degrees of forced exposure (Gallagher et al., 2001; Kimefeld and Watt, 2001; Dahlén et al., 2004; Bezjian-Avery et al., 1998; Cho et al. 2001). These findings may imply that the positive effects of an animated screen in online advertising may be compensating for the negative effects of its interactivity.

Although the effectiveness of online advertisements has not yet been directly compared to that of TV advertisements, a similar qualitative comparison may be made in that while TV advertisements involve an animated screen, they do not exhibit the same degree of interactivity. This suggests that TV advertising may perform similarly to online advertising with the added benefit of its forced exposure. Therefore it is hypothesized that:

H1: Online advertisements will have higher performance measures than print advertisements but lower performance measures than TV advertisements.

In addition to media type, the study here considers two other major format characteristics that are direct offerings of the advertising host: advertisement shape and online animation level. Advertisement shape refers to the size and shape of an advertisement, such as whether an online advertisement is a banner, skyscraper, or square, whether a print advertisement is one or two pages, and the time length of a TV advertisement. Online animation level specifically refers to whether an online advertisement is static or employs rich media or video; naturally, all print advertisements are static and all TV advertisements are video. Appendix D provides details on the sizes of these groups.

Unlike other advertisement characteristics such as message, product, and creativity, the shape and animation level of an advertisement is determined specifically by what an advertiser decides to purchase from the host. Therefore, in comparing advertisements across media types, any differences found in effectiveness between these formats may be compared with industry prices to determine advertisement values that are independent of how well an advertiser actually executes the format in question. This leads to practical implications for purchasing and pricing decisions that are not a function of the advertiser's ability to maximize other potentially influential factors such as design.

Online Animation Level

In examining the animation level of online advertisements, advertisements are divided into three categories: static, rich media, and video. Static online advertisements refer to still image advertisements. Rich media online advertisements (labeled here as "rich online") refer to advertisements incorporating any non-video interactive or animated features such as pull-down menus, games, and flash animations. Video online advertisements include all advertisements that incorporate video. In the comparison to other media types, TV advertisements, all of which take the form of video, are grouped into one category; likewise, print advertisements, which are necessarily all static, are grouped into a single category as well.

With regards to online advertising, there are a number of prior studies that have considered the effects of animation (Rae and Brennan, 1998; Li and Bukovac 1999; Lang et al., 2002; Brown, 2002; Lohtia, Donthu and Hershberger, 2003; Chandon et al., 2003; Yoo, Kim and Stout, 2004; Sundar and Kalyanaraman, 2004; Sundar and Kim, 2005; Appiah, 2006). It should be noted that while studies have examined animation, essentially no prior research has directly studied rich media as it is used today. Appiah (2006) defines rich media as "visual effects that contain complex animations or instantly playing audio and video that exist on a Web page," considering testimonial videos as one example; here this level of animation is categorized as video. Otherwise, Brown (2002) provides the only other research on rich media as it is defined here, finding that pull-down menus improve the effectiveness of an online banner advertisement.

With noticeable concurrence, these studies all generally find that a higher level of animation improves an online advertisement's effectiveness. Reflecting these findings as well as the previous hypothesis, it is thus hypothesized that:

- H2: Online advertisements will receive higher performance measures with higher levels of animation (from static, to rich media, to video), and all online advertisements will still receive performance measures higher than those of print and lower than those of TV advertisements.

Advertisement Shape

To examine the effects of advertisement shape, the advertisements of all three media types are divided into smaller categories. Online advertisements are divided into three categories: skyscraper, banner, and square; these terms refer to Internet Advertising Bureau standards for advertisement shape.¹ The print advertisements considered here are all full-color magazine advertisements, and they are divided into the three categories of 1 page, 1 and 1/3 page (labeled here as "1.33 print"), and 2 page advertisements. TV advertisements are divided into 30-second and 15-second advertisements, although the 15-second advertisements are not included for the majority of the analyses performed here due to insufficient data.²

The majority of prior research on online advertising has focused solely on banner advertisements since they have historically been the most common. However, with conflicting results, several studies have compared the effectiveness of different online advertisement shapes. Chandon et al. (2003) find that larger online advertisements tend to be more effective. Sundar and Kim (2005) show that, while the effectiveness of different online advertisements depends on the level of animation, square advertisements are usually dominant. By contrast, Burn and Lutz (2006) find that skyscraper advertisements are generally the most effective.

However, it is likely that the effectiveness of these advertisements is also determined by their position on a webpage. While banner advertisements tend to appear at the top of a web page, square advertisements appear beside the main content, and skyscraper advertisements extend farther down. For this reason, it is expected that square advertisements will be the most effective because they are concentrated at the location where viewers focus their attention. Following this are banner advertisements, which are first seen by the viewer, and then skyscraper advertisements. Additionally, since prior research shows that larger advertisements are also more effective for print advertisements (Finn, 1988; Kelly and Hoel, 1991; Naccarato and Neuendorf, 1998), it is expected that larger (and longer) advertisements will generally be more effective as well. Given these expectations as well as the prior hypothesis about media type, it is hypothesized that:

- H3: Larger and longer advertisements will receive higher performance measures, square online advertisements will receive higher performance measures than other online advertisements (followed by banner advertisements and then skyscraper advertisements), and all online advertisements will receive performance measures higher than those of print advertisements and lower than those of TV advertisements.

¹ The Internet Advertising Bureau defines the following standards, used here, for online advertisements: traditional "medium rectangles" are 300x250 pixels, traditional banners, or "leaderboards," are 728x90 pixels, and traditional "wide skyscrapers" are 160x600 pixels.

² The original data include other online and TV advertisement shapes that were omitted from this analysis due to insufficient data. For online advertisements, these include overlays, multi-advertisement combinations, and micro-site/landing pages. For TV advertisements, these include 45-second, 60-second, and 120-second advertisements.

Levels of Discrimination

Determining statistically significant differences in the effectiveness of various advertisements is useful only if these differences can be used to meaningfully improve future advertising decisions. For this reason, further analysis is performed to understand how well the dependent and independent variables are able to discriminate between each other. First, to understand the ability for the differences in performance measures to be used to discriminate between different categories of advertisements, the following hypotheses are formed:

- H4a: Performance measures may be used to discriminate between media types.
- H4b: Performance measures may be used to discriminate between media types and online animation levels.
- H4c: Performance measures may be used to discriminate between advertisement shape.

While these hypotheses provide for a valuable analysis of the classification abilities of the non-categorized performance measures, a more directly applicable analysis may be found from the inverse: the ability of advertisement characteristics to predict high and low levels of performance. It is therefore hypothesized that:

- H5a: Media type, online animation level, and advertisement shape may be used together to discriminate between the top and bottom 50% levels of performance measures.
- H5b: Media type, online animation level, and advertisement shape may be used together to discriminate between the top and bottom 25% levels of performance measures.

In conjunction, these additional hypotheses thus allow one to understand the meaningfulness of any significant differences that may exist within the three advertisement characteristics.

METHOD

Sample and Procedure

This study examined the aggregated results of advertising response surveys conducted by the consumer research and consulting firm OTX Research. The data include 1,636 advertisements, representing 272 different brands, surveyed over the period of January 2005 to December 2008. The surveys were based online with respondent demographics matched to client specifications; while demographics were therefore not the same for each survey, they consistently represented each advertisement's individual target audience, thereby allowing for more useful implications of advertisement effectiveness. OTX Research allowed the use of this database on the understanding that this paper would not reveal any results that might infringe on confidentiality aspects of the data.

Each of the 1,636 surveys measured the responses of 200 consumers for an individual advertisement. A separate control group of 200 respondents with matched demographics was used where lifts in measures were concerned. As already described, the primary independent variables considered were media type, advertisement shape, and online animation level. The data also include categorization of the advertisement product by industry as well as the country where the survey was conducted. These variables were not incorporated into the initial analyses of the other advertisement characteristics, but they were included as covariates in the final MANCOVAs that tested whether the differences in all of the advertisement characteristics, together, were still significant.

Measures

There were six dependent variables considered in this research. These measures each represent aggregate response data for surveys conducted on individual advertisements.³ More detailed information on the distributions of these variables may be found in Appendices A and B.

Unaided Recall: Unaided Recall represents the percent of total respondents able to correctly identify the advertisement's brand when asked to list any brands, products, or services that they remembered seeing.

Total Recog: Total Recognition represents the percent of total respondents who, when shown the advertisement again after the test session, remembered having seen it.

Brand/Total Recog: Brand/Total Recognition represents, of those who already remembered seeing the advertisement, the percent of respondents who were then able to identify its brand. An exponential transformation is applied to this measure.

Like: Like represents the percent of total respondents who mentioned something when asked to list what, if anything, that they liked about the advertisement.

Dislike: Dislike represents the percent of total respondents who mentioned something when asked to list what, if anything, that they disliked about the advertisement. A logarithm transformation is applied to this measure.

Brand Buy Next Lift: Brand Buy Next Lift represents the lift from the control group in the percent of respondents who chose the brand when asked to pick which brand they were most likely to buy next.

Due to the nature in which the surveys were conducted, not all six dependent variables were observed during every survey. Of the 1,636 advertisement surveys in the data set, only 594 include data for all six of these variables. Additionally, as described above, further data is excluded for several analyses due to a lack of sufficient data for certain advertisement shapes and industries; sample sizes are therefore stated for each analysis.

RESULTS

Factor Analysis of Advertisement Response Measures

An initial examination of the six dependent variables revealed significant correlations among several of the measures (Table 1), suggesting that the dependent variables may be reduced to fewer factors. In particular, a high correlation between Exp(Brand/Total Recog) and Unaided Recall suggested that response to the brand may form one factor. Additionally, a high correlation between Like and Total Recog suggested that response to the advertisement may comprise another underlying factor. Brand Buy Next Lift was also noticeably uncorrelated with the other measures, suggesting that buying habits may produce a third factor.

To develop advertising response factors, the values for the six dependent variables were subjected to a principal components analysis with varimax rotation. Only the eigenvalues for the first two components were above 1 (Table 2), accounting for 56% of the total variance and suggesting a two-

³ The original data include a number of other measures that were omitted from this analysis due to insufficient data. These include measures of advocacy, affinity, the relative lifts of advocacy and affinity from the control group, and the association of the advertisement with ten different adjectives.

TABLE 1: Pairwise Correlations of Dependent Variables*

Variable	by Variable	Correlation	Count	Sig
Exp(Brand/Total Recog)	Unaided Recall	0.54	1258	<.0001
Exp(Brand/Total Recog)	Like	0.30	1103	<.0001
Exp(Brand/Total Recog)	Total Recog	0.28	1452	<.0001
Exp(Brand/Total Recog)	Log10(Dislike)	-0.15	1101	<.0001
Like	Total Recog	0.49	1137	<.0001
Like	Unaided Recall	0.29	1002	<.0001
Like	Log10(Dislike)	-0.32	1167	<.0001
Unaided Recall	Total Recog	0.35	1280	<.0001
Unaided Recall	Log10(Dislike)	-0.06	1000	0.06
Total Recog	Log10(Dislike)	-0.17	1135	<.0001
Brand Buy Next Lift	Total Recog	0.13	788	<.001
Brand Buy Next Lift	Log10(Dislike)	0.05	705	0.20
Brand Buy Next Lift	Exp(Brand/Total Recog)	0.04	788	0.28
Brand Buy Next Lift	Like	0.02	703	0.52
Brand Buy Next Lift	Unaided Recall	0.01	684	0.82

*Multivariate correlations (n=594) are found in Appendix C

TABLE 2: Principal Components (n=594)

	Eigenvalue	Percent	Cum Percent
1	2.16	36.0	36.0
2	1.20	19.9	55.9
3	0.93	15.5	71.4
4	0.79	13.1	84.6
5	0.53	8.8	93.3
6	0.40	6.7	100.0

TABLE 3: Factor Loading (n=594)

	Factor 1	Factor 2
Unaided Recall	0.67	0.07
Total Recog	0.14	0.47
Exp(Brand/Total Recog)	0.69	0.16
Like	0.27	0.57
Log10(Dislike)	-0.33	-0.37
Brand Buy Next Lift	-0.11	0.18

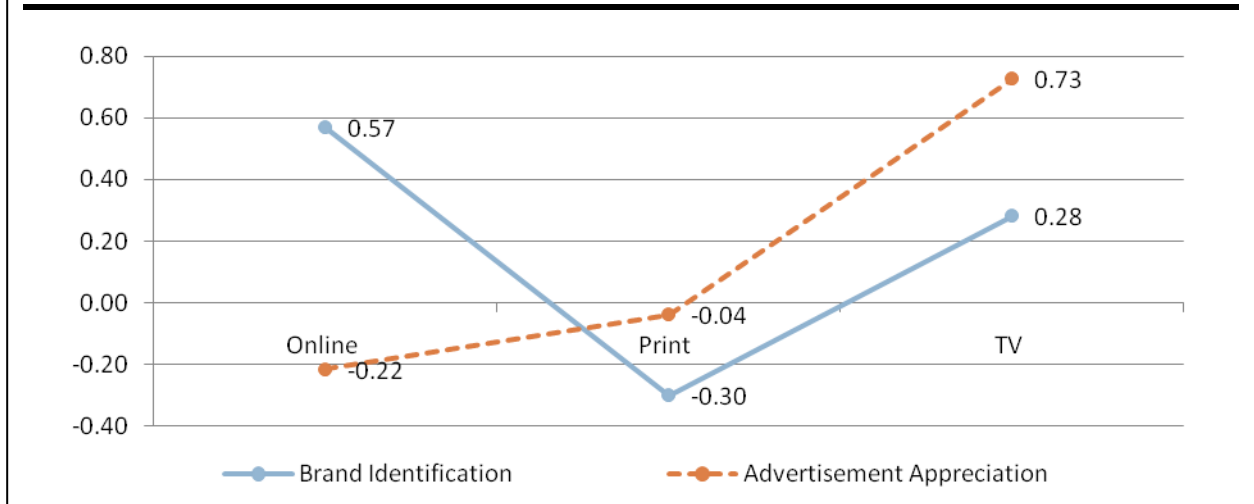
factor solution. Table 3 shows the loadings of the factors generated through principal component extraction and varimax rotation.

An examination of the factor loadings showed that the first factor incorporated high levels of Unaided Recall and Exp(Brand/Total Recog). This implied that the first factor represented the underlying nature in which consumers identified the brand. For this reason, this factor was labeled "Brand Identification." Similarly, the second factor showed high levels of Like and Total Recog as well as high negative values of Log10(Dislike). This suggested that the second factor represented the underlying nature in which consumers were recognizing and liking the brand. For this reason, this factor was labeled "Advertisement Appreciation." The distributions of these factors are shown in Appendix E.

Effects of Media Type

To test the differences in Brand Identification and Advertisement Appreciation among online, print and TV advertisements, an ANOVA was performed for each factor. Differences in media type were significant for both factors. For Brand Identification, the ANOVA had an F-ratio of 99.4 (DF=2), indicating a <.0001 significance. For Advertisement Appreciation, the ANOVA had an F-ratio of 58.2 (DF=2), indicating a <.0001 significance.

FIGURE 1: Effects of Media Type (n=594)



Consistent with the hypothesis, the findings showed that TV advertisements had the highest Advertisement Appreciation. However, online advertisements actually exhibited the highest Brand Identification and lowest Advertisement Appreciation. These differences are shown in Figure 1.

Effects of Media Type and Online Animation Level

To test the differences in Brand Identification and Advertisement Appreciation among media types and online animation levels, an ANOVA was performed for each factor. Additionally, a student’s t-test was performed to test the significances of the differences between each individual category. Differences in both advertisement characteristics were significant for both factors. The results of these tests are shown in Table 4 and Figure 2.

Consistent with the hypothesis, the findings showed that TV advertisements still had the highest Advertisement Appreciation. Additionally, while no significant difference was found among the online animation levels, all of the online advertisements categories had higher Brand Identification and lower Advertisement Appreciation than both TV and print advertisements. Interestingly, rich media online advertisements did not have a significantly higher Brand Identification than TV advertisements, nor did it have a significantly lower Advertisement Appreciation than print advertisements. This may imply a potential difference between rich media and other online animation levels.

To further explore potential differences in the effects of media type and online animation level, the same analysis was performed for the original six dependent variables. Differences in both advertisement

TABLE 4: Effects of Media Type and Online Animation Level on Factors (n=594)

Brand Identification
(DF=4, F=50.5, sig <.0001)

	Mean	Significantly higher than:
Video Online	0.84	Print and TV
Static Online	0.58	Print and TV
Rich Online	0.44	Print
TV	-0.3	Print
Print	0.28	-

Advertisement Appreciation
(DF=4, F=29.7, sig <.0001)

	Mean	Significantly higher than:
TV	0.73	All others
Print	-0.04	Static and Video Online
Rich Online	-0.11	-
Static Online	-0.22	-
Video Online	-0.42	-

characteristics were again significant for all dependent variables. The results of these tests are shown in Figure 3 and Table 5. To ensure the simultaneous significance of all six ANOVAs, a MANOVA was performed, achieving a significance of $<.0001$ ($n=594$, Wilk's Lambda=0.39, Approximate $F=26.7$, $DF=24/2038.5$).

This analysis shows differences among online animation levels not found when examining the factors. Video online advertisements had the significantly highest Unaided Recall. Additionally, video online advertisements had significantly higher Total Recog than static online advertisements as well as significantly higher Brand/Total Recog, Log10(Dislike), and Brand Buy Next Lift than rich online advertisements. Consistent with the implications of the ANOVAs using the two factors, rich online had the significantly lowest Brand Buy Next Lift. Strangely, TV advertisements had both the highest Like and Log10(Dislike) values, suggesting that these advertisements provoked the strongest responses in either direction. Print also had the significantly lowest Unaided Recall and Exp(Brand/Total Recog).

FIGURE 2: Effects of Media Type and Online Animation Level on Factors (n=594)

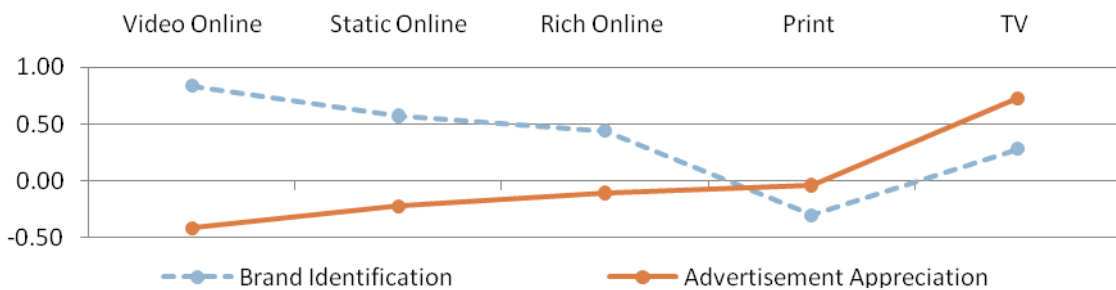


FIGURE 3: Effects of Media Type and Online Animation Level

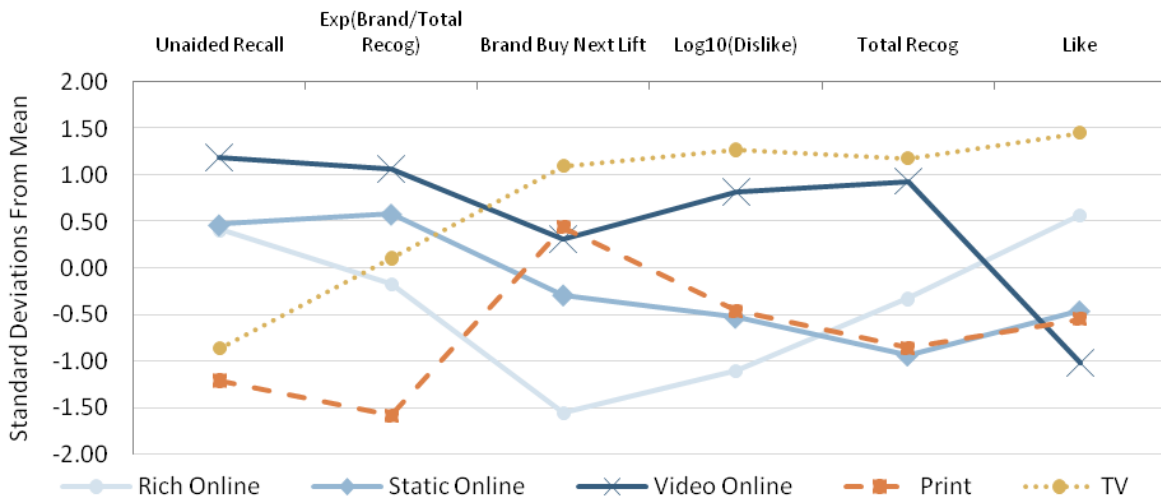


TABLE 5: Effects of Media Type and Online Animation Level**Unaided Recall** (n=1328, DF=4, F=82.2, sig <.0001)

	Mean	Significantly higher than:
Video Online	50.8	All others
Static Online	42.4	Print and TV
Rich Online	41.8	Print and TV
TV	27.1	Print
Print	23.0	-

Total Recog (n=1510, DF=4, F=33.4, sig <.0001)

	Mean	Significantly higher than:
TV	73.3	Print, and Static and Rich Online
Video Online	71.7	Print and Static Online
Rich Online	64.2	-
Print	61.0	-
Static Online	60.5	-

Exp(Brand/Total Recog) (n=1452, DF=4, F=60.5, sig <.0001)

	Mean	Significantly higher than:
Video Online	2.23	Print and Rich Online
Static Online	2.16	Print, Rich Online, and TV
TV	2.09	Print
Rich Online	2.05	Print
Print	1.83	-

Like (n=1171, DF=4, F=7.0, sig <.0001)

	Mean	Significantly higher than:
TV	74.0	Print, and Static and Video Online
Rich Online	71.8	-
Static Online	69.3	-
Print	69.1	-
Video Online	67.9	-

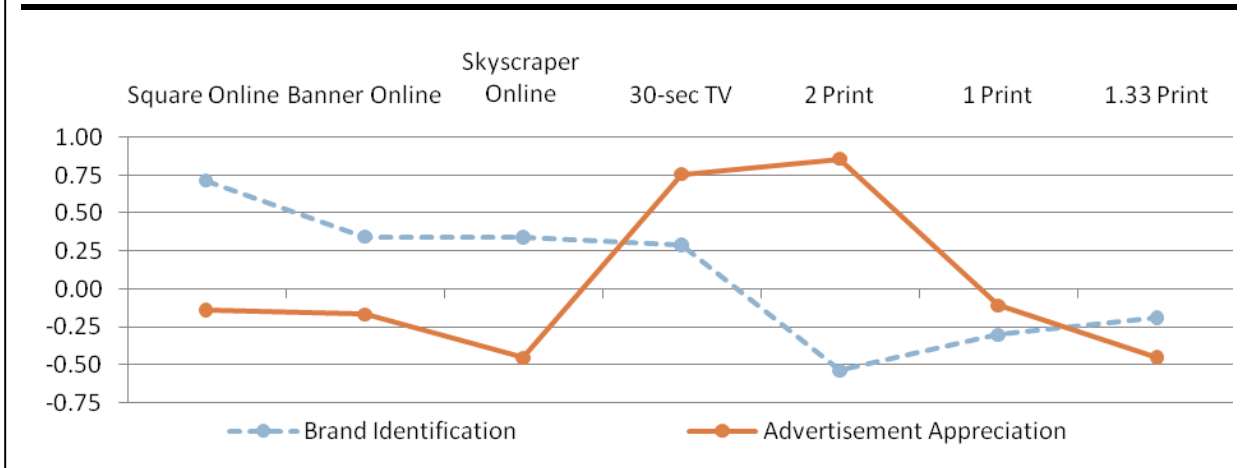
Log10(Dislike) (n=1169, DF=4, F=8.3, sig <.0001)

	Mean	Significantly higher than:
TV	1.52	Rich and Static Online, and Print
Video Online	1.50	Rich Online
Print	1.45	-
Static Online	1.44	-
Rich Online	1.42	-

Brand Buy Next Lift (n=810, DF=4, F=9.3, sig <.0001)

	Mean	Significantly higher than:
TV	5.46	Rich and Static Online, and Print
Print	4.42	Rich and Static Online
Video Online	4.21	Rich Online
Static Online	3.27	Rich Online
Rich Online	1.29	-

FIGURE 4: Effects of Advertisement Shape (n=562)



Effects of Advertisement Shape

To test the differences in Brand Identification and Advertisement Appreciation among advertisement shapes, an ANOVA was performed for each factor. Additionally, a student’s t-test was performed to test the significances of the differences between each individual category. Differences in advertisement shape were significant for both factors. The results of these tests are shown in Table 6 and Figure 4.

Somewhat consistent with the hypothesis, the findings showed that while there was no significant difference between 30-second TV advertisements and 2-page print advertisements, both had Advertisement Appreciations significantly higher than all other shapes. Additionally, consistent with the hypothesis, square online advertisements had the significantly highest Brand Identification. While no significant differences were found among banner online, skyscraper online, and 30-second TV advertisement shapes, these three shapes all had significantly higher Brand Identifications than print advertisements; no significant differences in the Brand Identifications of different print advertisements shapes were found. It is also worth noting that 1.33-page print and skyscraper online advertisements, though not significantly different from each other, had the significantly lowest Advertisement Appreciations. The findings indirectly suggest that square online advertisements may be the most effective of online advertisements while skyscraper online advertisements may be the least effective.

TABLE 6: Effects of Ad Shape (n=562)

Brand Identification

(DF=6, F=33.1, sig <.0001)

	Mean	Significantly higher than:
Square Online	0.69	All others
Banner Online	0.34	All Print
Skyscraper Online	0.34	All Print
30 TV	0.29	All Print
1.33 Print	-0.19	-
1 Print	-0.30	-
2 Print	-0.54	-

Advertisement Appreciation

(DF=6, F=40.1, sig <.0001)

	Mean	Significantly higher than:
2 Print	0.86	1.33 and 1 Print, and all Online
30 TV	0.76	1.33 and 1 Print, and all Online
1 Print	-0.11	1.33 Print and Skyscraper Online
Square Online	-0.15	1.33 Print and Skyscraper Online
Banner Online	-0.16	1.33 Print and Skyscraper Online
1.33 Print	-0.45	-
Skyscraper Online	-0.50	-

FIGURE 5: Effects of Advertisement Shape

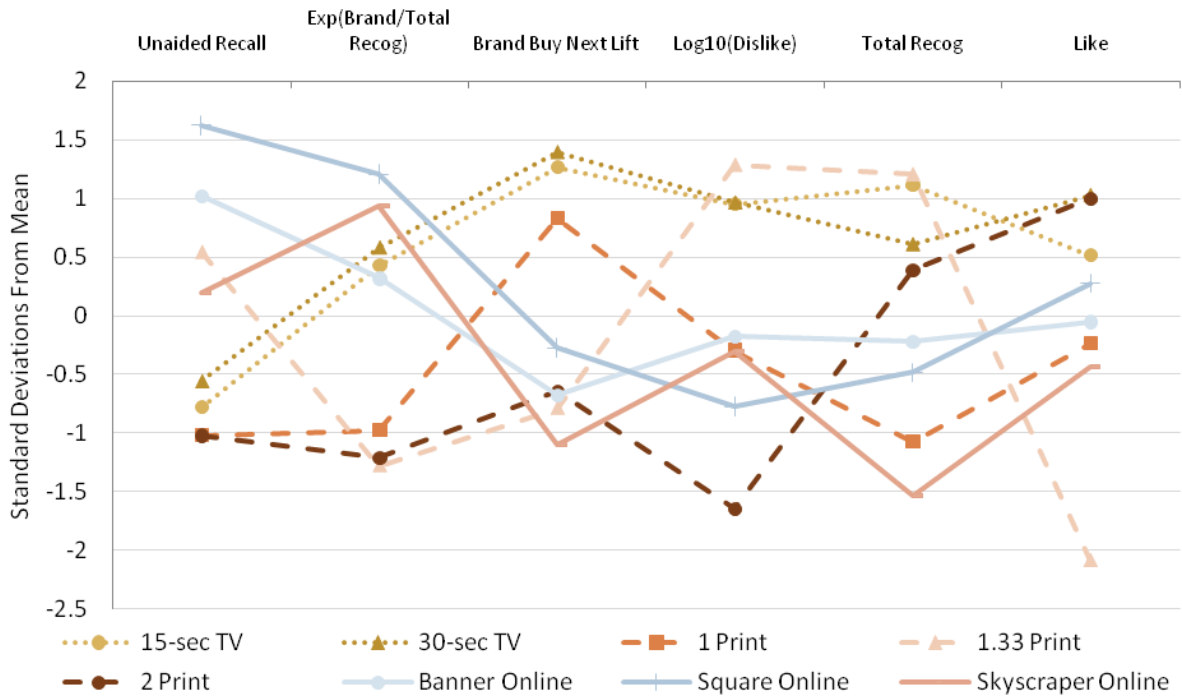


TABLE 7: Effects of Advertisement Shape

Unaided Recall (n=1292, DF=7, F=55.4, sig <.0001)

	Mean	Significantly higher than:
Square Online	46.6	All others
Banner Online	41.1	1 and 2 Print, all TV, and Skyscraper Online
1.33 Print	36.7	1 and 2 Print and all TV
Skyscraper Online	33.5	1 and 2 Print and all TV
30 TV	26.6	1 and 2 Print
15 TV	24.5	-
2 Print	22.3	-
1 Print	22.3	-

Total Recog (n=1475, DF=7, F=32.9, sig <.0001)

	Mean	Significantly higher than:
1.33 Print	76.5	All Online, and 1 and 2 Print
15 TV	75.8	All Online, and 1 and 2 Print
30 TV	71.8	All Online and 1 Print
2 Print	70.1	All Online and 1 Print
Banner Online	65.3	Skyscraper Online and 1 Print
Square Online	63.2	Skyscraper Online and 1 Print
1 Print	58.7	-
Skyscraper Online	55.1	-

TABLE 7 Continued: Effects of Advertisement Shape**Exp(Brand/Total Recog)** (n=1417, DF=7, F=32.8, sig <.0001)

	Mean	Significantly higher than:
Square Online	2.19	All Print, all TV, and Banner Online
Skyscraper Online	2.15	All Print
30 TV	2.09	All Print
15 TV	2.07	All Print
Banner Online	2.05	All Print
1 Print	1.84	-
2 Print	1.80	-
1.33 Print	1.79	-

Like (n=1144, DF=7, F=12.1, sig <.0001)

	Mean	Significantly higher than:
30 TV	74.2	1.33 and 1 Print, and all Online
2 Print	74.0	1.33 and 1 Print, and all Online
15 TV	71.9	1.33 Print
Square Online	70.8	1.33 and 1 Print, and Skyscraper Online
Banner Online	69.4	1.33 Print
1 Print	68.6	1.33 Print
Skyscraper Online	67.7	1.33 Print
1.33 Print	60.5	-

Log10(Dislike) (n=1141, DF=7, F=8.6, sig <.0001)

	Mean	Significantly higher than:
1.33 Print	1.54	2 and 1 Print, and all Online
30 TV	1.52	2 and 1 Print, and all Online
15 TV	1.52	2 Print
Banner Online	1.46	2 Print
1 Print	1.45	2 Print
Skyscraper Online	1.45	2 Print
Square Online	1.43	2 Print
2 Print	1.38	-

Brand Buy Next Lift (n=777, DF=7, F=7.0, sig <.0001)

	Mean	Significantly higher than:
30 TV	5.59	All Online and 2 and 1.33 Print
15 TV	5.41	All Online and 2 and 1.33 Print
1 Print	4.82	All Online and 2 and 1.33 Print
Square Online	3.31	-
2 Print	2.81	-
Banner Online	2.76	-
1.33 Print	2.61	-
Skyscraper Online	2.19	-

To further explore potential differences in the effects of media type and online animation level, the same analysis was performed for the original six dependent variables. Differences in both advertisement characteristics were again significant for all dependent variables. The results of these tests are shown in Figure 5 and Table 7. To ensure the simultaneous significance of all six ANOVAs, a MANOVA was performed, achieving a significance of $<.0001$ ($n=571$, Wilk's $\Lambda=0.21$, Approximate $F=25.0$, $DF=42/2620.7$).

This analysis showed differences not found when examining the factors. All TV advertisements as well as 1-page print advertisements together had the significantly highest Brand Buy Next Lift while no significant differences were found among the other shapes. Different print advertisement shapes produced the strongest discrepancies in affinity; 2-page print advertisements had high Like and the significantly lowest $\text{Log}_{10}(\text{Dislike})$ while 1.33-page print advertisements had high $\text{Log}_{10}(\text{Dislike})$ and the significantly lowest Like. Additionally, the largest differences among online advertisement shapes were found for Unaided Recall, for which, consistent with the hypothesis, square online advertisements performed significantly higher than banner online advertisements, which in turn performed significantly higher than skyscraper online advertisements.

Discriminating Between Advertisement Characteristics

To determine how well the 6 dependent variables were able to discriminate between the advertisement characteristics, a linear discriminant analysis was performed for the discrimination between media type, media type and online animation level, and advertisement shape. All three analyses were significant, and they each improved prediction levels beyond those of chance. The results of these analysis are shown in Table 8.

In the discrimination between media type, 73.7% of advertisements were correctly classified - more than twice as many as the 33.3% that would be predicted by chance. TV advertisements were predicted particularly well with an accuracy of 93%. When the online advertisements were further divided by animation level, the discriminant analysis correctly classified 60.1% of advertisements, more than three times the 20% level predicted by chance. Noticeably, the greatest misclassifications were found among the online animation levels; this was consistent with the previous findings that there were no significant differences between online animation levels.

In the discrimination between advertisement shape, 54.6% of advertisements were correctly classified. This was a significant improvement above the 14.3% that would be correctly predicted by chance. Similar to the discriminant analysis between media type and online animation levels, the most misclassifications were found among the online animation levels. Notably, 1.33-page and 2-page print advertisements were predicted particularly well with 97% and 94% accuracy, respectively.

In addition to these analyses, the same three discriminant analyses were performed using Brand Identification and Advertisement Appreciation. These analyses all significantly improved classification levels above those of pure chance, but they did not perform as strongly as the discriminant analyses using the 6 dependent variables. The results of these additional analyses are shown in Appendix F.

Discriminating Between High and Low Performance Measures

To determine how well the three advertisement characteristics were able to discriminate between high and low levels of Brand Identification and Advertisement Appreciation, a linear discriminant analysis was performed. This required transforming the advertisement characteristics into continuous variables and likewise transforming the factors into categorical variables. Dummy variables were created for the 12 advertising format categories previously considered: online static, online rich, online video, all TV, all print, banner online, skyscraper online, square online, 30-second TV, 1-page print, 1.33-page print, and 2-page print advertisements.

The two factors were categorized using two methods. For the first analysis, each factor was divided into two categories representing the advertisements with the highest and lowest 50% of values. The cross-multiplied combination of the two categories for each factor thereby produced 4 total groups. For the second analysis, each factor was dividing into three categories representing the advertisements with the highest 25%, middle 50%, and lowest 25% of values. The cross-multiplied combination of the three categories for each factor thereby produced 9 total groups. Further details of these two categorizations are found in Table 9.

Both analyses were significant, and both improved prediction levels beyond those of chance. The results are seen in Table 9. For the first analysis, which used top and bottom 50% values, 52.5% of advertisements were correctly classified, an improvement above the 25% level of pure chance. Noticeably, the discriminant analysis appeared biased toward predicting low values for each measure.

TABLE 8: Discriminant Analysis using 6 Independent Variables

Media Type

Total Correctly Classified: 438/594 (73.7%)

Wilks' Lambda=0.41, DF=12/1172, Approximate F=54.9, sig <.0001

Predicted->	Online	Print	TV
Online	79%	17%	4%
Print	22%	68%	10%
TV	2%	6%	93%

Media Type and Online Animation Level

Total Correctly Classified: 357/594 (60.1%)

Wilks' Lambda=0.39, DF=24/2038.5, Approximate F=26.7, sig <.0001

Predicted ->	Rich Online	Static Online	Video Online	Print	TV
Rich Online	52%	23%	10%	16%	0%
Static Online	23%	45%	16%	12%	3%
Video Online	25%	0%	67%	0%	8%
Print	13%	10%	9%	60%	8%
TV	2%	0%	3%	6%	90%

Advertisement Shape

Total Correctly Classified: 307/562 (54.6%)

Wilks' Lambda=0.23, DF=36/2418, Approximate F=27.0, sig <.0001

Predicted ->	30 TV	1 Print	1.33 Print	2 Print	Banner Online	Box Online	Skyscraper Online
30 TV	72%	2%	4%	21%	0%	0%	2%
1 Print	6%	46%	6%	7%	6%	16%	14%
1.33 Print	0%	3%	97%	0%	0%	0%	0%
2 Print	3%	0%	3%	94%	0%	0%	0%
Banner Online	3%	19%	14%	3%	19%	32%	11%
Square Online	4%	5%	6%	1%	19%	48%	16%
Skyscraper Online	0%	3%	0%	0%	0%	9%	88%

Few measures that were actually low were predicted to be high, whereas a significant number of advertisements that were actually high in either measure were instead predicted to be low for that measure. Even for those advertisements that were high in both measures (HH), the analysis predicted nearly twice as many of them to be low in both measures (LL) than it made actually correct classifications. Accordingly, the strongest prediction level was found for advertisements low in both measures; these were correctly classified with 87% accuracy.

TABLE 9: Discriminant Analysis using Advertisement Characteristics

Top and Bottom 50% of Brand Identification and Advertisement Appreciation

Category Labels:

		Advertisement Appreciation	
		Top 50%	Bottom 50%
Brand Identification	Top 50%	HH (n=151)	HL (n=118)
	Bottom 50%	LH (n=121)	LL (n=172)

Total Correctly Classified: 295/562 (52.5%)

Wilks' Lambda=0.49, DF=36/1616.9, Approximate F=12.3, sig <.0001

Predicted ->	HH	HL	LH	LL
HH	26%	22%	1%	50%
HL	8%	64%	0%	29%
LH	17%	2%	26%	56%
LL	3%	10%	0%	87%

Top and Bottom 25% of Brand Identification and Advertisement Appreciation

Category Labels:

		Advertisement Appreciation		
		Top 25%	Middle 50%	Bottom 25%
Brand Identification	Top 25%	HH (n=22)	HM (n=86)	HL (n=24)
	Middle 50%	MH (n=79)	MM (n=148)	ML (n=56)
	Bottom 25%	LH (n=32)	LM (n=53)	LL (n=62)

Total Correctly Classified: 142/562 (25.3%)

Wilks' Lambda=0.23, DF=96/3661.4, Approximate F=9.3, sig <.0001

Predicted ->	HH	HM	HL	MH	MM	ML	LH	LM	LL
HH	59%	5%	27%	0%	5%	5%	0%	0%	0%
HM	3%	5%	37%	0%	7%	6%	0%	42%	0%
HL	4%	8%	75%	0%	0%	13%	0%	0%	0%
MH	37%	1%	5%	0%	0%	0%	22%	35%	0%
MM	3%	7%	7%	0%	5%	9%	1%	69%	0%
ML	2%	5%	11%	0%	2%	57%	0%	23%	0%
LH	6%	0%	0%	0%	0%	0%	47%	47%	0%
LM	0%	0%	0%	0%	0%	0%	0%	100%	0%
LL	0%	2%	2%	0%	2%	13%	0%	82%	0%

For the second analysis, which used the top 25%, middle 50%, and bottom 25% of values of each factor, 25.3% of advertisements were correctly classified, twice as high as the pure chance prediction level of 11.1%. When the classifications of advertisements that fall in the middle 50% of both measures were not included, the percent of correct classifications improved to 32.6%. Unlike the previous analysis, this analysis did not actually correctly predict any advertisements that were in the bottom 25% of both measures. By contrast, the analysis correctly predicted 59% of advertisements that were in the top 25% of both measures, more than five times as high as the 11.1% that would be predicted by chance. The most notable finding, however, was the ability of this analysis to reduce the frequency of major false positives. A major false positive is defined here as an occurrence when a measure in the bottom 25% (L) is instead predicted to be in the top 25% (H) of that measure. While the major false positive rate should be 39.4% by chance, this analysis produced major false positives at a rate of only 2.6%.

Significance of Tests

Several analyses were performed to ensure the simultaneous significance of all previous analyses. To test whether differences in both Brand Identification and Advertisement Appreciation were still significant after all advertisement characteristics were concurrently incorporated, a MANCOVA was performed using the variables of media, online animation level (nested within media), advertisement shape (nested within media) and the interaction between animation level and advertisement shape (nested within media as well). The advertisement's industry and the country of the survey were also both incorporated as covariates. The MANCOVA achieved an overall significance level of $<.0001$, and every variable included was significant except for the interaction variable and online animation level. However, this was not surprising given that significant differences were not previously found between online animation levels. Details for this MANCOVA as well as the three other MANCOVAs performed may be found in Appendix G.

Because the interaction variable in the previous MANCOVA was found to be highly insignificant ($F=0.4$, $DF=6/1062$, $sig=.889$), a second MANCOVA was performed excluding this interaction. As with the first MANCOVA, all variables except online animation level were still found to be highly significant. However, the significance of online animation level improved substantially, reaching nearly 95% confidence (Approximate $F=2.4$, $DF=4/1068$, $sig = 0.0521$). This confirmed that all previous findings considering Brand Identification and Advertisement Appreciation were simultaneously significant.

The same two MANCOVAs were performed for the six dependent variables as well. For every independent variable, the significance levels were equal to or higher than those found in the previous two MANCOVAs. When the interaction variable was not included, a noticeable improvement was found in online animation level, which achieved a significance of 0.012 (Approximate $F=2.2$, $DF=12/1060$). This confirmed that all previous analyses considering the six dependent variables were also simultaneously significant.

DISCUSSION

Viewed together, these results reveal interesting implications about the comparative effects of online, print, and TV advertisements. Although the "effectiveness" of an advertisement is often referenced as a single all-encompassing term, this study finds that the manner in which a consumer identifies an advertisement's brand is separate from and even uncorrelated with the degree to which a consumer appreciates the same advertisement. Contrary to the initial hypotheses, online advertisements were found to have the highest brand identification but the lowest advertisement appreciation, while TV advertisements had the highest advertisement appreciation.

To understand these effects, a possible explanation may be found in the nature of the consumer's experience and engagement with the media. When browsing on the Internet and making use of its interactive capabilities, a consumer is most likely engaged in active, information-seeking behavior. On the one hand it is reasonable to expect the appreciation of online advertisements to be relatively low given the clutter of website displays and the intrusiveness of such advertisements on the search for information. However, if a consumer is actively seeking online content, the consumer may be more prone to gather and retain information from advertisements as well. This may explain why online advertisements exhibited such high brand identification.

Compared with the interactive engagement involved with online content, television content likely involves a more passive entertainment-seeking experience. Consumers are potentially less actively involved and thereby less attentive to the information provided by the advertisement, explaining why TV advertisements exhibited lower levels of brand identification. However, as an activity where consumers are likely seeking simple enjoyment of the media rather than looking to gather information, it is reasonable to expect a higher appreciation of TV advertisements. The fact that brand identification was the lowest for print advertising is interesting, for one would expect readers of magazines to engage in information-seeking behavior similar to that of online users. A potential explanation for this result may be the relatively lower degree of interactivity; readers of magazines can easily flip past pages showing advertisements, and they are not actively looking for buttons and links to click on. Of course, there is significant overlap in the processes involved with each media type, but the engagement and sought experiences of the consumer provide an intuitive interpretation for the findings of this study.

The further differences among advertisement formats generally enhance this explanation. Of all advertisement shapes, square online advertisements exhibited the highest brand identification. Similar to the explanation provided for the hypothesis, square online advertisements are located most directly within the vicinity of the sought content, and they are most likely to mimic the imagery of the content itself. If a consumer is actively seeking information, one would expect for the consumer to also look during this process to these square advertisements as a potential informational source. Likewise, 2-page print advertisements and TV advertisements exhibited the highest levels of advertisement appreciation. As large photographic and video displays, it is reasonable to expect consumers to recognize and like these advertisements the most.

The fact that these different advertisement formats can be successful in different ways has important implications for advertisers. To the extent that marketers may seek different kinds of responses for different advertisements, the choice of media is an important consideration. Informational advertisements that are intended to help improve the recognition of a brand may be more effective when seen online. By contrast, if an advertiser is looking to build a preference and affinity for the product, TV advertisements appear to be the most advisable choice. Both types of responses are positive, and both likely in turn lead to more purchases. It should be noted, however, that the Brand Buy Next Lift variable is weighted positively as a component of advertisement appreciation while negatively as a component of brand identification. This suggests that the building of a brand may be at the short-term expense of purchase intent. Indeed, the findings show that TV advertisements had the highest Brand Buy Next Lift values while online advertisements, in all forms, generally exhibited the lowest Brand Buy Next Lift values.

At the same time that these results are statistically significant and provide clear implications, the differences found may also serve as meaningful predictors of performance. Discriminant analysis revealed that the variables considered may be used to more than double the accuracy of predictions of performance. Interestingly, there was a general bias toward predicting low performance measures; this implies that for those advertisements incorrectly predicted to have low performance, other characteristics were producing the positive effects. This is to be expected, since there are a number of other factors involved that can improve an advertisement, such as message, creativity, and aesthetics.

The fact that advertisements were much less often incorrectly predicted to have high performance measures, however, implies that once a high-performing advertisement format is chosen, there are much fewer characteristics that can compromise its positive influence and bring its effectiveness back down. This is shown particularly well in the low rate of major false positives (only 2.6%) found in the discriminate analysis-derived predictions of top and bottom 25% levels of Brand Identification and Advertisement Appreciation. If a company uses an advertisement format that was predicted to be particularly effective in both measures, there is an extremely low chance that this advertisement is actually one of the overall lowest performing formats. Thus, while there are undoubtedly many issues to consider in the conception of an advertisement, simply purchasing the right type of advertisement seems to drive a major portion of the advertisement's effectiveness.

Limitations

This analysis was limited to the data that the clients of the research firm chose to collect in each survey. Potential correlations may therefore exist between the advertisements tested and the measures collected. Additionally, the study was limited to the advertisement formats surveyed and the data available; for example, only one TV advertisement shape was used due to lack of sufficient data. Because the surveys were given online, the nature of viewing print advertisements on a screen may have affected performance measures. Moreover, there is a potential self-selection bias in the survey respondents. Another limitation is that this analysis did not employ a hold-out sample.

FUTURE RESEARCH

This study provides implications for how consumer engagement with different types of media may affect the performance of advertisements. However, further research is needed to directly observe this connection. The distinction between brand identification and advertisement appreciation was also derived as an implied underlying influence of the variables measured, so future research could potentially focus on the comparison of these two factors relative to different forms of media. Furthermore, there are a number of other increasingly popular forms of advertising that require consideration, such as mobile advertising, sponsorship, product placement, and word of mouth. Future research could explore how these other forms of advertising compare with the types of media considered here.

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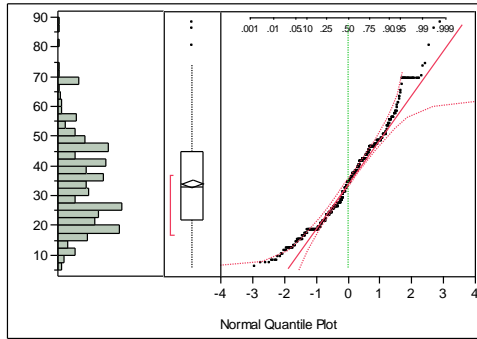
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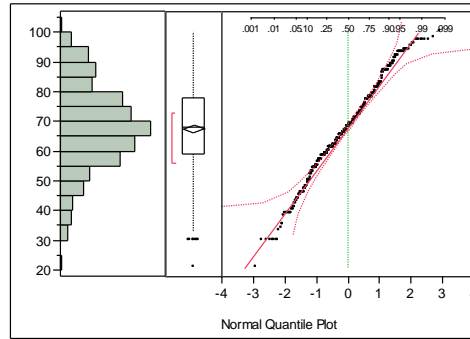
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APPENDIX A: DISTRIBUTIONS OF DEPENDENT VARIABLES

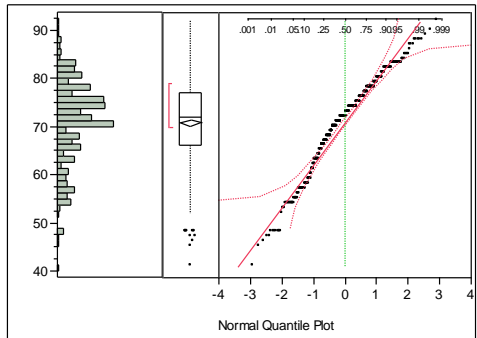
Unaided Recall:



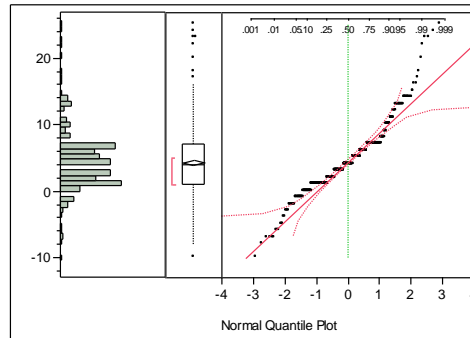
Total Recognition:



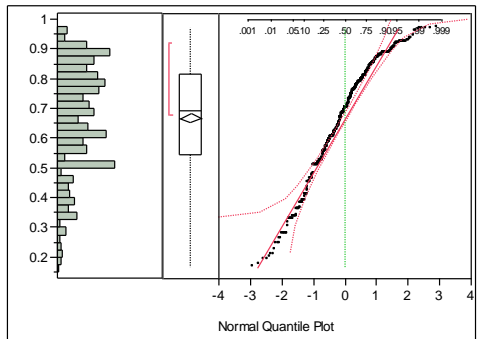
Like:



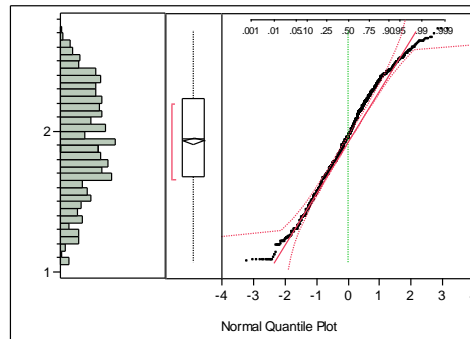
Brand Buy Next Lift:



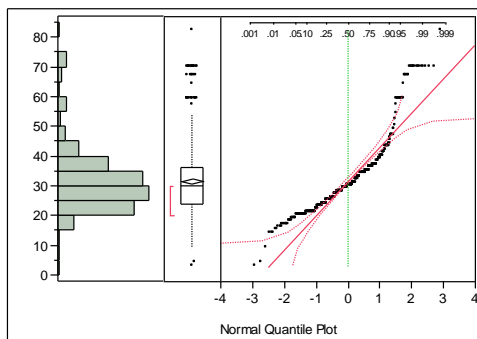
Total/Brand Recognition:



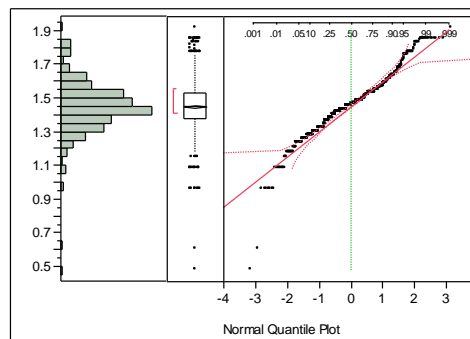
--> Exp(Total/Brand Recognition):



Dislike:



--> Log10(Dislike):



APPENDIX B: UNIVARIATE AND MULTIVARIATE VARIABLE CHARACTERISTICS

Univariate

	N	Mean	Std Dev	Minimum	Maximum
Unaided Recall	1328	26.11	14.70	1	88
Total Recog	1510	63.42	16.98	9	100
Brand/Total Recog	1452	0.64	0.20	0.07	1
Like	1171	69.69	9.80	39	92
Dislike	1169	29.99	10.69	3	82
Brand Buy Next Lift	810	4.18	4.60	-10	32

Multivariate

	N	Mean	Std Dev	Minimum	Maximum
Unaided Recall	594	34.01	14.98	6	88
Total Recog	594	67.74	14.37	21	100
Brand/Total Recog	594	0.67	0.18	0.17	0.97
Like	594	70.86	8.79	41	92
Dislike	594	31.72	11.44	3	82
Brand Buy Next Lift	594	4.38	4.44	-10	25

APPENDIX C: MULTIVARIATE CORRELATIONS (N=594)

	Unaided Recall	Total Recog	Exp(Brand/Total Recog)	Like	Log10 (Dislike)	Brand Buy Next Lit
Unaided Recall	1.00					
Total Recog	0.15	1.00				
Exp(Brand/Total Recog)	0.59	0.16	1.00			
Like	0.20	0.38	0.28	1.00		
Log10(Dislike)	-0.22	-0.16	-0.31	-0.39	1.00	
Brand Buy Next Lift	-0.07	0.13	-0.03	0.05	0.01	1.00

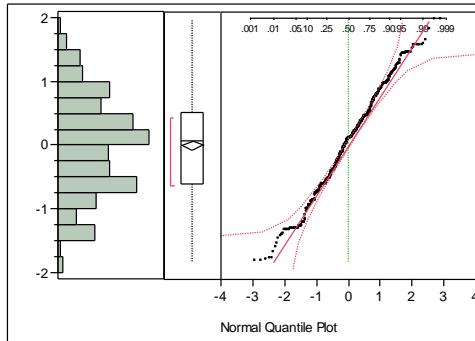
APPENDIX D: DISTRIBUTIONS OF INDEPENDENT VARIABLES

Group	Number in Group	
	Univariate	Multivariate (within n=594)
All Online	255	160
All Print	1064	367
All TV	317	67
Total	1636	594
Rich Online	45	31
Static Online	188	117
Video Online	19	12
Print	1064	367
TV	317	67
Total	1633	594

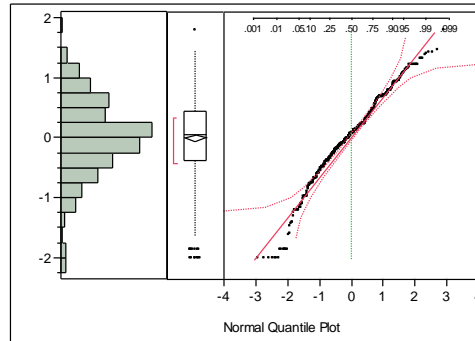
Group	Number in Group	
	Univariate	Multivariate (within n=594)
Banner Online	68	37
Square Online	111	79
Skyscraper Online	58	33
1 Print	855	298
1.33 Print	36	29
2 Print	165	33
15 TV	46	9
30 TV	259	53
Total	1598	571

APPENDIX E: DISTRIBUTIONS OF FACTORS

Identified Brand:



Advertisement Appreciation:



APPENDIX F: DISCRIMINANT ANALYSIS USING FACTORS

Media Type

Total Correctly Classified: 370/594 (62.3%)

Wilks' Lambda=0.59, DF=4/1180, Approximate F=87.8, sig <.0001

Predicted->	Online	Print	TV
Online	73%	15%	13%
Print	24%	56%	20%
TV	15%	12%	73%

Media Type and Online Animation Level:

Total Correctly Classified: 284/594 (47.8%)

Wilks' Lambda=0.59, DF=8/1176, Approximate F=45.1, sig <.0001

Predicted ->	Rich Online	Static Online	Video Online	Print	TV
Rich Online	36%	16%	19%	26%	3%
Static Online	21%	15%	41%	11%	13%
Video Online	0%	17%	75%	0%	8%
Print	20%	3%	5%	54%	18%
TV	6%	5%	5%	12%	73%

Advertisement Shape:

Total Correctly Classified: 275/562 (48.9%)

Wilks' Lambda=0.46, DF=12/1108, Approximate F=43.3, sig <.0001

Predicted ->	30 TV	1 Print	1.33 Print	2 Print	Banner Online	Box Online	Skyscraper Online
30 TV	55%	4%	2%	26%	2%	9%	2%
1 Print	8%	44%	12%	10%	13%	11%	2%
1.33 Print	0%	24%	76%	0%	0%	0%	0%
2 Print	3%	3%	0%	94%	0%	0%	0%
Banner Online	8%	14%	14%	3%	22%	24%	16%
Square Online	13%	1%	6%	0%	13%	47%	20%
Skyscraper Online	3%	3%	9%	0%	18%	15%	52%

APPENDIX G: MODEL MANCOVA TESTS (N=553)**MANCOVA for Brand Identification and Advertising Appreciation, with Advertisement Shape * Online Animation Interaction:**

	Wilk's Lamda	Approx F	DF	Sig
Whole Model	0.38	16.8	40/1062	<.0001
Media	-	32.8	2/531	<.0001
Ad Type[Media]	0.93	6.4	6/1062	<.0001
Animation[Media]	-	1.1	2/531	0.342
Ad Type*Animation[Media]	1.00	0.4	6/1062	0.889
Industry	0.87	9.2	8/1062	<.0001
Country	0.96	2.4	10/1062	0.0075

MANCOVA for Brand Identification and Advertising Appreciation:

	Wilk's Lamda	Approx F	DF	Sig
Whole Model	0.38	19.8	34/1068	<.0001
Media	0.83	26.0	4/1068	<.0001
Ad Type[Media]	0.91	6.6	8/1068	<.0001
Animation[Media]	0.98	2.4	4/1068	0.0521
Industry	0.87	9.2	8/1068	<.0001
Country	0.96	2.4	10/1068	0.0069

MANCOVA for six dependent variables, with Advertisement Shape * Online Animation Interaction:

	Wilk's Lamda	Approx F	DF	Sig
Whole Model	0.12	11.4	120/3053.2	<.0001
Media	-	29.0	6/527	<.0001
Ad Type[Media]	0.65	13.5	18/1491.1	<.0001
Animation[Media]	-	2.2	6/527	0.043
Ad Type*Animation[Media]	0.98	0.7	18/1491.1	0.800
Industry	0.65	10.0	24/1839.7	<.0001
Country	0.83	3.3	30/2110	<.0001

MANCOVA for six dependent variables:

	Wilk's Lamda	Approx F	DF	Sig
Whole Model	0.12	13.3	102/3028.5	<.0001
Media	0.69	18.2	12/1060	<.0001
Ad Type[Media]	0.60	12.1	24/1850.2	<.0001
Animation[Media]	0.95	2.2	12/1060	0.012
Industry	0.66	9.9	24/1850.2	<.0001
Country	0.83	3.3	30/2122	<.0001