

**Getting Real:
Drivers of Effectiveness in Online Brand Advertising**

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Dr. Anthony Romeo, Strategic Dynamics
Nick Nyhan, Dynamic Logic

Research Assistance:

Molly Hislop, Dynamic Logic
Andrew Latzman, Dynamic Logic
Amanda Salomon, Dynamic Logic
Kaii Tu, Dynamic Logic

Table of Contents

Introduction3

Background and Approach4

 Analysis Technique 5

 Overall Findings 5

 Regression Results and Observations: 7

Analysis9

 ➤ **Lesson One: Maturity Matters** 9

 ➤ **Lesson Two: Brands Differ – and So Does Their Online Advertising Effectiveness** 10

 ➤ **Lesson Three: Creativity Rules, but the Rules Are Complicated**..... 12

Where Next 14

Appendix 15

 Statistical Appendix 19

Regression 1: Dependent Variable: Brand Awareness Delta 19

Regression 2: Dependent Variable: Message Association Delta 19

Regression 3: Dependent Variable: Brand Favorability Delta 20

Regression 4: Dependent Variable: Purchase Intent Delta 20

Dependent Variables:..... 20

Getting Real

Introduction

Marketers have been learning online brand advertising on the run. In the early years we didn't really know if it even worked. Advertisers committed funds either on faith or simply as an experiment in a promising, and highly visible, new medium. The ads themselves reflected this experimental character, as advertisers tested the limits of technology and communication tools. Although rules of thumb for good advertising online were sometimes promulgated (e.g., see Carlon et al., 2000; DoubleClick, 2001), they were easily subjugated to the enticements of newer formats and approaches.

The industry has now reached the next stage of maturity. There is compelling evidence that online advertising is an effective branding tool (e.g., see Dreze and Hussherr, 1999; Briggs, 2001, Wakeling and Murphy, 2002). It is an accepted, if perhaps under-appreciated, part of advertising communication. It seems time to strengthen the guidelines on how to use online effectively.

This paper explores the effectiveness of online brand advertising. What sorts of Internet advertising work best, for what purposes, for what brands and categories? And how can advertisers maximize the effectiveness of their online advertising? Based on our analysis, we offer some lessons to guide advertisers as they develop their campaigns.

Does online advertising work?

It is worth stating upfront that for online advertising, as for traditional advertising, there is no simple formula for what works. Good advertising requires creativity, the right frequency, targeting, etc.. Does online advertising work? It can, but not always. If you are unsure how best to use online advertising, you are not alone. Many have probably realized that success does not come just from using the latest formats. So, lacking confidence, some hold back. This paper is offered as a way to understand where effectiveness can be found and we hope the MarketNorms database will continue to be a resource to help the industry answer these questions.

Background and Approach

Our analysis is based on the Dynamic Logic MarketNorms Database. As part of its market research activities over the last few years, Dynamic Logic has gathered detailed information on hundreds of online marketing campaigns, with over 5,000 classified creative executions, and close to half a million respondents within those campaigns. The data span a wide range of advertiser industries, brands, ad formats and includes advertising on thousands of web sites, including 10 of the top 10 publishers.

This proprietary database contains information on many metrics, by creative execution and campaign overall, but version 1.0 of MarketNorms focuses on four widely recognized measures of branding effectiveness:

Key Metrics	Definition
Aided Brand Awareness	Measures the level of familiarity respondents have with the brand listed.
Message Association	Measures the extent to which respondents can match the campaign messaging with the sponsor or brand.
Brand Favorability	Measures the extent to which respondents have a positive or favorable opinion of the brand.
Purchase Intent	Measures the likelihood of respondents to taking a purchase action in the future (<i>indicate will buy, or test-drive, for example</i>).

To learn more about these metrics and how they fit into the traditional hierarchy of advertising effects, please see the Appendix.

These measures are calculated through a rigorous methodology that compares people exposed to a campaign with a control group. The AdIndex methodology allows campaigns to be measured as they run live on websites. This unique approach, which Dynamic Logic helped pioneer, creates a real-world test environment of marketing in action - tested in its actual environment as opposed to a research facility.

Essentially, the research compares the attitudes of those exposed to creative units to those who have not been exposed. The purpose is to isolate the impact of the online advertising on people's impressions of the brand, while controlling for any effects from offline advertising. For more on the AdIndex methodology and detailed definitions, please see the Appendix.

Dynamic Logic has gone to great lengths to code additional data points onto each campaign. Additional data points include coding on the features of the brand advertised, the product/service industry, the frequency of exposure, and various characteristics of the

creative format and execution. The MarketNorms database thus provides a unique, comprehensive and consistent body of online advertising campaigns for our study.

Analysis Technique

We analyzed the data using multiple regression analysis. Many earlier studies have relied primarily on bivariate analyses, essentially correlating a measure of effectiveness with each possible explanatory variable in turn. While this bivariate approach is useful in identifying key factors, it is possible that any one factor could be picking up the effect of another. The multiple regressions helped us isolate the effects of each variable while controlling for all the others. Since many of the explanatory variables tend to be correlated with one another, the regression approach, in many respects, provides a stricter statistical test. A more detailed list of the variables and regression results are listed in the Appendix.

We focused the analysis at the level of the campaign, rather than each creative execution separately. This allowed us to see the effects of the overall online advertising approach. Campaigns were flagged if they included a specific creative execution and a median frequency level was computed. The database does enable analysis by execution and frequency level, which will be useful for some tactical questions, and we will be exploring this in further work.

Overall Findings

At the campaign level, the data offer a resounding reaffirmation of the effectiveness of Internet advertising. The evidence shows statistically significant improvements in all four key branding measures: aided Brand Awareness, Message Association, Brand Favorability, and Purchase Intent.

Table 1

Mean Changes for Four Measures of Effectiveness

	Aided Brand Awareness	Message Association	Brand Favorability	Purchase Intent
Control	0.7202	0.2753	0.6292	0.4972
Exposed	0.7548	0.3314	0.6409	0.5116
Delta	3.46	5.61	1.17	1.44
n=	341	299	302	344
t score	-12.157	-4.075	-6.762	-5.769
p-value	<0.01	<0.01	<0.01	<0.01
Significance	99%	99%	99%	99%

(n=campaigns; Delta #E-02)

Source: Dynamic Logic MarketNorms Q2/02

This table shows how across hundreds of campaigns, there are statistically significant increases in each of the four key metrics. The delta, or absolute difference, is the percentage point increase that each metric increases on average as a result of exposure to online advertising. For example, Message Association increases by 5.61 points on average whereas Purchase Intent increases 1.44 points on average. This makes intuitive sense since "awareness metrics" such as Brand Awareness and Message Association are traditionally more sensitive to advertising impact than "persuasion metrics" such as Brand Favorability and Purchase Intent.

So, online advertising is, indeed, effective in building brands. Our main goal, however, is to explain what factors best explain this improvement. Our findings are summarized below.

We considered four dependent variables, each reflecting one of our four different measures of effectiveness. The variables indicate the difference for a campaign between the control and exposed groups. These dependent variables were then regressed on a set of possible explanatory variables. Note: we chose a few variables for this paper based on personal interests. Of course, other variables should and will be explored in future work.

The table below provides an overview of the regression results, indicating the effect of each variable, holding the other variables constant. Overall, we were able to explain between 4% and 27% of the variation in campaign effectiveness, depending on the effectiveness measure used. While the data does not explain 100% of campaign effectiveness variance, the amount that it does explain is significant and compares favorably to the capabilities of complex behavioral research (Jaccard et al, 1997, see Appendix for more).

Table 2

Regressions Results: Overview of Key Effects

Dependent Variable	Explanatory Variables					R-squared
	Time	Brand Tenure	Frequency	Industry Factors	Formats	
Brand Awareness	YES	YES	yes	YES	YES	0.27
Message Association		YES				0.04
Brand Favorability				YES	YES	0.15
Purchase Intent				YES	YES	0.09

Source: Dynamic Logic MarketNorms Q2/02

Regression Results and Observations:

- Industry factors and ad format are very influential determinants of advertising effectiveness.
 - Ad format plays an important role in online advertising effectiveness. This may not surprise many people but it plays a pivotal role in how formats can be utilized and what they are worth to both the advertiser and the publisher. Perhaps more surprising, however, is that the industry is also a key determinant. Certain industries, overall, are either better or worse on moving three out of the four key metrics. This is explored further in Lesson Two on page ten of this paper. The fact that both ad format and industry are MORE indicative of advertising effectiveness than brand tenure, historical timing, and frequency suggests that the multiple regression has teased out something new - which is that different industries should utilize online advertising in different ways and for different goals.

- Over time, online advertisers have become better at building Brand Awareness.
 - The fact that time (as in the historical date of the campaign) is an indicator of effectiveness means that the multiple regression is showing that online advertisers have improved their abilities to raise Brand Awareness. Now there may be a certain amount of self-selection here given that brand advertisers tend to use Dynamic Logic research more often than non-brand advertisers. Still, if that were somewhat constant over time, than the brand advertisers using the Internet over the last few years, as measured by Dynamic Logic, have improved in their ability to raise awareness through online vehicles. This is especially significant given that the types of clients participating in Dynamic Logic research has grown populous with traditional brand advertisers - the types of brands that usually have higher levels of baseline awareness. This means that even big traditional brands are figuring out ways to build brands online over and above their higher baselines. This is discussed more in Lesson One on page nine. This is good news in that the medium is proving to be an awareness raiser like television, but still, online advertisers overall have not yet made statistically significant strides in the other areas: Message Association, Brand Favorability and Purchase Intent.

- Frequency of exposure is statistically significant only in explaining Brand Awareness. For other measures of effectiveness, it has no significant explanatory value.
 - The reason may simply lay the fact that showing a bad ad to someone more often does not make the ad more effective. So while it will enhance a good ad, it does not help a bad ad become more effective. Therefore, it is not a determinant by itself. They may be limitations to this analysis in that it relied on median frequency levels for a campaign. Further analysis at the

respondent or creative unit level may provide further insight into this variable.

- Message Association differences are explained by the tenure of the brand.
 - Message Association may be strongly correlated with brand tenure because more mature advertisers (with older brands) are often more focused in their advertising creative on providing a very simple clear message. This is partly due to the fact that they often have high baseline levels of aided Brand Awareness. Therefore, this marketer is often looking to build Message Association and further shape the brand in the consumer's mind by linking it to a specific message, thus moving the consumer along in the hierarchy of advertising effects (see Appendix). Traditional advertisers also seem to recognize the value of simple, strong and consistent messaging; their campaigns and ad creative often reflect that.

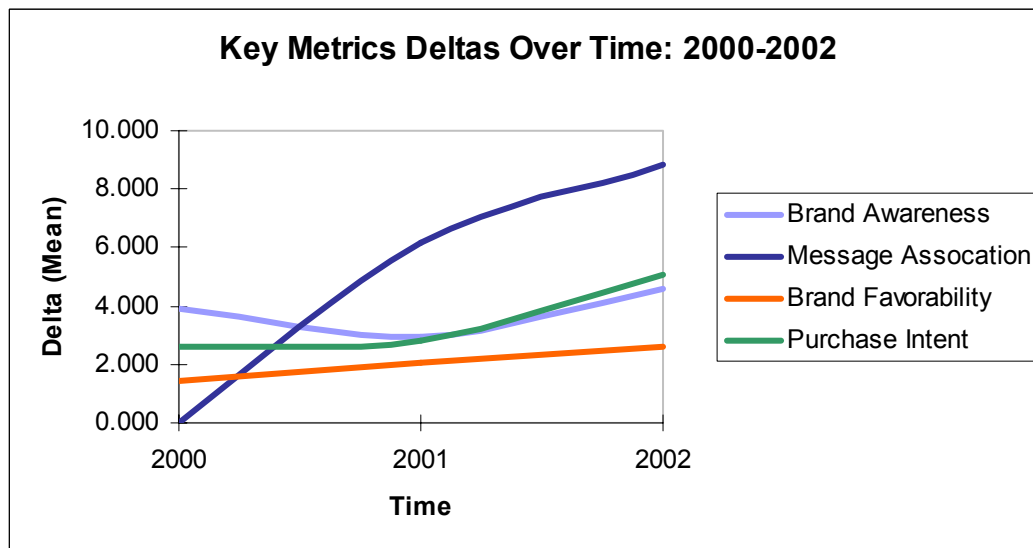
- Brand Favorability and Purchase Intent differences are explained by differences in the brand industry and the format of the ad.
 - As mentioned earlier, Persuasion metrics such as these are difficult to move in general. As explored in Lesson Two, certain industries have shown that they may be better able to move these metrics. It is hard to determine whether this is because that has been their aim or because online advertising is a more effective vehicle for these specific industries and brands. Either way, it shows up in the analysis as statistically significant and worth exploring.

Analysis

Our findings can be grouped into three main lessons:

☛ Lesson One: Maturity Matters

All new tools take time to learn how to use effectively, and Internet advertising seems to fit that condition. The chart below shows that ad effectiveness has increased over time for all four of our measures. In all four cases, there is a positive correlation between the timing of the campaign (measured in months from the start of the database) and its effectiveness.



Source: Dynamic Logic MarketNorms Q2/02

Note: In order to accommodate the graphing, averaging was employed to smooth the data.

What explains this improvement? Our analysis provides only a partial answer. In the multivariate analysis, i.e., the regressions of effectiveness on our various explanatory variables, the timing of the campaign is a significant explanatory variable only in explaining Brand Awareness. For the other effectiveness measures, timing is not statistically significant once we control for other features of the campaign.

The answer may lie in the way advertisers incorporate their learning over time into advertising. At the simplest level, there is likely to be some advertiser self-selection, as bad ads and bad advertisers drop out. Certainly, in the mid to late '90s, there were many toe-in-the-water experiments that were misguided and/or poorly executed. It is also likely that the learning shows up in more effective selection of formats. As noted earlier, there have been many studies suggesting ad format guidelines. So good advertisers have had steadily improving guidance. In addition, as online advertising has increasingly shifted from communication by dot-coms to communication from more traditional brands, advertising is being guided by a more practiced group of marketers.

Overall, the improved effectiveness reflects a maturing medium, where the fervor for technological novelty is giving way to the essentials of brand marketing. In this more mature environment, marketers' creative skills once again come to the fore. Lesson Three on page 12 addresses this issue further.

☛ Lesson Two: Brands Differ – and So Does Their Online Advertising Effectiveness

From the beginning, advertisers have recognized that the medium's special features were likely to be more suitable for some types of brands and categories. The medium's ability to engage, to provide information, or simply to interact all means that it may work better in some circumstances than in others. Our results confirm that effectiveness varies considerably by brand and industry (see below).

Another significant finding is the relatively lower effectiveness of advertising at increasing Brand Awareness for high-tenure, i.e., well-established brands. Of course by definition, such brands have less opportunity for improvement in aided awareness. It is difficult for a Coca-Cola type off advertiser to move Aided Brand Awareness higher from its high levels. Yet, it is interesting that medium-tenure brands score higher than either low or high-tenure brands. Perhaps the Internet is especially effective in building on modest awareness, reinforcing the initial offline recognition. The medium-tenure brands may well be the "sweet spot" for Internet advertising.

Effectiveness also varies considerably across categories. Industry classifications are statistically significant in most of our regressions. However, the significance and the relative impact of each industry vary depending on which measure of effectiveness is considered. This is consistent with recent results presented by Hislop (2002) through ESOMAR.

Table 3

Where Each Industry Is Most Effective Online Brand Advertising Relative To Specific Metrics and Compared To Overall MarketNorms

Rank Order	Automotive	Financial Service	Packaged Goods	Technology	Telecom/Utility
More Effective vs MarketNorms	Unaided Awareness	Aided Awareness	Unaided Awareness	Message Association	Unaided Awareness
⋮	Aided Awareness	Purchase Intent	Message Association	Aided Awareness	Aided Awareness
⋮	Message Association	Message Association	Purchase Intent	Unaided Awareness	Message Association
Less Effective vs MarketNorms	Purchase Intent	Unaided Awareness	Aided Awareness	Purchase Intent	Purchase Intent
Equal	Brand Favorability	Brand Favorability	Brand Favorability	Brand Favorability	Brand Favorability

Note: Unaided Awareness from supplementary data source.

Source: Dynamic Logic MarketNorms Q2/02

As the table shows, certain industries tend to be more effective at moving certain metrics. Automotive is very effective in the Awareness metrics. The financial services advertisers have been more successful than other industries at moving Purchase Intent, which is a difficult metric to move. They are all about equal in terms of ability to move Brand Favorability - an area where they are all equally weak on average. It seems no industry has yet mastered the ability to use online advertising to significantly move Brand Favorability beyond the 1.17 points norm.

The standout performer in our analysis is the packaged goods (CPG) industry. Campaigns from this industry perform significantly better than other industries in three out of four of the regressions. This may be due to the industry’s ability, building on a long marketing heritage, to home in on the medium’s communication possibilities. It may also be that CPG brands are susceptible to such campaigns. In any case, the results are remarkable.

In addition to the savvy of the CPG marketing departments, the category may be easier to sell online. The products are straightforward to explain (detergent is not as complex as financial services or technology products). Additionally, the low-consideration level of many of the products may make it easier to persuade consumers to take financial risks. Purchasing a snack food that turns out not be as expected does not carry the same level of consequence as committing one’s company to a telecommunications provider that turns out to be unsatisfactory.

The highly considered brands analyzed have had a more difficult time increasing brand perceptions through online advertising. This may be in part due to the high price points of the products and services, in addition to the complexity of the offerings themselves. Campaigns targeting business audiences (“B2B”) are rarely successful at increasing Persuasion metrics. Additionally, there are consumer-targeted brands that also have challenges increasing Persuasion metrics, such as automotive brands. Vehicles are very expensive purchases and are not made very often, thus making it hard to significantly increase Purchase Intent.

These results reflect a number of features of Internet advertising to date. Undoubtedly, some brands and some categories have simply done a better job of adapting to the medium and there are always winning and losing campaigns in each industry category. But, beyond that, it is also evident that the medium does some things better than it does others, and works better for some sorts of messaging. The brand’s stage of development, the industry, and the advertising goals all matter, and campaign planning will need to carefully mesh these all together.

➡ Lesson Three: Creativity Rules, but the Rules Are Complicated

An important paper two years ago offered five “Golden Rules” for online branding (Carlton et al., 2000). The study reported findings and recommendations on four creative attributes: ad unit clutter, logo size (relative to size of the unit), creative unit size and presence of a human face. The fifth rule looked at frequency of exposure. The analysis was based on a series of correlations between each of these five attributes and each of the six measures of effectiveness. The current Dynamic Logic MarketNorms database provides a more extensive set of campaigns and executions to explore these attributes. And the multivariate approach allows us to look at the creative and campaign attributes together.

Our results do reaffirm some of the findings of the earlier Golden Rules study. They show a positive effect of frequency, although it is only statistically significant in explaining improvements in Brand Awareness. Larger ads (in our study, large rectangle ads) also have a positive effect, on both Brand Awareness and Purchase Intent. Additionally, the presence of a life form has a positive effect on both Brand Favorability and Purchase Intent. (In our study we considered both humans and animals life forms.)

These results are reassuring and reinforce much of the common sense of the Golden Rules. Frequency should matter, at least up to a point. Others have corroborated this result (Briggs, 2001; Hislop, 2002). Bigger ads should also be expected to grab attention. And the role of a life form suggests that the Internet can indeed engender an emotional appeal.

Still, looked at more broadly, our results indicate that there are very few hard and fast rules for effective Internet brand advertising. Ads communicate successfully in a variety of ways. There are no universal rules of content or format. Some formats, e.g., large rectangle ads, do show up as consistently positive in impact. But other formats, even some out of favor, also

work in some instances. For example, banners seem good at increasing Message Association perhaps because they are smaller and usually can only contain a logo and a message.

Along the same lines, we saw mixed effects of two “Golden Rule” factors: logo size and clutter. Each of these variables flirted with significance in our analysis, and each was, on its own, correlated with effectiveness, but neither stood out as significant once other factors were accounted for. Keep in mind that our measure of clutter is a “clutter ratio.” It is our absolute clutter score of words and images divided by the pixel area of the ad unit. This was to control for larger sized ad units containing more words and images (see Appendix). It should also be noted that when the original "Golden Rules" paper was prepared in 2000, most of the data was from the predominant ad format, which was then the banner (468x60) ad unit.

Overall, we looked at campaigns that contained more than a dozen formats, and numerous features of the brand and the industry. We examined the variables on their own and interacting among themselves. Still, most of the variation in effectiveness could not be explained by these measured variables. This is important in that it means creative is still a wildcard, in online advertising, just like offline advertising.

Additionally, for some measures, notably Message Association, our variables explained very little of the variation in effectiveness. Clearly, there are harder to measure factors at work, notably the creativity that goes into the brand communication. For example, it seems likely that skyscrapers could be effective; but, as a new format, the creative input has often been of very poor quality (for example, the logos are often placed at the bottom instead of the top where they are more easily viewed, so although the ad is larger, consumers are not connecting the creative with a particular brand).

More generally, these findings suggest the development of a rich and complex medium. They reflect the maturation of online advertising. This is not simply a technological medium; good, creative advertising matters online at least as much as it always has offline. Jaffe has written recently that we should think of online advertising as an art that eschews rigid rules (Jaffe, 2002). We agree. Successful campaigns won't come simply by following a rulebook, but will require a complex interaction of creative attributes and placements.

Where Next

Growth in online advertising as a medium for brand development depends on at least two conditions: evidence that online advertising works and an understanding of how it works. Considerable progress has been made in demonstrating its effectiveness; we now know it can work. Yet many traditional marketers hold back because of a lack of confidence in the how: just how will a specific campaign accomplish the brand's specific goals. Research of the sort we presented here is a step toward developing a more systematic and reliable approach to campaign development.

Our three lessons do not in themselves offer a prescription for optimizing the effectiveness of online brand advertising. Indeed, they suggest that effective online advertising requires both careful analysis of your brand's attributes and rigorous, high quality campaign development.

It seems that many research papers end with a call for more research. Yet, due to the fact that advertising effectiveness can vary widely by brand and by marketing vehicle, more research is inevitable as each marketer, agency and publisher learns what works with their respective target audience. Case studies are helpful, but what is effective for one advertiser may not be true for another. Only specific repetitive research will provide data stability and insights that make marketers smarter and more effective in this complex but compelling medium.

Appendix

Appendix

Authors and Contributors

Dr. Tony Romeo is CEO of *Strategic Dynamics*, which provides strategy, marketing and new business support to companies facing the challenges of a changing marketplace. He is a former senior executive at Unilever, where he founded and chaired their Interactive Brand Center. He has been a Professor of Economics at London Business School and the University of Connecticut.

Nick Nyhan is the President of *Dynamic Logic*, an independent research company that specializes in measuring marketing effectiveness. His background includes traditional qualitative and quantitative research in his work at Bozell and online research while working at Modern Media Poppe Tyson. He has been a regular lecturer at New York University's Stern School of Business.

Molly Hislop is Vice President of Research Services at Dynamic Logic. Andrew Latzman is a Research Supervisor at Dynamic Logic. Amanda Salomon is a Research Manager at Dynamic Logic. Kaii Tu is a Research Intern at Dynamic Logic and is currently a junior at Harvard College.

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"In behavioral science research, where complex behaviors are studied, correlations of .20 to .30 (and -.20 to -.30) are often considered important." Correlations of 0.20 and 0.30 are the equivalent of r-squares of 0.04 and 0.09, respectively.

Appendix

Hierarchy of Advertising Effects

When consumers are introduced to a brand, there are a series of sequential and cognitive steps that often happen in the process of converting prospects into customers. To start, consumers must become familiar with the name of the brand, and if appropriate, recognize a logo as a symbol of that brand. Next, the brand must explain its value proposition to the target audience. This part of the process often relies on advertising messaging to articulate what the product or service does and how it can be of use.

Once a consumer is familiar with a brand and what it stands for, they are considered “aware”. Building awareness is a straightforward process relying on the communications of factual information – names, symbols and messages. The next stage is a greater challenge to marketer for they must persuade the educated prospects that the brand can be of value to them.

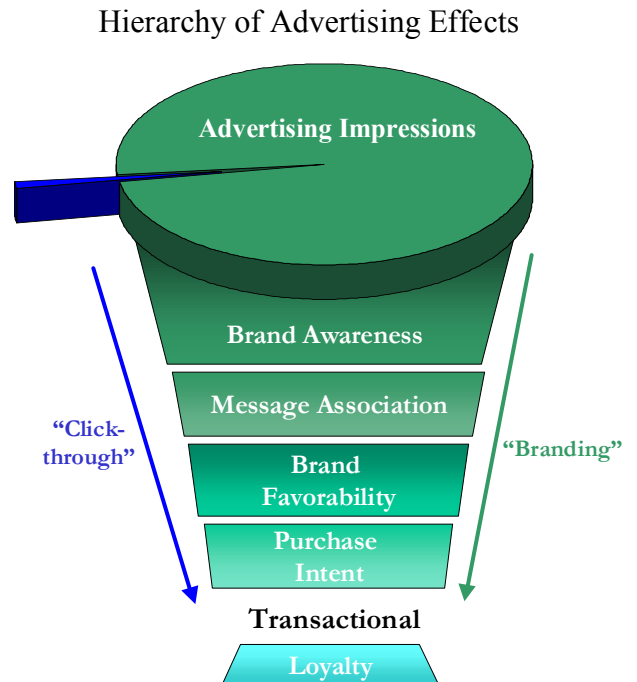
There are fundamentally two types of “value” that influence purchase and usage motives (Rossiter & Percy, 1997): Informational and Transformational. Informational products / services take a consumer from negative state and return them to a state of equilibrium. Examples of this category include pain relievers, food (satiating hunger) and household products. Marketers selling transformational goods must persuade consumers that their brand solves specific problems.

Transformational products take a consumer from a state of equilibrium to a higher and more positive state, and can be often labeled as rewards. Luxury cars, entertainment, vacations and ice cream are examples of products / services that are intended to make people feel happier, and are usually not considered things that consumers need. Marketers in this category must entice consumers to indulge and reward themselves or their families.

There are many brands that can fall into both categories and consequently have a greater challenge in persuading consumers. Some clothing brands, for example, are necessary items in the minds of some consumers, and at the same time, luxury items to others. Certain automotive brands also fall into both categories.

The first part of the persuasion process involves convincing a consumer that the brand is a good choice. No one is going to consider purchasing a product or service if they do not have a positive feeling towards it. Brand Favorability is a measure of how strongly consumers feel about the brand – positively or negatively.

Once consumers have formulated an opinion about a brand, the next logical step is whether they will engage in a desired behavior. In most cases, the behavior that the marketer is looking to drive is a purchase or financial transaction. There are many instances, however,



Appendix

where the advertising is aiming to drive a non-purchase behavior. Examples include campaigns striving to increase visitation of a web site, test-driving of a vehicle, consultation with a physician or watching of a network television show.

The ability of a marketer to increase intent to engage in the desired behavior often depends on the perceived risk to the consumer. Very expensive products / services require more consideration before a financial commitment is made because the consequence of making a poor choice can be great. Conversely, less thought or consideration is put forth for an inexpensive – sometimes called an “impulse-buy” – product / service as there is less risk associated with the purchase.

Appendix

Statistical Appendix

The tables below summarize the regression output. Note that:

- Although there are 350 campaigns in the database, there were missing data points for some explanatory variables. So the regressions were run with varying numbers of observations.
- The regressions presented include only those with variables where the null hypothesis of no effect could be rejected at the 10% level or better.
- All four regressions are statistically significant.

Regression 1: Dependent Variable: Brand Awareness Delta

R²	F	Significance	n
.274	10.799	.000	238

Significant explanatory variable	Coefficient	Std. error	t	Significance
Frequency median	2.133E-02	.001	2.018	.045
Tenure high	-3.284E-02	.009	-3.732	.000
Large rectangle/square – format	2.133E-02	.006	3.298	.001
months from 4/20/00	1.306E-03	.001	1.717	.087
Industry technology	-1.980E-02	.009	-2.185	.030
html/flash	-1.251E-02	.006	-1.990	.048
Tenure medium	2.036E-02	.010	1.991	.048
Top 200 Advertisers	-2.688E-02	.012	-2.158	.032

Regression 2: Dependent Variable: Message Association Delta

R²	F	Significance	n
.039	11.942	.001	299

Significant explanatory variable	Coefficient	Std. error	t	Significance
Tenure High	-9.634E-02	.028	-3.456	.001

Appendix

Regression 3: Dependent Variable: Brand Favorability Delta

R²	F	Significance	n
.145	6.654	.000	243

Significant explanatory variable	Coefficient	Std. error	t	Significance
Industry packaged good	1.689E-02	.004	3.908	.000
Industry restaurant	-2.337E-02	.012	-1.988	.048
Liform presence	1.180E-02	.004	3.205	.002
Top 100 advertisers	-1.063E-02	.004	-2.652	.009
Button – format	6.966E-03	.004	1.772	.078
Industry alcohol	3.421E-02	.020	1.706	.089

Regression 4: Dependent Variable: Purchase Intent Delta

R²	F	Significance	n
.090	4.987	.000	258

Significant explanatory variable	Coefficient	Std. error	t	Significance
Industry packaged good	1.399E-02	.006	2.484	.014
Large rectangle/square – format	1.300E-02	.005	2.485	.014
Liform presence	1.096E-02	.005	2.095	.037
Full page – format	1.351E-02	.007	1.828	.069
Skyscraper – format	-9.202E-03	.005	-1.709	.089

Variable Definitions:

Dependent Variables:

The dependent variables were the difference between the exposed and control groups for four variables:

Aided Brand Awareness - Measures the level of familiarity respondents have with the brand listed.

Message / Sponsorship Association - Measures the extent to which respondents can match the copy or messages in the creative to the brand.

Brand Favorability - Measures the extent to which respondents have a positive or favorable opinion of the brand.

Appendix

Purchase Intent - Measures the likelihood of respondents to take purchase action on the brand in the future.

Independent variables tested:

Note that to enable the multivariate regression analysis, many of the variables below are “dummy” variables, equal to 1 if a characteristic holds and 0 otherwise. For example “life form” equals 1 if a person or animal is present and 0 otherwise. Within a set of multiple mutually exclusive features, e.g., product categories, it is necessary to create multiple dummies, but for statistical reasons, the number of dummies for any set of n features must be n-1.

Demographic variables:

Average age: the average of ages for exposed respondents

Months from 4/20/00: number of months from 4/20/00 to campaign start date

Creative execution variables:

Product shot: 1 = product shot in campaign creative, 0 = no product shots in campaign creatives

Percent logo average: the average of the number of frames in which logo appears divided by total number of frames

Clutter ratio average: the average of the ratio of clutter (number of words and images in an ad) over the pixel area of the ads for a campaign

Interactivity: 1 = campaign uses interactive ad(s), 0 = campaign does not use interactive ad

Lifeform presence: 1 = campaign uses one or more ads that has picture of human or animal, 0 = campaign does not use ads that have picture of human or animal

Creative formats:

Banner – format: 1 = campaign used banner(s), 0 = campaign used no banners (see http://www.iab.net/iab_banner_standards/bannersource.html for description of a banner)

Button – format: 1 = campaign used button(s), 0 = campaign used no buttons (see http://www.iab.net/iab_banner_standards/bannersource.html for description of a button)

Appendix

Full page – format: 1 = campaign used full page ad(s), 0 = campaign used no full page ads (a creative execution that consumes the space of an entire page)

Large rectangle/square – format: 1 = campaign used large rectangle(s)/square(s), 0 = campaign used no large rectangles/squares (see http://www.iab.net/iab_banner_standards/bannersource.html for description of a large rectangle and square)

Skyscraper – format: 1 = campaign used skyscraper(s), 0 = campaign used skyscrapers (see http://www.iab.net/iab_banner_standards/bannersource.html for description of a skyscraper)

Number of format categories: the number of different types of formats used in a campaign

Technology:

gif/jpg: 1 = campaign uses a gif or jpg, 0 = campaign does not use a gif or jpg

html/flash: 1 = campaign uses an html/flash creative execution, 0 = campaign does not use an html/flash creative execution

Rich media: 1 = campaign uses a rich media creative execution (Supersitial, bridge/minisite, Next Generation Ad, eyeblaster, dhtml, pointroll, hybrid), 0 = campaign does not use a rich media creative execution

Brand attribute variables:

Consumer Type B2C: 1 = B2C brand, 0 = B2B brand

Consideration High: 1 = high consideration brand, 0 = low consideration brand

New product: 1 = new product, 0 = not a new product

Tenure High: 1 = baseline awareness of the brand in 67-100 percent range, 0 otherwise

Tenure Medium: 1 = baseline awareness of the brand in the 34-66 percent range, 0 otherwise
(Tenure Low)

Top 100 Advertisers: 1 = brand is top 100 advertiser in traditional media spending according to AdAge, 0 = brand is not top 100

Top 200 Advertisers: 1 = brand is top 101-200 advertiser in traditional media spending according to AdAge, 0 = brand is not top 101-200

(Neither Top 100 nor Top 200 Advertiser)

Appendix

Traditional: 1 = traditional brand, 0 = online brand

Sector Service: 1 = brand is in the service sector, 0 = brand is in the product sector

Industry:

Industry Alcohol: 1 = brand is an alcohol, 0 = brand is another industry

Industry Automotive: 1 = brand is automotive, 0 = brand is another industry

Industry Packaged Good: 1 = brand is a packaged good, 0 = brand is another industry

Industry Entertainment: 1 = brand is entertainment, 0 = brand is another industry

Industry Financial Services: 1 = brand is financial services, 0 = brand is another industry

Industry Pharmaceutical: 1 = brand is a pharmaceutical, 0 = brand is another industry

Industry Restaurant: 1 = brand is a restaurant, 0 = brand is another industry

Industry Retail: 1 = brand is retail, 0 = brand is another industry

Industry Technology: 1 = brand is technology-related, 0 = brand is another industry

Industry Utility/Telecom: 1 = brand is a utility or telecom, 0 = brand is another industry

(Industry Travel)

Other variable:

Frequency median: the median number of times individual respondents were exposed to ads from a given campaign