

Finding the "Missing Link": Advertising's Impact on Word of Mouth, Web Searches, and Site Visits

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For decades, marketers have trumpeted the importance of word of mouth in influencing purchase choice, but have still spent billions on brand advertising—without any proof of the link between the two. Using newly available data, we sought to resolve this contradiction by searching for the "missing link" between positive word of mouth about brands and brand advertising. We also tested the relationship between advertising and measurable behaviors of brand interest—namely, brand searches and website visits. The analysis involved 35 brands over a 26-week period using six sources of data. The results indicate that brands should redouble their efforts in using advertising to grow brand advocacy through the integration of online and offline branded consumer contact points.

INTRODUCTION

In a landmark study of voting decisions during the 1940 U.S. presidential election, Paul Lazarsfeld and his colleagues introduced the "two-step flow" theory of communication. Instead of media exposure having direct influence on voters, they showed that "ideas often flow *from* radio and print *to* the opinion leaders and *from* them to less active sections of the population" (Lazarsfeld, Berelson, and Gaudet, 1944, p. 151). This idea, that word of mouth (WOM) is an intermediate step in the mass persuasion process, had been described as early as 1898, when an influential social theorist asserted that conversation is "the strongest agent of imitation, of the propagation of sentiments, ideas, and modes of action" (Tarde, 1898).

Advertisers, like political candidates, are in the business of changing attitudes and behaviors—and the idea that WOM is more influential than mass media has been well documented by market researchers. Forty years ago, the Advertising Research Foundation (ARF) commissioned a review of marketing-related WOM literature. Citing scores of studies dating back as early as 1936, the article concluded that WOM was an "irresistible" force in

shaping consumer product opinions. "Although TV may be important as a source of information and news," the author of the ARF monograph wrote, "word of mouth seems to be the dominant decision clincher" (Arndt, 1967, p. 13).

But within marketing, this consensus has arguably had a limited effect. Most marketers still gear their marketing communication to have a direct influence on the consumers reached by their advertisements. This approach is enshrined in the most commonly held marketing rules of thumb, such as the "Attention, Interest, Desire, Action," or the AIDA model. Indeed, the ARF's own marketing model suggests that advertising drives sales via the direct effect of advertising messages carried through media channels (Ephron et al., 2003).

Recently, however, there has been an upswell of research again pointing to the power of WOM to build brands and market share. In 2003, consumer advocacy was cited as the strongest single predictor of company growth—an observation that has led to a cottage industry of "NetPromoter" research (Reichheld, 2003). The importance of consumer advocacy was confirmed in 2005 by several scholars who observed that WOM predicted sales

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growth across several product categories (Marsden, Samson, and Upton, 2005).

Part of the interest in the power of WOM can be traced to the advent of the internet, which has facilitated consumer-to-consumer sharing of information across time and space. Consumer opinions, once expressed online, can be long-lasting and far-reaching, and these opinions have been shown to have an effect on purchase choice. Studies (e.g., Chevalier and Mayzlin, 2003) have shown that recommendations and opinions shared online can influence consumer buying patterns.

This research, along with rapid changes in the media environment and consumer attitudes, has led many to claim that brand advertising no longer has its place. "Word of mouth is the most powerful force in the marketplace, much more powerful than salespeople, advertising, and all other marketing elements put together," one author has written (Silverman, 2001). The idea that advertising has lost power is virtually a given among many marketers. Recognizing this, Malcolm Gladwell, the popular social theorist and best-selling author, has called the power of WOM and the money spent on advertising a "contradiction" (Godin, 2001).

How do we reconcile this "contradiction" between what marketers do (buy advertising spots) and believe (that WOM drives purchase)? The only rational way to resolve it would be to point to proof that advertising actually stimulates posi-

tive WOM about brands. This could be grounded in the "two-step flow" communication model, where mass persuasion drives person-to-person influence. Without this proof, the vast majority of brand marketing dollars would be bypassing what has been shown to be the primary point of influence.

Surprisingly, however, the link between advertising and WOM has never empirically been shown. In 2006, Greg Nyilasy, in his meta-analysis "Word of mouth: what we really know—and what we don't," could not point to *any* research demonstrating a relationship between brand advertising and consumer WOM. He encouraged future research to "discover antecedent variables that are *controllable* by marketing professionals—factors they can do something about" (Nyilasy, 2006, p. 173).

Taking up this challenge, we decided to look for the "missing link" between brand advertising and WOM. Armed with newly available data, we analyzed whether advertising was associated with positive WOM about brands. We also explored other indicators of consumer interest in brands, namely, search queries and website visits. Specifically, the study was initiated to answer the following questions:

1. *Does advertising create offline brand advocacy (positive, person-to-person WOM)?* If so, are different media more or less influential in different categories?
2. *Does brand advertising stimulate search queries?* Online searches for brands

are a measurable behavior of consumer interest.

3. *Does brand advertising stimulate website visits?* As with search, brand website visits are an important indicator of consumer engagement with a brand.
4. *Is word of mouth an influencer as well as an outcome?* Does it work as an independent stimulus in consumer behavior?

We felt answering these questions could contribute to understanding the role of advertising and the process by which it influences consumers.

DATA ANALYZED

The data used for our analysis related to 35 brands in five product categories: automobile, retail, soft drinks, technology, and travel. The categories were chosen because together they include nondurable and durable goods as well as services. Each brand category was represented by several category leaders that had a robust enough data set in each of our six databases during this period. For each brand, we looked at 26 consecutive weeks during the second through fourth quarters of 2006. For each of these brands and weeks, we assembled the following data into one, integrated database:

- *Positive word of mouth:* These data were sourced from Keller and Fay's *Talk-Track*, a research service that tracks consumer conversations via a weekly survey sample of 700 consumers aged 13+. According to the company's research, 90 percent of brand conversations in their database take place offline (Keller and Fay, 2006). For this analysis, we tracked the number of brand discussions that were rated as mostly positive by respondents. This gave us a robust and unique measurement of positive, offline WOM. In the analysis, we will

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refer to this variable as "offline brand advocacy."

- *Online brand mentions:* These data were sourced from Nielsen BuzzMetrics, a service that searches the internet for mentions of specific words or phrases on discussion boards, blogs, and other places where consumers communicate online. The data are processed and reported as the number of online brand mentions by week. These data do not distinguish between positive and negative WOM and do not necessarily indicate a discussion about a brand, but only one that mentions a brand. In the analysis, we will refer to this variable as "online WOM."
- *Advertising spending:* Weekly advertising spending data for television (network, cable, syndicated, and spot) and national magazine advertising were extracted from Nielsen's Monitor+ database. Online advertising spending was sourced from AdRelevance, owned by Nielsen/Netratings.
- *Search queries:* To track brand search queries, we used data from Hitwise, which tracks the online search activity of 25 million consumers across all major search engines, including Google. To specify the search terms for each brand, we used the brand name and the top 10 subbrands in terms of total advertising spend, according to Nielsen Monitor+, along with commonly used monikers for those brands (e.g., Chevrolet/Chevy).
- *Website visits:* For data relating to consumer visits to brand websites, we used data from ComScore Media-Matrix, which tracks website visits

through a representative panel of 2 million consumers.

While each of these data sources is industry leading in its category, the data are very different—particularly for online and offline WOM. TalkTrack data, for example, are based on spontaneous recall in diary-type surveys. Nielsen BuzzMetric data are gathered by computer algorithms that read the underlying code of websites. Despite these differences, we hoped that looking at variations over 26 weeks within each data set had the potential of exposing quantitative relationships within categories.

METHODOLOGY

Once brand data were arrayed by week, we grouped the brands in each category and analyzed the data at the category level. This was done because analysis at the aggregate level could be misleading, because base levels of spending differ across categories, and each category entails different levels of consumer involvement.

Because WOM activity may not occur immediately after advertising exposure, lagged variables were created for total and online advertising spend. The correlations between different lag intervals for advertising spend and WOM were calculated as well as the correlation between same-week spend and WOM. Analysis of the correlation between advertising spending, both total and online, and the volume of online and offline WOM activity found no significant improvement in the pairwise correlations when lagged advertising variables were used. Therefore, sub-

sequent analysis focused on analysis of the unlagged advertising spending data.

The analysis was done using ordinary least squares multiple regression. Three sets of regression analyses were conducted based on the three dependent variables of interest: offline brand advocacy, search engine queries, and website visits. Nested models were created by adding online and offline WOM to media-specific advertising spending as independent variables. The improvement in fit for the complete model was used to determine the existence of a WOM effect, as an independent variable, that was distinct from advertising. As described above, the regression analysis was performed at the individual category level to isolate category-specific differences in the use of advertising and WOM.

STATISTICS AND TABLES

All reported relationships are significant at the 95 percent confidence level using a two-tailed test.

Tables 1, 2, and 3 show the standardized beta regression coefficients (beta) for each analysis. The beta measures the strength of the relationship between the independent variables, in this case advertising spending, and the dependent variables: positive brand mentions, brand searches, and brand website visits, respectively.

TABLE 1
Advertising and Positive
Offline Brand Mentions:
Betas

	Television	Magazine	Online
Auto	M (0.32)	I (0.23)	—
Retail	—	—	M (0.42)
Soft drinks	—	—	M (0.29)
Technology	m (0.29)	—	M (0.43)
Travel	—	—	—

TABLE 2

Advertising and Brand Search Activity: Betas

	Television	Magazine	Online
Auto	—	—	—
Retail	inv	—	H (0.63)
Soft drinks	—	—	M (0.39)
Technology	m (0.30)	—	H (0.73)
Travel	M (0.23)	—	inv

TABLE 3

Advertising and Website Visits: Betas

	Television	Magazine	Online
Auto	m (0.35)	—	H (0.52)
Retail	inv	—	H (0.70)
Soft drinks	M (0.34)	—	m (0.33)
Technology	—	—	—
Travel	—	—	—

In Tables 1, 2, and 3, an "L" denotes a "low" beta strength and represents a significant relationship in which the beta is less than 0.25. This means that roughly 5 percent or less of the variance in the dependent variable is due to the independent variable measured in the model. An "M" represents a "mid-level" beta between 0.26 and 0.5, and an "H" represents a "highest-level" beta above 0.5. These indicators are relative and were made based on the distribution of betas in the analysis. A capital letter indicates the variable that has the highest beta in the model, and a lower case letter represents a weaker beta. An "inv" denotes a significant, inverse relationship. Full results are reported in Table 4. Note that all reported results are significant, and insignificant predictors are indicated by a "—."

TABLE 4

Standardized Beta Regression Coefficients

Dependent Variables	Product Category	Independent Variables		
		TV Advertising	Magazine Advertising	Online Advertising
Positive brand mentions	Auto	0.321 ^a	0.228 ^a	0.077
	Retail	-0.070	-0.040	0.420 ^a
	Soft drinks	-0.284	-0.007	0.285 ^a
	Technology	0.290 ^a	-0.076	0.430 ^a
	Travel	0.022	-0.008	-0.208
Online WOM	Auto	-0.156	0.031	-0.077
	Retail	0.112	0.123	0.232 ^a
	Soft drinks	-0.551 ^a	-0.021	0.139
	Technology	-0.352 ^a	0.318 ^a	0.072
	Travel	0.306 ^a	-0.117	-0.674 ^a
ComScore unique visitors	Auto	0.354 ^a	0.044	0.516 ^a
	Retail	-0.197 ^a	0.084	0.697 ^a
	Soft drinks	0.341 ^a	0.219	0.328 ^a
	Technology	0.043	0.010	-0.152
	Travel	0.046	0.086	-0.281
Search	Auto	-0.034	0.123	-0.083
	Retail	-0.210 ^a	0.099	0.629 ^a
	Soft drinks	-0.129	-0.055	0.386 ^a
	Technology	0.295 ^a	0.007	0.725 ^a
	Travel	0.230 ^a	-0.068	-0.681 ^a

Note: When considering the significant inverse relationships shown when online WOM is a dependent variable, keep in mind the fact that online WOM cannot be coded as positive or negative, and any mention of the brand is picked up by the search algorithms. We do not feel that these relationships, while statistically significant, are meaningful.

^aSignificant at 95% level using a two-tailed test for significance

RESULTS AND INTERPRETATION

The analysis will follow our four main research questions.

RQ1: Does advertising create offline brand advocacy? If so, are different media more or less influential in different categories?

The first question we sought to answer was whether investment in advertising was a significant predictor of offline brand advocacy, using TalkTrack's weekly measure of positive brand mentions. To answer this, we developed a regression model testing television, national magazine, and online advertising's impact on this variable for each category.

With the exception of the travel category, advertising had a measurable and significant impact on offline brand advocacy—but relationships differed across categories. Online advertising was the most consistent influencer, showing significant impact in three out of five categories where advertising had a positive impact. Television was influential in two cases (Auto and Technology) and national magazine advertising in one (Auto).

A breakdown by category is shown in Table 1. Full results are reported in Table 5. These findings show that advertising can stimulate consumers to advocate products. It also indicates that online advertising can play a key role in stimulating *offline* brand discussion, indicating a crucial role for online brand communication, as well as highlighting the importance of online/offline communication integration. Given that online advertising is the most consistent driver of brand advocacy, the data suggest that online advertising's role is an important one in the purchase decision process. Marketers, particularly in the retail and soft drink industries (where industry-wide online spend is low), may be underinvesting in this contact point.

RQ2: Does brand advertising stimulate search queries?

Consumers search for brands when they are interested in them. We sought to understand whether brand advertising drives search engine queries for those advertised brands. Note that while we did not review the advertising running during the period of our data, it is likely to be a representative sample of advertising—not made up of advertising geared especially to drive online search activity (e.g., the "Google Pontiac" campaign).

We found that across four of five categories, advertising significantly impacted the number of search queries. Overall,

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online advertising was most likely to cause online searches—not surprising due to the ease in which consumers can view advertisements online and immediately search advertised brands. Despite the appearance of two inverse relationships that were not consistent with the rest of the results, we found significant relationships across categories and across media.

Note that the betas for online advertising in the retail and technology categories are particularly high (see Table 2).

Despite two anomalous, inverse relationships found in this analysis, overall we found that brand advertising could drive consumer search behavior. In the cases where there were positive relationships, online advertising had the most influence. The betas for retail and technology were particularly high. In the latter case, online advertising accounted for almost 50 percent of all the variance in search activity during the period.

The data strongly suggest that online advertising has a function beyond click-through and that the branding function of online advertising may yield important secondary behavioral effects. When consumers view online advertising for a brand, some are stimulated to search for the brand, an action that may not be properly quantified by many brand advertisers. The high betas in the retail and technology categories, both categories where a website may be particularly important (retail sites may sell products and technology sites promote information-rich products), emphasize the importance of online advertising in the consumer buying process.

RQ3: Does brand advertising stimulate website visits?

As with search, the brands represented in our data did not, to our knowledge, devote their advertising efforts, any more than average, to driving traffic to their websites. Nonetheless, we found strong evidence that advertising does stimulate increased visitation to the websites of advertised brands—an indicator of consumer interest and involvement with a brand.

These relationships were significant in all three of five categories, with TV and online advertising significant predictors in all of them. Magazine advertising did not make a significant difference in any category (see Table 3).

Again, we see that advertising can create enough interest in three categories to cause consumers to go to branded websites. In two of three cases, online advertising was more of a powerful stimulus than television. This is not surprising given the ease in which consumers can navigate from online brand advertising to brand websites. Nonetheless, the relationships are strong enough to suggest that they are not purely the result of direct click-through, rates of which are notoriously low. So, as with search, these data also suggest a secondary behavioral effect of online advertising that may not be directly measured by online marketers.

The role of television, however, should not be overlooked, given significant relationships in two categories. Marketers may be heartened to see that TV advertising

can move consumers from their living room couches to the web in search of brand experiences.

RQ4: Is WOM an influencer as well as an outcome?

In RQ1, we found that at offline brand advocacy was an outcome of brand advertising in four of five categories. But what about the effect of offline brand advocacy in online WOM, and vice versa? And does WOM, in aggregate, increase brand searches and website visits?

To answer this, we created a "nested" regression model framework. First, we grouped all TV, magazine, and online advertising into one "advertising" model. We found that in four of five categories (except travel) advertising stimulated significantly higher levels of offline brand advocacy, confirming our results of RQ1.

With this model as a base, we added online WOM to advertising as an additional, independent variable. We found that in two categories, auto and retail, online WOM significantly improved the model. This indicates that, in these categories, online WOM plays a significant role in generating offline brand advocacy independent of advertising's influence. In the case of retail, the combined model's r-squared is substantially higher, with online WOM and advertising accounting for more than 50 percent of variance of offline brand advocacy. These results are indicated in Table 5.

Conversely, in those same categories, offline brand advocacy significantly added to advertising's effect in creating online WOM (Table 6). Thus, in those two categories, there was a measurable interrelationship between online and offline consumer discussion, independent of advertising's effect.

This analysis points to a powerful offline/online dynamic in the auto and retail categories, where online discussion

TABLE 5
Nested Regression Models R^2

Dependent Variable	Independent Variables				Significant Difference between Models at 95%
	Advertising Only		Advertising and Online WOM		
Offline brand advocacy	Auto	0.167	Auto	0.224	Auto ✓
	Retail	0.515	Retail	0.515	Retail ✓
	Soft drinks	0.264	Soft drinks	0.264	Soft drinks
	Technology	0.417	Technology	0.417	Technology
	(Travel)	0.050	(Travel)	0.050	Travel

Note: All models are significant at the 95% level, except for those product categories in parentheses.

TABLE 6
Nested Regression Models R^2

Dependent Variable	Independent Variables				Significant Difference between Models at 95%
	Advertising Only		Advertising and Offline Brand Advocacy		
Online WOM	(Auto)	0.032	(Auto)	0.098	Auto ✓
	Retail	0.091	Retail	0.462	Retail ✓
	Soft drinks	0.401	Soft drinks	0.423	Soft drinks
	Technology	0.229	Technology	0.229	Technology
	Travel	0.493	Travel	0.497	Travel

Note: All models are significant at the 95% level, except for those product categories in parentheses.

creates offline brand advocacy, and vice versa. Given that we cannot isolate *positive* online discussion, it is even more striking that there is a relationship between the online and offline variables. It is possible that if a stable and accurate measure of online brand advocacy were available, which would be a better match to our offline variable, we would be able to find a relationship with offline brand advocacy in other categories as well.

As the last step in our analysis, we wanted to understand WOM's role in stim-

ulating search and website visits, independent of advertising. To do this, we grouped online WOM and offline brand advocacy and added them to models with advertising alone as predictors.

When it comes to searches and website visits, we found that WOM as a whole added significantly to advertising's effect in *all five categories*. Notably, for search, WOM and advertising combined in the auto category for an r-square of 0.77; in retail, 0.75; and in technology, 0.91. These very strong relationships indicate that

advertising and WOM work together to account for large amounts of variance in stimulating this behavior. (See Table 7.)

These results point to a complex relationship between advertising and WOM—both online and offline. WOM is shown to be both a *cause* and a *result* of important consumer behaviors relating to brands. All of the variables we explored here seem to play a role in a cyclical dynamic of building brand connections with consumers.

Results of all the nested models are in Table 8.

CONCLUSIONS AND IMPLICATIONS FOR MARKETERS

While far from the last word on the relationship between advertising and WOM, we feel that the results indicate there is "two-step" flow of communication in brand advertising. The evidence suggests that by disseminating brand messages in media, advertisers can stimulate consumers to talk about, and say good things

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about, their products. The results of search activity and web visits also provide tantalizing indicators of more complex information flows across online and offline contact points.

Finding the "missing link" between advertising and brand advocacy is an important step in validating the role of brand communication in building meaningful and lasting relationships with consumers. Our analysis both supports the importance of brand advocacy and advertising, and indicates that they both play a complex, but interrelated and complementary, role.

Several implications are suggested by our analysis:

The results show that advertising can build brand advocacy in a variety of media. Because this relationship is not uniform across media and categories, the analysis will hopefully encourage marketers to redouble their efforts to *use advertising to inspire consumer advocacy of their brands*. This may be especially true in the travel category, where advertising and brand advocacy were not significantly related.

Online advertising still represents a small proportion of media spending in most product categories. In this analysis, online advertising proved to be the most powerful and consistent medium in increasing offline brand advocacy, brand searches, and website visits. With this 'in mind, *advertisers, particularly in the retail and soft drink categories, should re-examine their online advertising spending levels* given the results. It is also clear that online advertising can and should be used in brand building efforts.

In many cases, as the results indicate, offline advertising drives online consumer behaviors, such as searches, web visits, and online WOM. The results should encourage marketers to *experiment with ways of building on TV and other offline advertising by extending the brand experience online, particularly on brand websites*.

Overall, the results point to the importance of an integrated online/offline strategy that includes offline and online advertising, search engine marketing, and the management of brand websites. Clearly, consumers are using

TABLE 7
Nested Regression Models R^2

	Independent Variables					
	Advertising Only		Advertising and WOM		Significant Difference between Models at 95%	
Search	(Auto)	0.022	Auto	0.770	Auto	✓
	Retail	0.499	Retail	0.746	Retail	✓
	Soft drinks	0.223	Soft drinks	0.593	Soft drinks	✓
	Technology	0.872	Tech	0.907	Technology	✓
	Travel	0.482	Travel	0.731	Travel	✓
ComScore unique visitors	Auto	0.414	Auto	0.600	Auto	✓
	Retail	0.581	Retail	0.716	Retail	✓
	Soft drinks	0.202	Soft drinks	0.364	Soft drinks	✓
	(Technology)	0.017	Technology	0.334	Technology	✓
	(Travel)	0.106	Travel	0.293	Travel	✓

Note: All models are significant at the 95% level, except for those product categories in parentheses.

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both offline and online channels to engage with and learn about brands. Their conversations flow from online to offline encounters. Because consumers do not interact with brands in silos, marketers need to continue to break down

any organizational and conceptual barriers that keep those silos, on the business side, in place.

There is, of course, much more to learn. In future analysis, we hope to employ a

structural equation model to identify indirect and multifaceted relationships among the variables. We also hope to identify adequate data for at least several categories to extend our analysis to sales. Nonetheless, we feel that finding the "missing link" between advertising and consumer advocacy is an important milestone in our knowledge of the way marketing communication works.

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TABLE 8
Nested Regression Models R^2

Dependent Variable	Independent Variables				Significant Difference between Models at 95%
	Advertising Only		Advertising and WOM		
Positive brand mentions	Auto	0.167	Auto	0.224	Auto ✓
	Retail	0.181	Retail	0.515	Retail ✓
	Soft drinks	0.236	Soft drinks	0.264	Soft drinks
	Technology	0.416	Technology	0.417	Technology
	(Travel)	0.043	(Travel)	0.050	Travel
Online WOM	(Auto)	0.032	(Auto)	0.098	Auto ✓
	Retail	0.091	Retail	0.462	Retail ✓
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