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Brand Names as Keywords in Sponsored Search Advertising

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Abstract

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KEYWORDS: brand, deceptive advertising, e-commerce, intellectual property, Internet advertising, keyword advertising, paid placement, paid search, passing off, pay per click, PPC, search advertising, search engine, search engine marketing, sponsored search, trademark, trademark infringement, trust

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I. INTRODUCTION

The advent of keyword advertising has had a tremendous effect on online advertising, Internet marketing, search engines, and websites that earn advertising revenue. Current projections predict that Internet advertising will continue to grow and that keyword advertising, also known as sponsored search, contextual advertising, or pay-per-click (PPC) advertising, will be the dominant form [IDG, 2008]. Internet advertising provides the revenue base for major search engines, such as Google and Yahoo!, as well as many content-based websites. In 2009, Google earned $23.7 billion, and 97 percent of this revenue came from keyword advertising [Google, 2009]. Keyword advertising is critical as a revenue stream for the major search engines and appears to be their major business model for the foreseeable future.

Keyword advertising works as follows. When a searcher enters a query into a search engine, all or part of the query may trigger the display of one or more ads on the search engine results page (SERP). If the searcher clicks on an ad, a page from the advertiser's website (known as the landing page) is displayed. The advertiser is then charged by the search engine (i.e., pay per click).

As Google and other search engine companies push to sell ads crucial to their revenue growth, some advertisers are growing angry with the way the search engines oversee their keyword advertising [cf., Steel, 2008]. The problem is a tactic that has been labeled, *piggybacking,* which we define in the context of search engine keyword advertising, as advertisers selecting other companies' brand names, slogans, or other trademarked terms or phrases, as keywords to trigger the display of their ads. We believe the term to be apropos, as this usage is consistent with the dictionary definition, "piggyback: to set up or cause to function in conjunction with something larger, more important, or already in existence or operation" [Merriam-Webster, 2010]. In this sense, the advertiser's ad display is piggybacking on the positive attributes of another organization's trademark.

One example is a television campaign by automaker Pontiac urging viewers to "Google Pontiac" [Carty, 2006]. During the campaign, some consumers who searched using the term *Pontiac* were greeted by comparison ads sponsored by competing automaker Mazda, which had bid on Pontiac's trademark. A few advertisers and others have formed an organization, the Alliance Against Bait & Click, in order to "make deceptive search ads a thing of the past" [AABC, 2008]. There have been numerous U.S. court cases concerning the practice [cf., Ascentive, 2009; Rescuecom, 2009]. However, the issue remains unresolved.

Google's policies have allowed piggybacking in the U.S., Canada, Ireland, and the U.K., and as of June 4, 2009, Google expanded this practice virtually worldwide [Orey, 2009], with the notable exception of most countries in the European Union [Naffziger, 2009b]. If piggybacking becomes more widespread, the results could significantly impact advertisers, search engines, and customers. For example, if piggybacking causes consumer confusion, as some advertisers claim [Sullivan, 2007], customers could become frustrated with sponsored search, leading to a drop in the number of clicks on ads. Lower click through rates would decrease the revenue of the major search engine companies, whose major income stream is keyword advertisements, as well as decrease the sales of current online advertisers. Regardless of consumer reaction, widespread piggybacking will certainly increase the bidding, and thus the cost of trademarked keywords, as well as encourage more large advertisers to bid on their own, now more expensive, trademarks, thus increasing advertiser expenses. In addition, should the courts determine that piggybacking can constitute trademark infringement and that search engines are at least partially liable for that infringement, then search engines may face the expensive burden of monitoring each and every query for trademark infringement:

> We [Google] are currently defending this policy in trademark infringement lawsuits in the United States …. Adverse results in these lawsuits may result in, or even compel, a change in this practice which could result in a loss of revenue for us, which could harm our business.
>
> Google, 2005, p. 27.

Given the multiple potential threats to the Internet search engine business model by the practice of piggybacking, it seems important to understand the nature and prevalence of the piggybacking phenomenon. How widespread and deceptive is piggybacking? Is it truly a potential major threat that begs for comprehensive user impact studies? Or is the piggybacking controversy simply a play by larger advertisers to stifle competition for customers, as well as minimize advertising costs? There is little research, and no comprehensive survey, of piggybacking in this area to

date. The major contribution of our research is to examine the prevalence and potential deceptiveness of a practice that may have wide-ranging negative consequences for the entire global search engine industry.

This research analyzes the search results of three major U.S. search engines after the 100 top global brand trademarks were submitted to each of them as 100 individual search queries. A classification of piggybacking ads was developed, with an analysis of their prevalence overall, as well as by market sector. The implications of these results for the future of keyword advertising are discussed, with suggestions for future research. First, we present the conceptual background of the intertwining issues and stakeholders which come into play in this phenomenon of piggybacking.

II. CONCEPTUAL BACKGROUND

Overviews and histories of keyword advertising are available [Fain and Pedersen, 2006; Jansen and Mullen, 2008], including an analysis of search engine marketing strategy [Sen, 2005]. The terminology surrounding the practice of piggybacking is varied and inconsistent. O'Connor [2007], the only academic researcher to our knowledge who has currently published in this area, simply refers to it as *trademark abuse,* a category which could presumably include more than what is defined here as *piggybacking*. Steel [2008] defines *piggybacking* to include the unapproved use of the trademark in the actual text of the ad. Without the trademark in the ad text, the unapproved use of a trademark to trigger the ad is termed a *conquest buy.* When the 2008 campaign of U.S. presidential candidate John McCain bought *Joe Biden* as a political advertising keyword, the practice was referred to as an *ambush strategy* [Steel and Vranica, 2008].

Regardless of specific terminology, search marketing experts recommend buying competitors' keywords as an effective strategy [e.g., Stern, 2008]—despite the legal uncertainty. Although there has been substantial litigation to date [Sullivan, 2007], the legality of piggybacking with regard to trademark infringement remains unclear, at least in part because many cases have been settled out-of-court, thus establishing few legal precedents. In the cases in which verdicts have been reached, the U.S. courts are split on whether piggybacking constitutes trademark infringement by either the advertiser or the search engine [Grimmelmann, 2007].

The legal issues involved have been analyzed in numerous law review articles [e.g., Goldman, 2005; McGeveran, 2008; Troxclair, 2005]. For example, Goldman [2005] examines the perspectives of searchers, publishers, and search providers, and concludes that trademark law should be updated. From the consumers' perspective, the relevancy of the actual content presented by search engines should be considered, and search engines should be given protection from liability as encouragement to deliver the most relevant content to consumers. Schecter and Thomas [2003] add that it is the role of trademark law to balance the wishes of those who would monopolize the use of a trademark with the wishes of "others who feel they have a right or need to use it for their own purposes" (p. 540). However, legal scholars still have much to do in the area of search engine law [Grimmelmann, 2007]. They generally agree that these issues are years away from legal resolution [e.g., Troxclair, 2005].

Currently, all three major search advertising platforms' policies prohibit "trademark-infringing" uses of ads or keywords [Google, 2009; Microsoft, 2009; Yahoo!, 2009]. However, they require aggrieved trademark holders to file a complaint with them before any corrective action may be taken. Thus, the burden of trademark enforcement falls on the advertiser and not the search engine. The big difference among the search engines is that only Google allows piggybacking (with the exception of 30+ countries, mostly in Europe, many in which litigation is taking place) [Naffziger, 2009a]. Google will not investigate complaints alleging trademark infringement based solely on the purchase of brand names or other trademarks to trigger advertisements. Thus, Google is taking the legal position that piggybacking does not constitute trademark infringement. That is why advertisers may be angry at Google in particular.

A key factor in this controversy is the great importance of brand names in e-commerce. Research has shown the prevalence of brand names as search terms [e.g., Ghose and Yang, 2008a; Ghose and Yang, 2008b; Pan, Litvin, and O'Donnell, 2007]. Brands have been found to raise consumer intent to purchase in both traditional and internet distribution channels [Lee, Ang, and Dubelaar, 2005; Ye, 2007], as they function as signals of trustworthiness. It is already widely accepted that consumer trust is essential for the success of e-commerce [e.g., Hoffman, Novak, and Peralta, 1999].

Yet, trust has already been shown to be an issue with perceived relevance of sponsored ads [cf., Jansen, 2007; Jansen and Resnick, 2006]. Research participants also indicated trustworthiness as an issue. If consumers perceive piggybacking to also be deceptive, that would make matters worse. For example, research on online advertising [Rohrer and Boyd, 2004] has found that deceptive advertising can negatively affect the user experience at Yahoo!. Given that search engines depend on advertising to fund their business models, they may not want to encourage practices that could jeopardize consumer trust. Grazioli and Jarvenpaa [2003] put it this way, "the collapse of

telemarketing revenues during the 1980s, largely ascribed to the loss of consumer trust, is a warning of what might happen to e-commerce if public trust in the medium fades" (pp. 93–94). Thus, should piggybacking be found to be both widespread and deceptive, it's effect on e-commerce and Internet search engines could be devastating.

III. RESEARCH QUESTIONS

Despite the worldwide controversy over predatory keyword advertising, there has been little empirical investigation into the phenomenon. How prevalent is piggybacking? Does it differ among search engines? What is the effect on ad placement? Does the practice vary among industries? These are the motivators for our research.

Research Question #1: What are the various forms of piggybacking?

The limited research available currently lumps all piggybacking together. However, we can conceive of piggybacking taking many forms. For example, taking customers away from the competition is what often comes to mind in a discussion of piggybacking, as in Mazda courting searchers looking for Pontiac automobiles [Carty, 2006]. Certainly, companies might be concerned about the use of their trademark in these situations. However, what if the trademarked term is used by other retailers selling the company's products, for example, a store promoting a specific manufacturers' electronics gear? Thus, instances of piggybacking may span a range of seeming legitimacy. How much diversity is there among advertisers in terms of types of piggybacking, and how does this vary across industries? We seek to define piggybacking in a more systematic way that permits detailed investigation of the phenomenon.

Research Question #2: How prevalent is piggybacking?

Media attention and advertiser lawsuits [e.g., Steel, 2008; Sullivan, 2007] may suggest that piggybacking is a common practice. But is it? This research investigates the 100 top global brands in the U.S. and the results of searches of these brand names on three major search engines in order to get a clearer picture of piggybacking, particularly in terms of its prevalence.

Research Question #3: How does piggybacking vary by market sector?

Does piggybacking occur primarily in the travel industry, as one might conclude from the press [e.g., May, 2009; Steel, 2008], or is it more widespread? The brands selected for study here span across sixteen market sectors, providing a wider picture of the practice.

IV. RESEARCH METHODS

In order to get a broad view of the piggybacking phenomenon, we selected a collection of brands that spanned across many diverse market sectors. Our focus was on large brands because it has been suggested that piggybacking is most effective when smaller companies try to take advantage of the well-established brand's goodwill or of larger, more dominant organizations' reputations [e.g., Steel, 2008; Stern, 2008]. We explored several lists of brands on the Web, including The American Customer Satisfaction Index [ACSI, 2006], Business Week's Top Brand 100 [Business Week, 2009], and BrandZ Top 100 Most Powerful Brands Ranking [Millward, Brownmor, Optimor, 2008]. After examination of these three brand lists, we selected the BrandZ Top 100 Most Powerful Brands Ranking because this list provided substantial details about the brands and categorized each brand into a market sector. The brand list is provided in Appendix A.

Each of these 100 brands was submitted to Google, Yahoo!, and Microsoft Live Search (MSN Live). These three search engines were selected because they were the largest keyword advertising platforms in the sponsored search area.

We submitted each brand as a query to one of the search engines, capturing the first two search engine results pages. Given that 80 percent of searchers never go past the second page [Jansen and Spink, 2005], we decided that capturing just the first two SERPs was appropriate. In each query, we included only the brand name with no other terms. For example, we used the query *Tide* rather than a phrase like *Tide detergent.* We did this because the keyword advertising platforms have a variety of matching functions, including a "broad match." So, if terms other than the brand name were included in the query, the non-brand term might have been the term that triggered the ad. Using only the brand name helped to ensure that the brand name, rather than another term, triggered the ad, although a few brand names that contain generic terms (e.g. bank, mobile) still triggered other advertisements. This process of submitting the query and capturing the first two SERPs was repeated for each brand and each search engine.

First, the number of organic (aka, non-sponsored or natural) search results for each query was recorded. Next, for each sponsored ad captured, the following information was collected or assigned:

a. *Indication of ad placement by brandholder (self-bid)*—If the landing page of the ad was determined to be one of the brand's official websites, we assumed that the advertiser had bid on its own brand name. This was then noted. For all other sponsored ads, we coded the piggybacking type (below). Our thought process was that, since the query contained only the brand term, any ad that was not from that brand must be a form of piggybacking.

b. *Piggybacking type*—Type is derived from a content analysis of sponsored ads and is discussed later.

c. *Ad position*—Keyword advertisements typically appear in three locations on the SERP. These three locations are referred to in the industry as North, East, and South as shown in Figure 1. The North position, above the organic search results, is considered to be the most desirable for an advertiser. A sponsored ad's position on the SERP is determined by the search engine, based on the advertiser's bid and the search engine's estimate of ad quality. Ad position is an interesting variable for several reasons. First, it is well-established that link location influences how often a link is clicked [e.g., Jansen and Spink, 2009]. Second, the position of a sponsored link may affect the likelihood of consumer confusion between brands [cf., Brooks, 2004; Jansen and Resnick, 2006; O'Connor, 2009].

d. *Occurrence of the brand name in the ad title, text, or URL* (see Figure 2)—In addition to advertiser complaints about piggybacking, unauthorized use of companies' trademarks displaying in the ad have also drawn complaints [e.g., Steel, 2008]. Like piggybacking, enforcement of trademark policies by the search engine is not undertaken until the advertiser complains directly to the search engine.

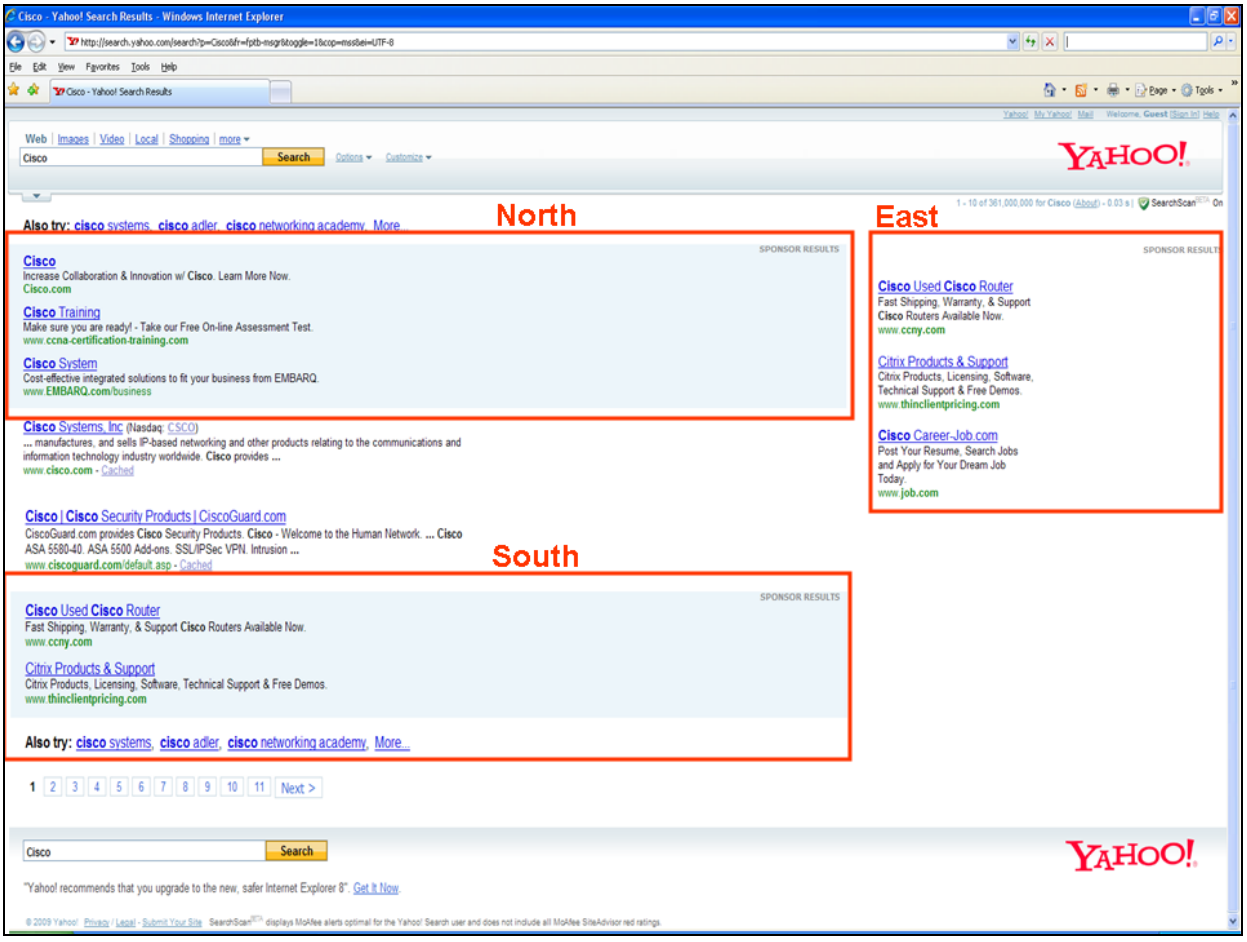

Figure 1. Locations of Sponsored Ads

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Source: http://www.whyiblog.com/wp-content/uploads/2008/12/adsample.jpg.

Figure 2. Elements of a Sponsored Ad—Example from Google

Conventional content analysis [Krippendorff, 1980] is "usually appropriate when existing theory or research literature on a phenomenon is limited" [Hsieh & Shannon, 2005, p. 1279]. We used inductive category development, allowing the categories to be grounded in the data. Each author examined a small sample of ads first, and then the two authors compared findings and developed the single classification presented here. Following several discussions and generations of coding rules for each ad type, the two authors divided the coding task. One author coded brands 1–50, while the other coded brands 51–100. Inter-coder reliability for the piggybacking classification was estimated by coding 10 percent of the 300 queries by both authors. To confirm the level of agreement, inter-coder reliability was checked by Cohen's Kappa [Landis and Koch, 1977]. Cohen's Kappa was 0.807, which is on the borderline between "substantial" and "almost perfect" agreement.

V. RESULTS

Our 100 queries on the three search engines generated 8,345 results on the 600 SERPs. Of these results, 5,995 were organic, and 2,350 were sponsored.

Research Question #1: What are the various forms of piggybacking?

As shown in Table 1, we derived a classification of piggybacking advertisements.

Table 1: Types of Piggybacking

Types of Piggybacking	Explanation
a. Competitive	Obvious competitor (i.e., in the same industry selling a competitive product/service)
b. Promotional	Promoting product/service of the brand (e.g., a reseller of the brand or some other function that assists in selling the product, i.e. coupons or free samples)
c. Orthogonal	Offering a different product/service from the product/service offered by the brand (e.g., corporate information about the brandholder, training on the brandholder's product, information on the general subject area of the brandholder's product area, etc.)

The first class, "Competitive," includes ads on which a competitor to the brand obviously bid on the brand name. This is the common definition or understanding of piggybacking. Figure 3 shows an example of carmaker Infiniti displaying an ad on Google in response to the query "BMW" (the brand of a competing automaker). In this example, the search term is not displayed in the text of the ad. It is the official Infiniti site. Nevertheless, some advertisers object to this type of use of their trademarks, interpreting it as a competitor taking advantage of the goodwill of their trademark.

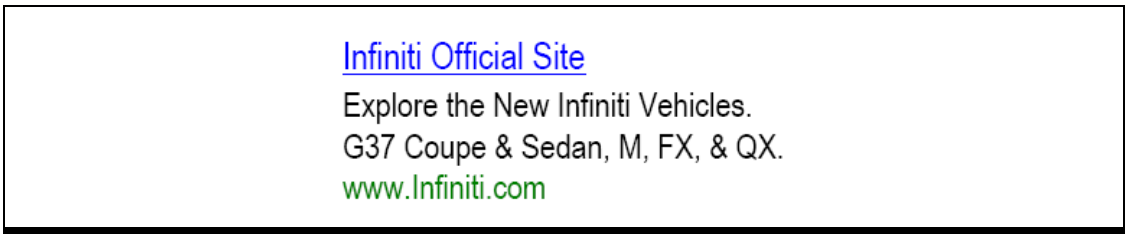

Figure 3. Sponsored Ad from Google—Triggered by the Search Query: "BMW," an Example of "Competitive" Piggybacking

The second type of piggybacking is "Promotional." These advertisements direct searchers to a landing page of a company or organization that is in some way, either formally or informally, promoting one or more of the brand's products or services. Figure 4 shows an example of CVS, the pharmacy retailer, displaying an ad on Microsoft LiveSearch in response to the query "L'Oreal" (the brand of a beauty products company). In this example, the search term appears in both the title and text of the ad. Currently, all three search engines allow resellers to do this. This appears to be a legitimate case of a retailer selling a manufacturer's product.

Figure 4. Sponsored Ad from MSN LiveSearch—Triggered by the Search Query: "L'Oreal," an Example of "Promotional" Piggybacking

The third type of piggybacking is "Orthogonal." In this form of piggybacking, the advertisement landing page is not that of the brand, a competitor, or a promoter of the brand. Instead, these landing pages are typically information websites providing information or opinion concerning the brand. The product/service provided is completely different from that of the brandholder. Figure 5 shows an example of Hoover's, a business information aggregator, displaying an ad on Yahoo! in response to the query "ibm" (the global computer systems and services company). In this example, the searched-for brand name appears in the ad title. Currently, all three search engines allow informational sites to do this. Clearly, Hoover's is not selling IBM products/services or products/services that compete with those of IBM. This appears to be a legitimate case of using a trademark to refer to a company.

Figure 5. Sponsored Ad from Yahoo!—Triggered by the Search Query: "ibm," an Example of "Orthogonal" Piggybacking

Research Question #2: How prevalent is piggybacking?

Table 2 shows the total number of links (organic search results and sponsored ads) found on the 600 SERPs from the three search engines broken down by number of organic results, number of sponsored ads, and number of sponsored ads that were classified as one of the three types of piggybacking ads.

Page for page, Google displayed fewer sponsored ads than the other two search engines did. Table 2 also shows that piggybacking (as a percentage of total sponsored ads) is a fairly common occurrence with percentages ranging from a low of 63.9 percent of occurrence on Google to a high of 94.3 percent on Yahoo!. An ANOVA clearly shows that there is a difference in number of piggybacked sponsored ads across search engines ($F(2) = 54.67$, $p <= 0.01$).

Table 2: Occurrences of Piggybacking by Search Engine					
	Total Links	Organic Results	Sponsored Ads	Piggybacking Ads	% Piggybacking
Google	2269	2000	269	172	63.9
Yahoo!	3278	2000	1278	1191	93.2
MSN	2798	1995	803	677	84.3
	8345	5995	2350	2040	86.8

Next, we looked at piggybacking by type. Of the 300 search queries of brand names, twenty-seven, or 9 percent, contained at least one instance of competitive piggybacking. By search engine, these twenty-seven queries were broken down by search engine as follows: Yahoo!—11, Google—9, and MSN—7. Overall, twenty-three of the 100 brands were piggybacked by competitors. The ad occurrence of piggybacking by type, by position, and by search engine is shown in Table 3.

Table 3: Occurrences of Piggybacking by Type and Ad Position									
Search Engine	Piggybacking Type	North	North % of Type	East	East % of Type	South	South % of Type	Total by Type	Total % by Type
Google	**Competitive**	0	0.0	11	6.5	0	0.0	11	6.4
	Promotional	2	100.0	132	77.6	0	0.0	134	77.9
	Orthogonal	0	0.0	27	15.9	0	0.0	27	15.7
	Total by Position	2	100.0	170	100.0	0	0.0	172	100.0
Yahoo!	**Competitive**	8	5.2	35	4.5	9	3.5	52	4.4
	Promotional	106	68.8	509	65.3	157	61.1	772	64.8
	Orthogonal	40	26.0	236	30.3	91	35.4	367	30.8
	Total by Position	154	100.0	780	100.0	257	100.0	1191	100.0
MSN Live	**Competitive**	8	4.5	5	1.4	5	3.8	18	2.7
	Promotional	87	49.2	221	60.3	67	50.4	375	55.4
	Orthogonal	82	46.3	141	38.3	61	45.9	284	41.9
	Total by Position	177	100.0	367	100.0	133	100.0	677	100.0

Despite the high occurrences of piggybacking (shown in Table 2), closer examination presents a somewhat different picture. The vast majority of piggybacking is the Promotional type, ranging from 55.4 percent on MSN Live to 77.9 percent on Google. The second most frequently occurring type of piggybacking is Orthogonal, ranging from 15.7 percent on Google to 41.9 percent on MSN Live. What is most interesting, however, is the low occurrence of Competitive piggybacking, which has generated controversy in some circles, including in the press. The occurrence of this type of piggybacking is in the single digits for all search engines, ranging from a low of 2.7 percent on MSN Live to a high of 6.4 percent on Google. We see that in general the majority of occurrences of piggybacking were positioned in the East ads, and not in the higher visibility, more frequently clicked ads in the North position. Google's policy at the time of the study was to avoid placing ads in the South position.

Table 4: Occurrences of Piggybacking by Type and Market Sector								
Sector	Competitive	% of Sector	Promotional	% of Sector	Orthogonal	% of Sector	Total of Sector	% of All Sectors
Apparel	13	14.8%	57	74.0%	18	23.4%	88	4.3%
Beverages	1	1.7%	15	25.9%	42	72.4%	58	2.8%
Cars	4	1.0%	298	77.4%	87	22.6%	389	19.1%
Cigarettes	0	0.0%	0	0.0%	4	100.0%	4	0.2%
Consumer Goods	1	2.6%	7	18.4%	31	81.6%	39	1.9%
Entertainment	0	0.0%	23	76.7%	7	23.3%	30	1.5%

Table 4: Occurrences of Piggybacking by Type and Market Sector								
Sector	**Competitive**	**% of Sector**	**Promotional**	**% of Sector**	**Orthogonal**	**% of Sector**	**Total of Sector**	**% of All Sectors**
Fast Food	0	0.0%	4	11.4%	31	88.6%	35	1.7%
Financial	17	6.7%	124	51.7%	114	47.5%	255	12.5%
Insurance	4	4.9%	32	40.0%	46	57.5%	82	4.0%
Luxury	5	3.2%	138	91.4%	13	8.6%	156	7.6%
Mobile	1	0.8%	76	58.5%	53	40.8%	130	6.4%
Motorcycles	0	0.0%	23	79.3%	6	20.7%	29	1.4%
Personal Care	1	1.6%	27	42.9%	35	55.6%	63	3.1%
Retail	19	20.9%	5	6.8%	67	90.5%	91	4.5%
Technology	15	2.6%	449	79.2%	113	19.9%	577	28.3%
Transportation	0	0.0%	3	21.4%	11	78.6%	14	0.7%
Total	81	4.0%	1,281	62.8%	678	33.2%	2040	100.0%
Average	5.06	3.8%	80.06	47.2%	42.38	52.0%	127.50	6.3%

Research Question #3: How does piggybacking vary by market sector?

The percentage of piggybacking in sponsored ads varied from 50 percent to 98.4 percent across the market sectors. An ANOVA shows a significant difference across the sectors ($F(15) = 5.36$, $p <= 0.01$). Table 4 breaks down the occurrence of piggybacking across market sectors and by type. There is little Competitor piggybacking (as a percentage of sponsored ads), ranging from 0 percent to 20.9 percent across all sectors, with no significant difference among industries ($F(15) = 0.73$, $p = 0.75$). There was also no significant difference for Orthogonal piggybacking ($F(15) = 1.35$, $p = 0.17$). However, the sectors vary significantly in terms of the percentages for Promotional ($F(15) = 7.95$, $p <= 0.01$)).

Additional Results

In addition to the bidding on branding terms, advertiser complaints about trademark use also include the use of their brand names by others in the text of sponsored ads [cf., Steel, 2008]. Table 5 summarizes the occurrences of third-party brand names found in the ads' text, broken down by search engine and type of the ad in the SERP. As shown in Table 5, the use of trademarked terms by competitors is extremely low.

Table 5: Occurrences of Brand Term in Ad						
	Mention of Brand	**Sponsored Total**	**% Mention**	**Competitive**	**Promotional**	**Orthogonal**
Google	137	269	50.9%	0	109	28
Yahoo!	943	1278	73.8%	2	660	281
MSN	534	803	66.5%	4	401	129
Total	1614	2350	68.7%	6	1170	438

As shown in Table 6, those six competitive piggybacking ad occurrences are the result of just two ads, one ad in one query on MSN Live, and one ad in one query on Yahoo!.

Table 6: Competitive Piggybacking Ads with Brand Names in Ad Text		
Ad:	**Cisco** - fonality.com Small Business Phone System. 15-500 Employees? Try Fonality.	Genesis - Official Site Better Braking than the **Mercedes** & Affordable. Think About it. **HyundaiGenesis.com**
Advertiser:	Fonality	Hyundai
Search engine:	MSN Live	Yahoo!
Search query:	Cisco	Mercedes
# Ad impressions:	4	2
Positions of impressions:	North/South on first two SERPs	East/South on first SERP

VI. DISCUSSION AND IMPLICATIONS

Issues in the Piggybacking Classification Development

We considered creating finer-grain categories in the classification. For example, the Promotional category contains mainly two types of advertisers: traditional retailers (e.g., car dealers, pharmacies, and department stores) and comparison shopping web merchants (e.g., Shopzilla, NexTag, Pronto, etc.). There is also a small contingent of sites offering coupons or free samples of the brand's products. The Orthogonal category contains advertisers offering products/services that, although unrelated to the brand's products/services, vary in degree of direct relevance to the brand. For example, as previously noted in Figure 5, an ad by Hoovers.com was triggered by the brand, IBM. Although their service of providing corporate information is unrelated to IBM's products and services, the information itself being promoted is about IBM (i.e., directly related to the brand). Contrast this with an ad triggered by the query, "CocaCola" by BuyBetterTickets.com for the CocaCola 600, a NASCAR racing event that's really not about beverages. Thus, the Orthogonal ads varied greatly in relevance to the triggering brand term. Also, another, smaller portion of Orthogonal ads were triggered by brand names that were homonyms. For example, the brand, Marlboro, triggered an ad for a hotel in Marlborough, a suburb of Boston, with the hotel presumably trying to capitalize on searchers' mis-spellings. Finally, the Competitive category could have been broken into two: those competitive ads that used the brand in the actual ad text and those that did not (which were only six of 1,614 piggybacking ads with brand mentions, see Table 5).

We chose the three broad piggybacking classes because the focus of our study is how organizations use others' brands to trigger ads resulting from consumers' search queries. From the perspective of the brandholder, assuming that a searcher is intending to find the brandholder's products/services, piggybacking can result in three broad situation types. The brandholder can be possibly threatened by the display of a competitor's ad, possibly helped by a third party's ad promoting the brandholder, or unaffected by an advertisement that is orthogonal to the brandholder's purposes. Also, the Promotional and Orthogonal categories correspond well with the "reseller" and "informational site" categories of exceptions for using others' trademarks, found in both Microsoft's and Yahoo's policies. Thus, we believe that the three higher-level categories fit well with the focus of the research.

Piggybacking in Terms of Prevalence and Deception

This research explored a variety of types of relationships between advertisers who bid on others' trademarks, and the trademark holders. The results clearly show that the majority of ads triggered by brands were, in fact, sponsored by organizations other than the brandholder—86.8 percent. Other organizations' ads to sell or promote the brandholder's products/services comprised 62.8 percent of those piggybacking ads. Approximately, another third of the piggybacking ads promote non-competing products/services, while only the remaining 4 percent of the ads were of a directly competitive nature. Thus, it is not unusual (with any of the three major search engines) for organizations to use another organization's brand to trigger an ad. However, the percentage of Competitive ads is comparatively small.

Regarding the potential deceptiveness of piggybacking as "bait and switch" advertising, only six of 1,614 ad occurrences (0.3 percent) contained the competitor's actual trademark in the ad text. Table 6 shows the two ads that caused those six occurrences: one by the car-maker, Hyundai, and the other by telephony provider, Fonality. The reader can see that the former is a fairly straightforward comparison advertisement. The latter, however, using their competitor's name as the headline, could easily be interpreted as an advertisement for the searched-for brand, when in fact it is not. This was the only instance we found in over two-thousand advertisements in which a competitive trademark appeared to be used in a potentially deceptive manner. Thus, the alleged deceptiveness of piggybacking, claimed by some [AABC, 2008], eroding trust in e-commerce, appears in actuality to be a non-issue.

We found that piggybacking clearly differs by market sector (Table 4). However, in terms of piggybacking type, only the Promotional type was found to vary by sector. With the caveat of a small sample, the retail and apparel sectors had the highest percentages of competitive piggybacking. The travel sector, some of whose members have identified themselves as victims of piggybacking [Steel, 2008; AABC, 2008], was not represented in the list of the top global brands.

Google and Brand Searches

One striking result is how many fewer total sponsored ads Google displayed for a query in comparison to the Microsoft and Yahoo!—an average of less than one ad on the first two SERPS. This is compared to an average of approximately four ads for Yahoo, and about two and two-third ads for MSN. Of that lower total of sponsored ads displayed, Google displayed a lower percentage of them as piggybacking ads as well. It would be interesting to be able to compare these numbers to those of other types of (non-brand-triggered) queries.

Several different strands of the data, when considered together, could be interpreted to indicate that Google may have done a better job of delivering relevant ads to these brand-name queries, while at the same time, providing brandholders less of a risk of threat by competitive ads. Given that Google has often been vilified in the press for its refusal to disallow piggybacking [e.g., Steel, 2008], this indeed would be an interesting result.

Following is the analysis. It is based on the assumption (which could be verified by future user studies) that, in general, the presence of a brand-name in a query usually means that the searcher is looking-for/interested-in that brandholder's product or service. Certainly, it is difficult in general to infer searcher intent based strictly on a query's search terms [Russell et al., 2009]. However, considering the entire set of queries, it does not seem unreasonable to assume that, in general, the searcher in most cases is interested in the brand's products or services. Given that assumption, we can broadly classify the ad-types we've studied here into a general hierarchy of relevance toward these brand-related queries. For example, in general, it is reasonable to believe that the "self-bid" ads, those sponsored by the brandholder, would be the most relevant to the brand query. Again, there will be exceptions (e.g., a query to discover the current IBM stock price, or directions to the nearest Wal-Mart), but overall, we assume that most of the searchers' interests are focused on the brand product/service. Thus, by definition, on average, the self-bids ads as a group would be more relevant than any of the types of piggybacking ads. Following the same logic, the next most relevant type of ad triggered by the brand name would be the Promotional piggybacking type. It promotes the same product/service as the brandholder. In general, it might not be as relevant as the brandholder's ad, but it would on average be more definitely more relevant than the Orthogonal ad type, and usually more relevant than the Competitive piggybacking type because the Promotional type deals with the brandholder specified in the query.

Thus, given these assumptions, we propose a three-level hierarchy of relevance to brand-related queries: self-bid, Promotional piggybacking and a third, least relevant level containing the Competitive and Orthogonal piggybacking ads. Given this hierarchy, and our general assumption of brand product/service interest, Google looks like it serves up the most relevant ads in response to brand queries. It has, by orders of magnitude, the highest percentage of self-bid ads, the highest level of relevance in the hierarchy (Table 7), especially considering that almost half of MSN's self-bid ads are in the least visible South position, below all the organic search results and all the other ads. Google also leads handily in the second highest level of relevance in the hierarchy, Promotional piggybacking ads (Table 3). Thus, all other things being equal (which would need to be verified by future research), based on types of ads and seemingly reasonable assumptions we made those about types of ads and searchers' intent, Google's results appear to be more relevant to these queries containing major brandholders' brands.

Table 7: Occurrences of Self-Bidding

	Sponsored Total	Self-bid Total	% Self-bid	North	East	South
Google	269	97	36.1%	30	67	0
Yahoo!	1278	87	6.8%	65	12	10
MSN	803	126	15.7%	54	14	58
Total	2350	310	13.2%	149	93	68

Further, one could assert that Google's results pose less of a threat to brandholders when their marks are used as search terms, based on examining where the ads are placed vis-à-vis the organic results, in the North, East, or South positions. To simplify the analysis, we make the reasonable assumption the North position poses the predominant threat of competitive piggybacking to brandholders. Our data bolsters this assumption in that the vast majority of queries found the brandholder in the #1 organic result position. (In the few cases where this was not true, most of the time the brandholder was #2, following the Wikipedia entry of the brandholder. A small number of exceptions were foreign brands like Ariel (detergent), and TIM (Telecom Italia Mobile), which are extremely polysemous and less-searched-for in the English versions of the search engines we tested. Thus, Competitive ads will usually be seen first by the searcher only if they appear in the North position [e.g., Richardson et al., 2007]. So, by putting mostly self-bid ads and no Competitive piggybacking ads in North, the threat to Google's advertisers was minimized.

In contrast, although the number is low, both Yahoo! and MSN put competitive ads in North (Table 3). Further, they put significant percentages of Promotional piggybacking ads, which although supporting the brandholders (mostly as resellers), often promote competitive products/services as well. Thus, despite unfavorable press and lawsuits on this subject, one could argue that Google actually provides advertisers with a more hospitable advertising environment. Again, further research is necessary to establish this. Examining ad positions also bolsters the argument for Google having comparatively more relevant search results for these queries. Both Yahoo! and MSN put significant percentages of Orthogonal piggybacking ads in the North position. Finally, we again caution that ad relevance is ultimately judged by search engine users, and these phenomena need to be verified by user studies.

Microsoft Bing and Brand Searches

In the time since our data collection, Microsoft has introduced the Bing search engine which is reported to address many of the issues discussed here regarding brand searches (Wallace, 2009). Wallace reports that Bing often limits or downgrades the visibility of sponsored ads in general. Thus, the number of less relevant ads resulting from brand searches (e.g., Orthogonal piggybacking) may be reduced and/or decreased in visibility. This is a win for the consumer, but maybe not for the brandholder, because of the following. Wallace describes Bing's "Similar to this" feature: "Bing almost always shows highly visible links to competitors on branded searches" (see Figure 6).

Regarding the links in Bing's Similar to This feature, Wallace (2009) asserts:

> …this is likely to decrease CTR [clickthrough rate] on branded terms and increase comparison shopping by users. Furthermore, it's clear that it is focusing on the most significant competitors—so the consequence is not going to be the same for different brands. For larger, more established brands, they would be more likely to show on competitor branded searches than lesser known brands. So lesser known brands will have a reduction in branded click traffic because of an increase in diverted traffic to competitors, but will not have a corresponding increase in traffic from its competitors. In other words, smaller brands get hurt and bigger brands get helped by this system.
>
> Wallace, 2009.

This then puts competitive links adjacent to the brandholder's organic search result. This benefit again goes to the consumer, and to the major brandholder, by eliminating the need for the competitive bidding that Google seems to be encouraging. On the downside, Microsoft loses the potential revenue while the brandholders can no longer prevent the more significant competitors from appearing with them. However, if lesser-known or unknown brands were to flee from Bing, that could potentially increase the perceived relevance of Bing's sponsored ads, as compared with other search engines. However, this could also be perceived as reducing the diversity of advertisements with a resulting constriction of consumer choice.

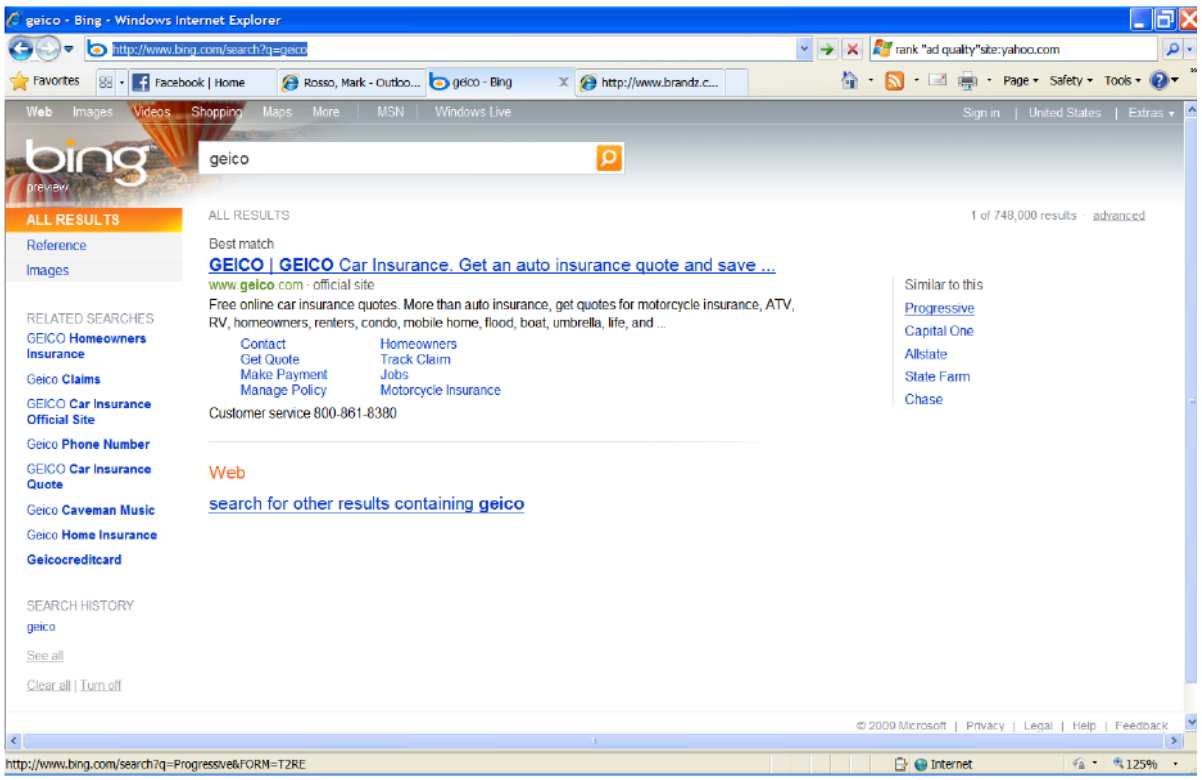

Figure 6. Screenshot of Microsoft's Bing Search Engine SERP—Triggered by the Query: "geico"

Limitations and Strengths of this Work

The limitations of our study are that we examined only the largest major brands. Although we believe that this brand selection method returns results similar to that from the market as a whole, other brand listings or market niches might produce different results. Also, advertisers may vary their ads based on time of day, week, season, and locale.

In addition, the specific ads displayed can be affected by competitive bidding at the time the search query is made. There are several strengths of the study. First, we used a large number of well-known brands with major impact from a variety of industry sections. This ensured our results have practical and influential implications. Second, we approached our analysis of piggybacking from a variety of perspectives, using a mixed methods approach and employing both quantitative and qualitative measures. This helped ensure that our findings are robust. Third, our focus on piggybacking is an emerging area with potentially significant impact on the advertising and search engines area. Therefore, our research is timely and has practical implications in the marketplace.

VII. FUTURE RESEARCH

Although it seems like piggybacking is not a widespread or deceptive threat to e-commerce, there are still many research opportunities to follow-up on this exploratory study. For example, this work could be reproduced with different brands, different market sectors, and using non-U.S. search engines. Further, studies of user perceptions are crucial when considering issues like deceptiveness and relevance of advertisements. Future research could involve in-depth analysis of search behavior to see whether piggybacking improves or degrades the customer experience, and whether trust in the search engine is affected. Other e-commerce platforms with search capabilities, such as Amazon or eBay, could be explored in terms of potentially deceptive use of trademarks. Social networking sites also allow the possibility of using other companies' brand names. For example, Needleman [2009] reports of an instance on Twitter.com in which a company created a profile named for a competitor but promoted its own services instead. Also, the effect of piggybacking on keyword prices would be of interest to search engines and advertisers.

Previous work by Stewart [2006; Stewart and Malaga, 2009] provides plausible theories to be tested that relate to piggybacking. For example, Stewart and Malaga [2009] found an "assimilation effect" among adjacent links which raised consumers' trusting beliefs in an unfamiliar organization when its link was surrounded by links of trusted organizations. Given this result, the authors go on to suggest "a new Web search business model" in which companies could bid on which other companies' links would appear next to them. They further suggest that "an unfamiliar company might bid to appear along with familiar trusted companies in the same industry" (p. 88)—exactly what can happen when a lesser-known company piggybacks on a dominant brand. The piggybacker's ad appears near the major brand's organic listing(s) (as well as their ad, if the major brand self-bid). Is there an assimilation effect in this case? Future research could test whether this trust transfer from familiar to unfamiliar company works in the search advertising context. If so, this would be empirical evidence of the value of piggybacking for less dominant brands. (As an aside: given Stewart and Malaga's result, Bing's policy of excluding these brands from its "Similar to This" list (Figure 6) would prevent this assimilation effect from benefitting small advertisers.)

Stewart [2006] also found a similar trust transfer to an unknown company, if it was linked to by a trusted organization. Given these two situations of trust transfer from a trusted to an unknown company, is there a similar transfer of trust when the ad of an unknown company appears as a result of a search for the brand name of a trusted organization? This would also be an interesting property of piggybacking.

VIII. CONCLUSION

With the study's scope and limitations in mind, we have shown that competitive piggybacking is not the widespread, deceptive practice that some would have us believe. Only 4 percent of the ad displays studied was competitive in nature, and only one advertisement sampled was found to be potentially deceptive regarding its sponsor.

This study has filled a gap in the existing literature by comprehensively examining the phenomenon of piggybacking, which could have great impact on consumers, advertisers, and search engines alike. We have created a taxonomy of piggybacking, and used it to hypothesize, for example, that although Google has been blamed for its stance on the piggybacking issue, it may be providing the most relevant results, while at the same time, placing competitive ads in positions of lower visibility.

We sympathize with stakeholders on all sides of the piggybacking issue. Large advertisers want to "own" the pages that result from searches for their brand names. They prefer not to have competitors show up at all in "their" search results. Also, they prefer not to pay high prices for their own brand names as ad triggers, or even have to bid at all on trademarks that they already own. On the other hand, search engines want to provide the most relevant results to consumers while protecting or increasing the ad revenue which funds their business models. As researchers, there are many opportunities to add data to the debate. Findings on user perceptions of trust and satisfaction, effects on advertising costs, and resulting advertising strategies can only help us increase our understanding of the consumer search process in e-commerce.

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Editor's Note: The following reference list contains hyperlinks to World Wide Web pages. Readers who have the ability to access the Web directly from their word processor or are reading the paper on the Web, can gain direct access to these linked references. Readers are warned, however, that:

1. These links existed as of the date of publication but are not guaranteed to be working thereafter.
2. The contents of Web pages may change over time. Where version information is provided in the References, different versions may not contain the information or the conclusions referenced.
3. The author(s) of the Web pages, not AIS, is (are) responsible for the accuracy of their content.
4. The author(s) of this article, not AIS, is (are) responsible for the accuracy of the URL and version information.

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APPENDIX A—LIST OF BRANDS USED AS SEARCH QUERIES

Table A-1: List of Brands Used as Search Queries

Rank	Brand	Brand Value ($M)	Market Sector	Rank	Brand	Brand Value ($M)	Market Sector
1	Google	86,057	Technology	**51**	BlackBerry	13,734	Technology
2	GE (General Electric)	71,379	Technology	**52**	Chase	12,782	Financial
3	Microsoft	70,887	Technology	**53**	Nike	12,499	Apparel
4	Coca-Cola	58,208	Beverages	**54**	Canon	12,398	Technology
5	China Mobile	57,225	Mobile	**55**	AT&T	12,030	Mobile
6	IBM	55,335	Technology	**56**	Starbucks	12,011	Fast Food
7	Apple	55,206	Technology	**57**	Goldman Sachs	11,944	Financial
8	McDonald's	49,499	Fast Food	**58**	Samsung	11,870	Technology
9	Nokia	43,975	Technology	**59**	Nissan	11,707	Cars
10	Marlboro	37,324	Cigarettes	**60**	Marks & Spencer	11,600	Retail
11	Vodafone	36,962	Mobile	**61**	Amazon	11,511	Retail
12	Toyota	35,134	Cars	**62**	Yahoo!	11,465	Technology
13	Wal-Mart	34,547	Retail	**63**	Morgan Stanley	11,327	Financial
14	Bank of America	33,092	Financial	**64**	UBS	11,220	Financial
15	Citi	30,318	Financial	**65**	eBay	11,200	Retail
16	HP	29,278	Technology	**66**	H&M	11,182	Apparel
17	BMW	28,015	Cars	**67**	Wachovia	11,022	Financial
18	ICBC	28,004	Financial	**68**	Ford	10,971	Cars
19	Louis Vuitton	25,739	Luxury	**69**	Chevrolet	10,862	Cars
20	American Express	24,816	Financial	**70**	Budweiser	10,839	Beverages
21	Wells Fargo	24,739	Financial	**71**	Colgate	10,576	Personal

Table A-1: List of Brands Used as Search Queries							
Rank	**Brand**	**Brand Value ($M)**	**Market Sector**	**Rank**	**Brand**	**Brand Value ($M)**	**Market Sector**
							Care
22	Cisco	24,101	Technology	**72**	Harley-Davidson	10,401	Motorcycles
23	Disney	23,705	Entertainment	**73**	Subway	10,335	Fast Food
24	UPS	23,610	Transportation	**74**	Merrill Lynch	9,802	Financial
25	Tesco	23,208	Retail	**75**	JP Morgan	9,762	Financial
26	Oracle	22,904	Technology	**76**	Hermès	9,631	Luxury
27	Intel	22,027	Technology	**77**	BBVA	9,457	Financial
28	Porsche	21,718	Cars	**78**	State Farm	9,425	Insurance
29	SAP	21,669	Technology	**79**	Gucci	9,341	Luxury
30	Gillette	21,523	Personal Care	**80**	Cartier	9,285	Luxury
31	China Construction Bank	19,603	Financial	**81**	FedEx	9,273	Transportation
32	Bank of China	19,418	Financial	**82**	Tide	9,123	Consumer Goods
33	Verizon Wireless	19,202	Mobile	**83**	T-Mobile	8,940	Mobile
34	Royal Bank of Canada	18,995	Financial	**84**	Zara	8,682	Apparel
35	HSBC	18,479	Financial	**85**	Chanel	8,656	Luxury
36	Mercedes	18,044	Cars	**86**	IKEA	8,507	Retail
37	Honda	16,649	Cars	**87**	Ariel	8,437	Retail
38	L'Oréal	16,459	Luxury	**88**	Telefónica Movistar	8,117	Mobile
39	Pepsi	15,404	Beverages	**89**	MTS	8,077	Mobile
40	Home Depot	15,378	Retail	**90**	Esprit	7,907	Apparel
41	Dell	15,288	Technology	**91**	TIM	7,903	Mobile
42	Deutsche Bank	15,104	Financial	**92**	Motorola	7,575	Technology
43	ING	15,080	Financial	**93**	Barclays	7,382	Financial
44	Carrefour	15,057	Retail	**94**	Avon	7,209	Consumer Goods
45	NTT DoCoMo	15,048	Mobile	**95**	Auchan	7,148	Retail
46	Target	14,738	Retail	**96**	VW (Volkswagen)	7,143	Cars
47	Siemens	14,665	Technology	**97**	AXA	7,141	Insurance
48	Banco Santander	14,549	Financial	**98**	AIG	7,102	Insurance
49	Accenture	14,137	Insurance	**99**	Mastercard	6,970	Financial
50	Orange	14,093	Mobile	**100**	Standard Chartered Bank	6,855	Financial

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