Smart Marketing or Bait & Switch?
Competitors' Brands as Keywords in Online Advertising

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ABSTRACT
The business models of major Internet search engines depend on online advertising, primarily in the form of search engine keyword advertising. In recent years, a controversy surrounding keyword advertising has gained notoriety worldwide, in both the international court systems and the media. It concerns a form of potential "bait and switch" advertising where a consumer, searching using the brand name of one company, is presented with an advertisement by a competitor of the searched-for brand. Sometimes, this competitor's ad copy contains the name of the searched for brand as well. This practice has been referred to as "piggybacking". Given the particular need for consumer trust in ecommerce, one might question the overall value of piggybacking. In the U.S. in particular, the legality of this practice, and the potential liability of the search engines for contributing to trademark infringement, is unclear. However, the eventual resolutions of the issue by the U.S. and international courts could significantly and negatively impact the business model of Internet search engines. In this paper, the actual prevalence of piggybacking of major brands in U.S. search engines is investigated. One hundred search queries consisting solely of one of the 100 top global brand names were submitted to three major search engines, Google, Yahoo!, and Microsoft's. Analysis of 8,345 results from the search engine results pages showed only 4 percent of sponsored ads triggered by competitors' trademarked terms. There was even lower use of trademark terms in ads by competitors. Thus, competitive piggybacking does not appear to be a widespread phenomenon. Possible explanations for this are discussed, and suggestions for future research are given.

Categories and Subject Descriptors
K.4.4 [**Computers and Society**] Electronic Commerce – *intellectual property*; K.5.m [**Legal Aspects of Computing**]: Miscellaneous

General Terms
Economics, Legal Aspects

Keywords
Brand, deceptive advertising, e-commerce, intellectual property, Internet advertising, keyword advertising, marketing, paid placement, paid search, passing off, pay per click, search advertising, search engine, search engine marketing, sponsored search, trademark, trademark infringement, trust.

1. 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 grow 15-20 percent through 2011 and that keyword advertising, also known as sponsored search, contextual advertising, or pay-per-click (PPC) advertising, will be the dominant form [18]. Internet advertising provides the revenue base for major search engines, such as Google and Yahoo!, as well as many content-based Websites. In 2008, Google earned $21.8 billion, and more than 90 percent of this revenue came from keyword advertising [13]. 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.

PPC 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, the 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). The search engine's display of specific ads (and the order in which they are displayed) is determined for each individual query by several possible factors. These include the amounts of advertisers' bids on specific search terms and the estimated relevance of the query to the advertiser's ad and to the landing page. Several overviews and histories of keyword advertising are available [7, 20], including an analysis of search engine marketing strategy [46].

As Google Inc. and other search engine companies push to sell ads crucial to their revenue growth, some of the largest advertisers are growing angry with the way the search engines oversee their keyword advertising [c.f., 47]. The problem is a tactic known as "piggybacking," which we define in the context of search engine keyword advertising, as advertisers bidding on other companies' brand names, slogans, or other trademarked terms or phrases. A nationwide example in the U.S. is a television campaign by automaker Pontiac urging viewers to "Google Pontiac" [5].

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 concerned others) have formed an organization, the Alliance Against Bait & Click, in order to "make deceptive search ads a thing of the past" [1]. There have been numerous U.S. court cases concerning the practice [c.f., 2, 42]. 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 has expanded this practice virtually worldwide [40], with the notable exception of most countries in the European Union [35]. 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 [51], 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 on-line 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. [12, 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. This research analyzes the search results of three major U.S. search engines after the one-hundred top global brand trademarks were submitted to each of them as one-hundred individual search queries. A classification of piggybacking ads was developed, with an analysis of their prevalence overall, as well as by market segment (not reported). The implications of these results for the future of keyword advertising are discussed, with suggestions for future research. First, a review of the relevant literature is presented.

2. LITERATURE REVIEW

The terminology surrounding the practice of piggybacking is varied and inconsistent. O'Connor [38], the only academic researcher to our knowledge who has 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 [47] 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." Finally,

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" [48].

Regardless of specific terminology, consumers' search terms that may be interpreted as advertisers' trademarks are at the heart of the controversy behind this research. Should advertisers be allowed to display ads to consumers who search on others' trademarks? Law scholars Schechter and Thomas [45] informally describe trademarks as "a brand name – the designation for a particular type or style of goods that come from a particular producer and have consistent attributes each time you buy them" (p. 539). Thus, a brand can be recognized by a trademark that distinguishes an organization or a product from its competitors. Therefore, good branding can result in customer loyalty and positive image of a firm's products and services. From a marketing perspective [24], a brand provides various functional features for different stakeholders. For a brand recipient, such as a Web search engine user, a brand may exert an identification image, a discrimination function, a quality assurance, a prestige or a trust function [24]. Given that value of a brand's trademark, it is only natural that organizations would want to control its use. However, 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" [45, p. 540].

The issues involved with piggybacking on search engine query terms have been analyzed in numerous law review articles [e.g., 11, 31, 52]. For example, Goldman [11] 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. Although there has been substantial litigation to date [51], 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 [16]. Despite this legal uncertainty, search marketing experts recommend buying competitors' keywords as an effective strategy [e.g., 49].

Search engines' explicit policies regulating the practice of piggybacking have evolved over the years. Currently, all three major search advertising platforms' policies prohibit trademark-infringing uses of ads or keywords [14, 32, 54]. The big difference among them is that only Google allows piggybacking (with the exception of 30+ countries mostly in Europe, many in which litigation is taking place [34]). Thus, Google is taking the position that piggybacking does not constitute trademark infringement. All three search providers require aggrieved trademark holders to file a complaint with them before any corrective action may be taken. Thus, the burden of trademark enforcement falls upon the advertiser and not the search engine.

Almost no academic research that investigates the phenomena of piggybacking has been published to date. One exception is a small study [38] that noted sponsored ads (on Google and AltaVista) triggered by the names of ten hotels throughout U.S., Europe, and

Asia. Another study, methodologically-similar to ours, analyzed the non-sponsored search results of brand name queries [53]. Their distinction between "official" and "unofficial" search results is analogous to the distinction (that we make later) between self-bid and piggybacking sponsored ads.

However, despite the lack of work on piggybacking, research has shown the importance of brand names as search terms. Ghose and Yang [8, 9] reported two studies based on data from a Fortune 500 nationwide retail chain which advertises on Google. In the first study, with data spanning the first quarter of the year 2007, 5,146 observations of 1,799 unique keywords showed that queries with retailer-specific brand information tended to have higher click-through rates while queries with product/ manufacturer brand information tended to have higher sales conversion rates [9]. Their second study focused on 166 keywords of the 1,799 that contained product or product-category information for the categories: bath, bedding, electrical appliances, home décor, kitchen and dining. They found that queries with product-level information offer significant potential for cross-selling products in other product categories [8]. Finally, in an unrelated study of consumer searches for travel accommodations, Pan, Litvin, and O'Donnell [41] found that searchers commonly typed brand information into a search engine to find specific hotels' Websites. These studies, taken together, show the importance of the role of brand in search queries.

Lee, Ang, and Dubelaar [29] studied brand as a signal of trustworthiness, and found that brand raised the intent to purchase in both traditional and internet distribution channels. Ye [55] found a significant relationship between brand familiarity and searchers clicking on sponsored search results. Logically then, given the desirability of the brand, it would not be surprising that the delivery of an ad unrelated to the brand query might possibly cause some consumer dissatisfaction with the process. Trust has already been shown to be an issue with perceived relevance of sponsored ads in general [19]. This result was found, despite the fact that sponsored ads were evaluated as being more relevant than organic ones for e-commerce-related queries. In a second study, the positions of the organic results on the SERP and that of the sponsored ads were swapped [21], and study participants then judged the relevancy of all results on the original SERP or the "swapped" SERP. Surprisingly, the evaluations of the results, when labeled as organic, were significantly better than when the results were labeled as sponsored ads, even though they were the exact same results! Further, in the post-study survey, participants indicated that lack of trust was a major reason for not clicking on the sponsored ads. Despite the value of sponsored ads, these studies suggest that searchers can exhibit a definite bias against sponsored ads involving trust.

However, at the same time, consumer trust is a widely accepted requirement for the success of e-commerce [e.g., 17]. Grazioli and Jarvenpaa [15] 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" (p. 93-94). Kim, Ferrin and Rao [25] offered empirical evidence for this relationship. Trust was shown to have a strong effect on purchasing intent. They found that stronger purchasing intent resulted in a higher likelihood of actual purchase. Other researchers have also created models for trust in e-commerce and its antecedents, [c.f., 26, 27,

30]. Given that a primary complaint about piggybacking sponsored ads is the possibility of causing consumer confusion [c.f., 47], it is conceivable that piggybacking could exacerbate the trust issue of sponsored advertising, which is now a significant part modern e-commerce today, as well the main source of funding for today's Internet search engines.

In some cases, piggybacking might also be viewed as a form of deception. According to Grazioli and Jarvenpaa [15], "Deception poses a problem to its victims because they take action based on inaccurate cognitive representations of their circumstances," (p. 93). In the cases of piggybacking that may be considered deceptive, actions could include clicking on ads, and possibly making purchases that they might not have otherwise made. In their typology of internet deception, these instances of piggybacking would be classified as "relabeling", defined as describing the "items involved in a social exchange…in a questionably favorable way" (p. 97). Other research has shown that deceptive advertising can negatively affect the user experience at Yahoo! [43], as well consumers' intent to purchase in a traditional marketing setting [39]. Darke and Ritchie [6] studied the effect of deceptive advertising on trust and concluded:

> The generalized effects of distrust on advertising we observed in our studies suggest that deceptive advertisements have the potential to be damaging to advertising in general and, by extension, to firms that rely heavily on advertising to sell their products. (p. 125)

All the models of e-commerce trust mentioned above have one of their antecedents of trust that could be considered to include truthful advertising: non-deception [44], goodwill (subsuming benevolence and honesty) [26], integrity [30], and information quality [25, 27]. If consumers are disturbed by piggybacking, these results suggest that overall trust in e-commerce could be negatively affected.

3. RESEARCH QUESTIONS

Despite the interest in 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.

3.1 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 [5]. 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. We seek to define piggybacking in a more systematic way that permits detailed investigation of the phenomenon.

3.2 Research Question #2: How prevalent is piggybacking?

Media attention and advertiser lawsuits [e.g., 47, 51] 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.

4. 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 segments. 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., 47, 49]. After exploring several lists of brands on the Web, 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 [33].

In November 2008, 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 [22], we decided that capturing just the first two SERPs would suit our purposes. 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 brandname. This was then noted. For all other sponsored ads, we coded the piggybacking type (below). Any ad that did not appear to be sponsored by the brandholder was considered to 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., 23]. Second, the position of a sponsored link may affect the likelihood of consumer confusion between brands [c.f., 4, 21, 37].
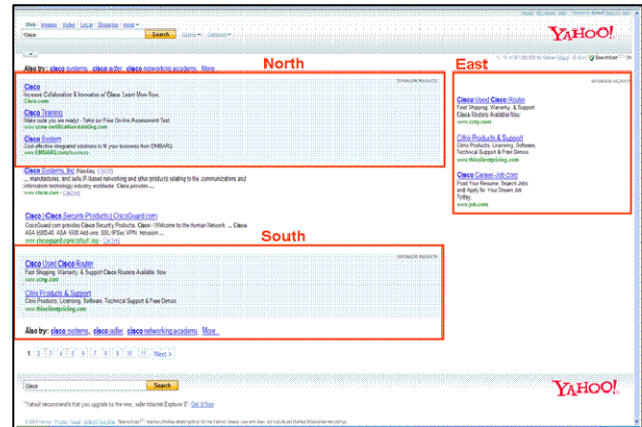

Figure 1. Location of Sponsored Ads

d. Occurrence of the brand name in the ad title, text, or URL – In addition to advertiser complaints about piggybacking, unauthorized use of companies' trademarks displaying in the ad have also drawn complaints [e.g., 47]. Like piggybacking, enforcement of trademark policies by the search engine is not taken until the advertiser complains directly to the search engine.

**Figure 2. Sponsored Ad from Google –
triggered by the search query: "BMW",
an example of competitive piggybacking**

5. 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.

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

As shown in Table 1, using a ground theory approach [10] and open coding [50], we derived three classifications of piggybacking advertisements. The first was "Competitive," meaning ads on which a competitor to the brand obviously bid on the brand name. This is the common definition or understanding of piggybacking. Figure 2 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. There does not seem to be any intent to mislead the consumer: 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. (Note: At the time this data was collected, it was Google's policy to allow no third-party trademarks in ad titles or text, even in cases in which it is a clearly legal use.)

However, we propose that there are two other types of piggybacking. "Partnership" advertisements direct searchers to a landing page of a company or organization that is in some type of partnership, either formally or informally, with the brand or is a reseller or affiliate of one or more of the brand's products or services. Figure 3 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 promoting a manufacturer's product.

**Figure 3. Sponsored Ad from MSN LiveSearch –
triggered by the search query: "L'Oreal",
an example of "Partnership" piggybacking**

The third type of piggybacking is "Opportunistic." In this form of piggybacking, the advertisement landing page is not that of the brand, a competitor, or a partner. Instead, these landing pages are typically information websites providing information or opinion concerning the brand. Figure 4 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.

Table 1. Types of Piggybacking

Types of Piggybacking	Explanation
a. Competitive	Obvious competitor (i.e., in the same industry and no formal partnership)
b. Partnership	Not directly competing but leveraging 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. Opportunistic	Not a competitor and not a partner, but leveraging the brand for some non-product sales purpose (e.g., providing information about the brand, information about something related to the brand, or a service that one can associate with that brand (i.e., maps, stocks, etc.)

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 ten percent of the 300 queries by both authors. To confirm the level of agreement, inter-coder reliability was checked by Cohen's Kappa [28]. Cohen's Kappa was 0.807, which is on the borderline between "substantial" and "almost perfect" agreement.

Ibm

Locations, products, execs, financials, competitors, & more. View now.

www.hoovers.com

**Figure 4: Sponsored Ad from Yahoo! – triggered by the
search query: "ibm", an example of "Opportunistic"
piggybacking**

5.2 Research Question #2: How prevalent is piggybacking?

Table 2 shows the total number of links found on the 600 SERPs from the three search engines broken down by number of organic results, number of sponsored results, and number of sponsored results 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 93.2 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	Total Sponsored	Total Piggy-backing	%
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

The occurrence of piggybacking by type and by search engine is shown in Table 3.

**Table 3. Occurrences of Piggybacking
by Type by Search Engine**

	Google		Yahoo!		MSN Live		Total	
	Total	%	Total	%	Total	%	Total	%
a. Competitor	11	6	52	4	18	3	81	4
b. Partnership	134	78	772	65	375	55	1281	63
c. Opportunistic	27	16	367	31	284	42	678	33
	172	100	1191	100	677	100	2040	100

Despite the high occurrences of piggybacking (shown in Table 2), closer examination presents a somewhat different picture. The vast majority of piggybacking is the Partnership type, ranging from 64.8 percent on MSN Live to 77.9 percent on Google. The

second most frequently occurring type of piggybacking is Opportunistic, ranging from 15.7 percent on Google to 41.9 percent on MSN Live. What is most interesting, however, is the low occurrence of Competitor piggybacking, which has generated the most 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.

5.3 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 [c.f., 47]. Table 4 summarizes the occurrences of third-party brand names found in the ads' text, broken down by search engine and piggybacking type. As shown, the use of trademarked terms by competitors is extremely low.

Table 4. Occurrences of Brand Term in Ad

	Mention of Brand	Sponsored Total	% Mention	C	P	O
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

Search advertising professionals encourage advertisers to bid on their own brand names [c.f., 3]. However, the percentage of the sponsored ads by companies bidding on their own trademarks was 6.7 percent on Yahoo!, 15.6 percent on MSN, and 36.8 percent on Google (see Table 5).

Table 5. Occurrences of Self-bidding

	Sponsored Total	Self Total	% Self	North	East	South
Google	269	99	36.8%	30	66	0
Yahoo!	1278	86	6.7%	65	10	8
MSN	803	125	15.6%	54	13	57
Total	2350	310	13.2%	149	89	65

While the overall level of self-bidding may seem low, it is interesting to note the higher level of self-bidding on Google, the only one of the three that explicitly allows piggybacking in the U.S. This result suggests that the policy of allowing competitive piggybacking encourages advertisers to self-bid on brand names.

6. DISCUSSION AND IMPLICATIONS

This study's results show that the overall level of piggybacking varies across search engines. One factor seems to be that Google generally ran fewer sponsored ads per SERP (Table 2) and consequently, fewer piggybacking ads. This could be due to one or more of several reasons. First, piggybacking ads may be judged to be of a lower quality (i.e., of lower relevance to the searcher) because a competitor's trademark usually does not appear frequently on the landing page of the advertiser. If Google were to have a higher quality threshold than the other two search engines, it would make sense that piggybacking ads in general would

display less often. Secondly, another reason that Google's SERPs had fewer ads could be that Google's search volume, being many times greater than the others, allows it to have fewer ads per page while still producing enough ad impressions to satisfy the revenue model. Finally, we have defined the total number of sponsored ads to be equal to the number of piggybacking ads plus the number of ads in which advertisers bid on their own brands (i.e., self-bidding). Self-bidding was higher for Google (Table 5), so by definition, the percentage of piggybacking would have to be lower.

Competitive piggybacking, which has been a subject in the popular press as well as in numerous lawsuits [c.f., 47, 51], was found not to be that widespread for the queries we tested. We can think of three possible reasons for this. First, companies may have found that buying competitor' brand names as keywords may not be that effective or profitable. As each company's products/services and competitive situation are unique, it seems reasonable to assume that competitive piggybacking may not be effective in some situations. However, it seems unlikely that this alone would account for a low level of competitive piggybacking. As noted earlier, marketing professionals recommend it [e.g., 49]. Also, in one of the author's classroom experiences with students crafting search advertising campaigns for local businesses, one campaign's most effective search keyword was the trademark of a larger competitor. More research is needed to determine what factors are involved in the effectiveness of piggybacking ads.

The low level of competitive piggybacking could be a result of the search engines enforcing restrictions against questionable trademark use. However, the difficulty of this task makes it unlikely that this is the case. As Goldman [11] points out, enforcing the appropriate use of a trademark would "force the search provider to engage in a costly and possibly irresolute inquiry into each use of that word in their database" (p. 592). Determining what actual trademark infringement is in cases where the trademark brand uses common terms can get quite difficult. For example, consider the brand "State Farm", composed of two common terms. Both terms are legitimate terms that other insurance companies might use for bidding or in ads (e.g., "Insurance for farms" and "Insurance in all states").

Finally, competitive piggybacking might be reduced by companies' concerns about the legitimacy or legality of the practice. The current uncertain legal situation may be dissuading advertisers from piggybacking. Certainly, the prevalence of piggybacking will be affected by legal court rulings, one way or the other.

In addition to the legality of piggybacking, the courts must also decide whether and to what extent search engines are liable for trademark infringement. Resolution of these two issues will help advertisers know what the rules are and will inform search engines as to what their obligations are regarding trademark infringing advertisers. However, legal scholars still have much to do in the area of search engine law [16]. Commentators agree that these issues are years away from resolution [52].

The limitations of our study are that we examined only major brands. Although we believe that this brand selection method returns results similar to that from the market as a whole, other brand listings 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.

7. CONCLUSION

In this research, we investigated the occurrence of piggybacking in keyword advertising. Research findings show that occurrences of piggybacking are high, but the specific type of piggybacking that has caused much concern is actually quite low. Our results, and common sense, suggest that if piggybacking is found to be legal, there will be an increase in self-bidding, and prices of trademarks as keywords will rise. The winners in all this will be the search engines, and the losers will be the advertisers in more expensive/less effective advertising. What about the consumers? Will they benefit from increased competition in a greater diversity of search results, or will they feel misled and lose trust in search advertising? Future research involves in-depth quantitative and qualitative analysis of search behavior to see whether piggybacking improves or degrades the customer experience. We would also like to investigate the motivational factors that lead advertisers to engage in all forms of piggybacking in keyword advertising. It would be interesting to try to quantify the effect of piggybacking on keyword prices. The research can also be extended to other brands and to other countries. Finally, other e-commerce platforms with search capabilities, such as Amazon or eBay, could be explored. Social networking sites also allow the possibility of using other companies' brand names. For example, Needleman [36] reports of one instance on Twitter.com in which a company created a profile named for a competitor but promoted its own services instead.

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