

Google Bombing from a Time Perspective

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Google bombing is a collective attempt to change the placement of some documents in Google's result list for a given query. This can be achieved by extensive linking to the page to be promoted, since Google's ranking algorithm takes into account the quantity and quality of links pointing to a page. This article investigates whether the effects of Google bombing are long term or whether the interest in promoting a page diminishes over time. Nine Google bombs that were once successful and were 10-40 months old as of August 2005 were examined, and the content of a random 20% of the pages linking to the targeted pages was analyzed. The results of the content analysis show that the behavior of the Google bombs over time seems to be dependent on the type of Google bomb (humor, ego, or ideological) and on the community promoting the bombed page. Six of the targeted pages still occupied top positions, while three lost their effect over time.

doi:10.1111/j.1083-6101.2007.00356.x

Introduction

The Web has become a major source of information in the developed world, answering many of people's information needs in their everyday, personal, and professional lives. According to recent estimates, the size of the Web stands at 11.5 billion indexable documents (Gulli & Signorini, 2005). Due to the vast amounts of information available, special tools are needed in order to locate information on the Web. These tools are primarily the major commercial search engines: Google, Yahoo!, and Windows Live. According to a report by comScore (2007), in July 2006, Google's market share of searches was 47.3%, and Google, Yahoo, and Windows Live (MSN) together accounted for 86.3% of the searches on the Web in the United States.

Search engines are supposed to be unobtrusive tools for information retrieval. However, in reality they have considerable influence on the Web. Businesses, organizations, and individuals invest time and money so that their Web pages are placed high for certain queries; an entire new industry focusing on search engine optimization is based on this idea (SEMPO, 2004). One of the major activities in this new field concerns Organic Search Engine Optimization, which, according to the Search Engine Marketing Professional Organization's report, is "[t]he practice of using

a range of techniques, including augmenting HTML code, web page copy editing, site navigation, linking campaigns and more, in order to improve how well a site or page gets listed in search engines for particular search topics” (SEMPO, 2004, p. 4).

Search engines are the primary tools for finding information on the Web; they are extremely powerful, since they decide what to index and how to rank the indexed results for the specific queries. “Without much exaggeration one could say that to exist is to be indexed by a search engine” (Introna & Nissenbaum, 2000, p. 171). In order to be included in Google’s index, users can submit their sites (<http://www.google.com/addurl/>), or they can wait for the Google crawler to discover their new page/site. Crawlers are programs that cover the Web, starting from “seed” (a set of initial URLs) and then following links found on those pages (see, e.g., Levene, 2006). Submission does not guarantee inclusion; thus it is important to have links to the site in order to be discovered.

Links are important for the ranking process as well. One of the ingredients in Google’s ranking algorithm is PageRank (Brin & Page, 1998; Google, 2007). The PageRank of a page is determined by the quantity and quality of links pointing to it. The quality of a link is based on the PageRank of the source of the link (for a detailed explanation, see Levene, 2006). For most queries there are thousands of results, which only underscores the importance of ranking. Previous studies have shown that most users view only the first results page. For example, in a study of the search engine AlltheWeb in 2002, 76.3% of the users viewed the first results page only (Spink & Jansen, 2005). A recent eye-track study by Enquiro (2005) showed that users concentrate only on the top three results. Thus links are a key factor in locating information on the Web—Walker (2005), in discussing the economic power of links, considers them the “currency of the Web” (p. 524). Hargittai (2004) provides advice for non-profits on how to improve visibility in the online landscape. Her advised strategies include cross-linking among similar sites and linking to the welcome page from every page of the site (this is called self-linking).

Thus Web page owners, commercial and non-profit, try to please the search engines in order to enhance their visibility on the Web. As Introna and Nissenbaum concluded, search engines are far from being unobtrusive and objective; they influence what we see on the Web, and they themselves are influenced by the “collective preferences of seekers ... [and] tend to cater to majority interests” (p. 177).

Search engines such as Google not only influence the business landscape, they also have social implications. The verb “Google,” according to the Oxford English Dictionary (2006), has two meanings: 1) “[t]o use the Google search engines to find information on the Internet,” and 2) “[t]o search for information about (a person or thing) using the Google search engine.”

The remaining sections of the article first discuss “Google bombs,” a method to manipulate search results, specifically as they relate to the results of Google. Next, details about specific Google bombs, data collection, and analysis are provided. The results and discussion sections present the findings and discuss the fate of the analyzed Google bombs from a time perspective: Are Google bombs short lived, or

are they effective for long periods of time? On the Internet “a long time” is relative; in this study, 10-40 month old Google bombs were considered.

Google Bombing

An active manipulation of the results in Google is called “Google bombing.” The term *Google bombing* is even included in the second edition of *The New Oxford American Dictionary* (Price, 2005, n.p.). There *Google bombing* is defined as “the activity of designing Internet links that will bias search engine results so as to create an inaccurate impression of the search target.”

Google bombs work because, as mentioned before, Google’s ranking algorithm takes into account the quality and quantity of links pointing to the given page. This is not the only factor in Google’s secret algorithm, but concrete examples show that a large number of links pointing to a certain page may increase the placement of that page, especially when the query term appears in the anchor text of the link pointing to that page.

Successful Google bombs raise public interest and are often discussed in the media (e.g., the *LA Weekly* [Lewis, 2003], *BBC News* [2003], *The New York Times* [Flynn, 2004]); in search engine resources (e.g., Sullivan, 2002a & b, 2004a & b), and in the blogger community (e.g., Callishain, 2004; Leiter, 2005; Levine, 2002; Mathes, 2001; Rockley, 2005).

This exploratory study aims to examine whether successful Google bombs result in the continued prominence of the targeted pages on results pages, and if they do, whether there is a change in the linking patterns to the target pages. The “bombing” not only affects the targeted page, but also affects the search engine: It becomes manipulated by the public. The question raised here is whether this manipulation has a short- or a long-term effect on search query outcomes.

As can be seen, links are central to Google bombing. Links are often considered analogues of citations in the scientific environment (Brin & Page, 1998). “Google interprets a link from page A to page B as a vote, by page A, for page B” (Google, 2007). But are links similar to citations when linking patterns are considered at different points in time? A major difference between the two is that citations in printed literature are here to stay, whereas links that exist at one point in time may disappear in the next moment. The number of citations a publication receives is monotonically non-decreasing over time, but what can be said about link counts?

The growth patterns of printed, scientific literature have been studied extensively. The growth of scientific literature on a topic over time can usually be characterized by a logistic function (Egghe & Rousseau, 1990; Price, 1963). The logistic growth curve is characterized by initial exponential growth, explained by the success-breeds-success principle (Egghe & Rousseau, 1990, pp. 297-301; Price, 1976), followed by a period of linear growth. Later the rate of growth slows considerably, until all interest in the topic disappears. Bar-Ilan (1997) showed that the logistic growth

function is also applicable to newsgroup discussions on “hot topics”—she studied discussions on mad-cow disease at the time the crisis erupted in the UK—but the life span of the curve was not measured in years; it took only 100 days for interest in the topic to level off.

Standard informetric techniques are applicable to newsgroups postings (Bar-Ilan, 1997), because once a message is posted it does not change. This, however, is not true of Web documents in general. Some of them change over time; others move to a different URL or disappear from the Web altogether (see, e.g., Bar-Ilan & Peritz, 2004; Fetterly, Manasse, Najork, & Wiener, 2003; Koehler, 2004). Printed literature and even newsgroup postings (since they are usually archived) cumulate; thus the function characterizing the cumulative growth is monotonic, non-decreasing. This is not the case for Web links: When a document is removed from the Web, all the links on the page disappear with it. In addition, Web documents often undergo changes, causing additions/deletions of the links outgoing from these pages. Since the essence of Google bombing is linking to the target page, it is not possible to apply existing informetric techniques to study the development of Google bombs over time. In this article, several Google bombs are considered in order to gain insight into linking to the targeted sites some time (between 10 and 40 months) after the Google bomb was created.

Google bomb links often emanate from blogs (usually from the sidebar of the blog) and from forums (where the “bombing” link appears in the signature files of the participants); thus the bombing link often does not form an integral part of the content of the posting (Bar-Ilan, 2006; Kahn & Kellner, 2004). Blogs have been defined as “pages consisting of several posts or distinct chunks of information per page, usually arranged in reverse chronology from the most recent post on the top to the oldest post at the bottom” (Bausch, Haughey & Hourihan, 2002, p. 7). Blogging has become a popular online activity, although according to the Pew Internet & American Life Project, only 8% of Internet users keep a blog, and only 39% read blogs (Lenhart & Fox, 2006).

It is very easy to edit the signature that appears at the bottom of forum messages or to redesign the sidebar of a blog without altering the actual content of individual posts, and this design change at once affects all previously published posts. This process was called “retroactive change of history” by Bar-Ilan (2006). She demonstrated that even during a short period of time (about five months), the linking patterns to the targeted pages changed considerably. These changes occurred without changing the textual content of blog posts. Blog entries have so-called permalinks or permanent links (Bausch et al., 2002); thus changing the sidebars affects all existing blog postings without changing the actual contents of the postings.

Google bombs are one of the means through which Google’s search results are manipulated. This study set out to explore whether Google bombing has a long-term effect on the ranking of search results. In order to do this, a sample of Google bombs was selected, and the content of a sample of source pages (pages from which the links to the targeted page emanate) and the links were analyzed.

Data and Methods

Google Bomb Selection

The Web was first searched for information on Google bombs. Several lists were found, the most comprehensive of which was in a Wikipedia entry. “Google bomb,” as of August 2005 (Wikipedia, 2005a), contained a list of 32 accomplished Google bombs, eighteen of them in English. This list contained all the Google bombs that I was able to locate through extensive searches on the Web and was the most comprehensive list available at the time. A comparable list including more recent Google bombs was published in the Technology News and Reviews Daily blog (2006).

From the Wikipedia list all the English queries considered to be “real queries” users would ask and that would get biased results because of the Google bombing were picked; thus, practical jokes like “miserable failure” (pointing to the official biography of President George W. Bush) and obscene phrases were excluded. For the purposes of this article, cases with financial motives were also excluded, because the aim of this study was to concentrate on the social aspects of the phenomenon. Among the major non-financial reasons for Google bombing, as identified by Hiler (2002a), are humor, ego, and justice.

In addition, Hiler (2002a) provides details of a number of “older” bombs not included in the Wikipedia list, out of which, again, all the Google bombs that would appear in response to “real” queries were chosen. Google bombs with financial incentives were excluded in this case, as well.

Below is a list of the selected Google bombs in chronological order. Most of the searches for the current rank on Google of the target pages were conducted on August 7, 2005, and some were carried out during September 2005. For each search, the exact date that it was executed is given. Because search results are dynamic and change often, it is important to report the exact time.

- *David Gallagher* – David Gallagher is a freelance journalist who maintains a blog at <http://www.lightningfield.com/>. In February 2002, he decided that he wanted to be the most famous David Gallagher on the Internet and asked people to link to his blog with the anchor text *David Gallagher* (Gallagher, 2002a). His scheme succeeded by April 2002 (Gallagher, 2002b). In one of his blog postings (Gallagher, 2002c), he thanked the people who helped him. As of August 7, 2005 his blog was still the number one result for the query *David Gallagher*.
- *scientology* – This long and involved fight between scientology.org and xenu.net (an anti-scientology site) erupted at the beginning of 2002 (for an extensive account, see operatingthetan, 2002). The Church of Scientology filed a DMCA complaint, which resulted in temporarily removing the xenu.net site from Google (Gallagher, 2002d). This site was also removed from the Internet Archive (<http://www.archive.org>) (Miller, 2002), and extensive search on the scientology.org site did not yield any pointers to discussions of this issue. The Google bombing issue probably started by scientology.org trying to increase its ranking artificially, but it backfired when bloggers Google bombed the xenu.net site instead (Hiler, 2002b).

As of August 7, 2005, scientology.org's homepage was number one and xenu.net is number three when searching for scientology on Google; the number two page was another page from the scientology.org site.

- *Daniel Pearl videotape* – This Google bomb promoted the page <http://home.nyc.rr.com/janegalt/Videotapes.htm>, which instead of showing the tape of Daniel Pearl's death, expresses disgust with people who want to view the tape. This is what Hiler (2002a) calls a "justice bomb." This page still existed and was indexed by Google, but was not among the 748 results out of 133,000 that are displayed for the query as of September 10, 2005. This bomb was dated February 2002.
- *Critical IP* – The target of this Google bomb was a page against the company Critical IP. This is called a "justice bomb" by Hiler (2002a, n.p.), against "a corporation accused with telemarketing to domain name owners by stealing phone numbers out of an Internet database." The targeted page does not exist anymore, but is archived by the Internet Archive, and can be accessed at <http://web.archive.org/web/20020219190520/http://a.wholelottanothing.org/archived.blah/2/01/2002/>). Six out of the top-ten pages for the query *Critical IP* still pointed to this non-existent page as of August 7, 2005. This bomb also dates from February 2002, and in just a few days the warning note was ranked above the company's site on Google (Hiler, 2002c).
- *French military victories* – This bomb was targeted at <http://www.albinoblacksheep.com/text/victories.html>, which is a page that looks like a Google results page. It says that the search did not match any documents and suggests searching for French military defeats instead. This page was created in January 2003 and was already successful in February 2003 (perhaps even earlier; see Thoughts, Arguments, and Rants, 2003). It was still number one for the search phrase on Google as of August 7, 2005.
- *weapons of mass destruction* – The targeted page was <http://www.coxar.pwp.blueyonder.co.uk/>, which states that weapons of mass destruction cannot be displayed. The page was set up in February 2003 and became a successful Google bomb in July 2003 (Cox, 2003). By August 7, 2005, it lost its placement and was result number 125, replaced in top popularity by the U.S. Treasury's page on foreign assets control (<http://www.treas.gov/offices/enforcement/ofac/>).
- *poodle* – This Google bomb was aimed at Tony Blair's biography at <http://www.number-10.gov.uk/output/page4.asp>); it was started around January 2004 (Infothought, 2004). Tony Blair's official biography was number eight on google.com as of August 7, 2005, and when searching at google.co.uk and limiting the search to UK pages only, the biography is the first result for the query *poodle*. The number one search result for *poodle*, when the results are not limited to UK pages only, was: <http://www.poodleclubofamerica.org/>.
- *jew* – In this case two pages (<http://www.jewwatch.com> and <http://en.wikipedia.org/wiki/Jew>) were Google bombed by two competing groups. The [jewwatch.com](http://www.jewwatch.com) page was number one before the bombing of the Wikipedia entry commenced in March 2004 (Bar-Ilan, 2006), and the Wikipedia entry became the

top result for *jew* for the first time by mid-April 2004 (Bar-Ilan, 2005). This Google bomb started when it was noticed that a highly anti-Semitic page (*jewwatch*) was the top result for the query *jew*.

The top-ranking page for the *jew* query caused considerable public reaction (see, e.g., Flynn, 2004; Sullivan 2004b), and a petition to Google asked for the removal of the *Jewwatch* site from its index (Removejewwatch, 2004). The site was not removed, nor was its rank lowered. However, Google added its response appearing as a sponsored link when carrying out the search “Offensive search results” (<http://www.google.com/explanation.html>). There they explain that although they do not like what they see, the ranking algorithms are automatic, and they are not going to interfere with the results. Google.de and google.fr do not index the *jewwatch* site, because “the French and German sites seem to screen search results corresponding to sites with content that might be sensitive or illegal in the respective countries” (Zittrain & Edelman, 2002, n.p.).

On August 7, 2005, the Wikipedia entry *jew* was the top result for the query *jew*, while *jewwatch.com* was number three. The situation with this Google bomb is not entirely stable, and sometimes the *Jewwatch* page still comes up first (for example, this happened on September 27, 2005).

- *Arabian Gulf* – The top site is <http://arabian-gulf.info>, stating that the gulf never existed. This Google bomb first appeared in November 2004 (Anonymous blogger, 2004); it was the number one result on Google for *Arabian gulf* on August 7, 2005. The controversy around the name of the Persian Gulf started when The National Geographic Society considered Arabian Gulf as the second name for the Persian Gulf in the 8th edition of its *Atlas of the World* (Green Years, 2004). This is a long-standing naming dispute (El-Najjar & Habibi, 2005) that reached the Internet recently. The target page has an Arabic version as well at <http://arabic.arabian-gulf.info>. The URL http://legofish.com/arabian_gulf.htm redirects to <http://arabian-gulf.info>, and links to both addresses target the same page and are retrieved as sources of links to <http://arabian-gulf.info>.

Two additional famous bombs are mentioned here, *more evil than Satan* (aimed at the Microsoft corporation) and *miserable failure* (primarily aimed at George W. Bush, but also at Jimmy Carter), although I do not consider these queries to be “real queries” users would ask, but rather examples of anecdotal interest. The *more evil than Satan* query, although no longer working, is one of the oldest Google bombs, dating back to October 1999 (Sullivan, 1999). Interestingly, for a short time in November 2004, the top result for the same search at MSN was Google (Sullivan, 2004c). The *miserable failure* bombs started around December 2003 (BBC News, 2003), and the biography of President George W. Bush was still the top result for the query as of September 10, 2005; however Jimmy Carter’s biography (previously number two) did not appear among the first 500 results. The Jimmy Carter bomb was allegedly set up by Bush supporters in retaliation against the original one (Wikipedia,

2005b). The *miserable failure* Google bomb has a side effect: For the query *biography* on Google, George Bush's biography was number 14 as of September 10, 2005, the first item which is a biography of a person and not a database or a collection. Since the number of links to a page influences its rankings, the "miserable failure" links made the George Bush biography page not only visible for the query "miserable failure" but for other queries like "biography" as well.

For the Google bomb *jew*, data are available on the linking patterns near the time the bomb started in March 2004; the link data are from August 2004 (Bar-Ilan, 2006). Thus, for this case I was able to compare the links to the targeted pages around the time the bombing started and the links to the same pages one year later. For the other Google bombs in the list only the links to the targeted pages 10 to 40 months after the bombing started were examined.

Data Collection

On August 7, 2005 links pointing to the bombed pages using Google's *link:* feature were collected. A query of the type *link:http://www.aaa.b/c.html*¹ retrieves pages that link to <http://www.aaa.b/c.html>. Without this feature, search engine users would not be able to learn about links pointing to specific pages. Google was used to collect the link data because Google bombs are aimed at Google.

In spite of the usefulness of the *link:* feature, it has several known limitations. First, Google only displays 1,000 results regardless of the actual number, and queries containing the meta word *link:* cannot be combined with other search terms.² Another limitation is that Google does not display or report all the pages linking to the given page it indexes (Bar-Ilan, 2002; Searchenginewatch Forum, 2004). Even if the reported number of search results is less than 1,000, Google does not display the whole set, unless the user clicks on the link saying "*repeat the search with the omitted results included*" at the bottom of the search results page. Google justifies the omission of certain results by saying "[i]n order to show you the most relevant results, we have omitted some entries very similar to the ... already displayed." It is not known how Google selects which pages to display, and of course its choice may bias the results.

It is assumed here that the displayed pages are a representative sample of the whole set of pages for the given query. In this study, only the initially displayed results are considered because only a sample of the links was analyzed. For links to the targeted pages for the query *jew*, the search was repeated with the omitted results included, since this method was employed when data were collected for the first time (Bar-Ilan, 2006). No link data were collected for the *Daniel Pearl* videotape and for *Critical IP*, because there were no links to the targeted pages. For *jew* and *scientology*, link data were collected for both competing pages, which were still top ranking pages for these searches. For *weapons of mass destruction* the targeted pages were no longer top-ranked; thus link data were also collected for the currently number one search results. Finally, for the query *poodle*, link data were collected both to the targeted pages and to the top-ranking page at google.com.

For each target URL (either a bombed page or a currently number one page) the URLs of all the source pages pointing to the target page displayed by Google on August 7, 2005 were collected. These URLs were visited on the same day and the pages residing at those URLs were downloaded to a local drive. A small number of the pages were inaccessible (mainly due to communication problems, server problems, “page not found,” and “access forbidden” reasons). Table 1 displays the details of the data collection; the Google bombs are displayed in the order of their first appearance (from oldest to most recent). The difference between the number of identified versus collected pages with links to the specific pages results from the inaccessible pages.

Data Analysis

The links and the pages containing the links were characterized using content analysis (Krippendorff, 1980; Neuendorf, 2002). As claimed in Bar-Ilan (2005), it is not enough to characterize the link; the embedding page and the creator of the page have to be taken into account in order to gain better insight into the linking process. The content analysis provided details on the creator, page type, intention of link, link placement, and relationship between source and target—based on the model proposed by Bar-Ilan (2005). Figure 1 depicts the basic model. In the general model the target has to be characterized as well, but in the present study, the targets were already described in the “Google Bomb Selection” section of this article.

For each analyzed page and link, a single value was assigned to each of the attributes appearing in Figure 1. The values were chosen from a predefined list based on a preliminary analysis of the pages and links. The following is a list of the attributes and the set of possible values assigned to them:

- creator: individual, community/forum, organization, government/military, company (other than news outlet or portal), educational institution, government/military, news outlet/publisher, portal, wiki, other and undeterminable
- page type: blog/blog posting, forum/discussion list, content page, resource list, news item (one or more)/press release/article, encyclopedia entry, form, non-textual resource, toc/directory/sitemap/bookmark, mixed (more than one value), other and undeterminable
- intention: informative, interactive (discussions), navigational, administrative (e.g., contact info), raising link count, undeterminable, other
- link context: general content, Google bomb (the link is inserted only in order to promote the ranking of the target for the specific anchor text), discussing Google bomb(s), navigation, archiving, administrative (e.g., contact info, credit), resource list, link only, invisible link, undeterminable, other
- link placement: embedded, part of a list, sidebar, signature, menu/logo, notices area (usually at the bottom of the page, contact, copyright, etc.), other and undeterminable
- link tone: neutral, positive, negative, unknown/undeterminable

Table 1 Number of link pages identified and analyzed for each Google bomb

Google bomb	Date of first appearance	URL of the target pages	# identified link pages	# collected link pages	# analyzed link pages
David Gallagher Scientology	February 2002	www.lightningfield.com	344	342	69
	March 2002	www.scientology.org	486	482	98
		www.xenu.net	482	481	97
French military victories	February 2003	www.albinoblacksheep.com/text/victories.html	69	69	16
Weapons of mass destruction	July 2003	www.coxar.pwp.blueyonder.co.uk/	396	389	78
		www.treas.gov/offices/enforcement/ofac	359	356	73
poodle	January 2004	www.number-10.gov.uk/output/Page4.asp	812	807	165
		www.poodleclubofamerica.org/	36	35	9
jew	March 2004	en.wikipedia.org/wiki/Jew	942	938	188
		www.jewwatch.com/	294	287	63
Arabian gulf	November 2004	arabian-gulf.info	195	166	33

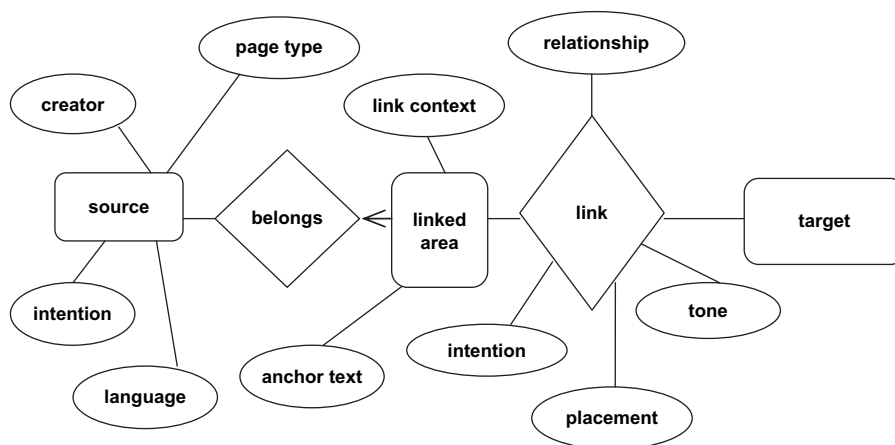


Figure 1 The link characterization framework (Bar-Ilan, 2005)

- **relationship:** target expands information existing on the source page, target is designated as useful by the source, source discusses/describes target, source is based on target, Google bomb, beware of target, link to target aids navigation, target provides service (e.g., archiving), appears (without any context), mentions target (in the general context of the page), affiliated with target (person or entity mentioned), source page is affiliated with target (e.g., mirror site), target is credited, undeterminable, other

For each target URL, a random 20% of the source pages pointing to that target from the list of accessible link pages displayed by Google was analyzed. Altogether, 889 pages were analyzed (see breakdown per target page in Table 1). A random 10% of the randomly chosen link pages (90 pages) was analyzed by a second coder as well. Inter-coder agreement was high, as can be seen in Table 2, since the assigned values were rather general, and there were great similarities in the contents of many of the pages.

Table 2 Inter-coder agreement on the link analysis

Attribute	# of times coders agreed (out of 90)	% of time coders agreed
creator	84	93.3%
page type	80	88.9%
intention	82	91.1%
link context	84	93.3%
link placement	90	100.0%
link tone	85	94.4%
link intention	87	96.7%
relationship	79	87.8%

Results

First the summary of the content analysis of the source pages (Table 3) and of the links (Table 4) is presented. For each attribute, the tables provide data only for the most prevailing values relating to that attribute for each of the target pages.

In the content analysis, for each page its creator, page type, intention, and language were defined. In the summary table, data are provided only about the creator and the page type. For each target page, with the exception of the *Arabian Gulf* bomb, the language of 80% or more of the source pages was English. Seventy-six percent of the source pages linking to arabian-gulf.info were in Persian or in Persian and English. For all the target pages, with the exception of [jewwatch](http://jewwatch.com), 93% or more of the pages were assigned the value “informative” for the attribute “intention.” Only 70% of the source pages linking to jewwatch.com were defined as informative, the intention of the remaining pages being navigational (e.g., tables of contents of sub-sections of the site) or interactive (e.g., forum discussions).

Altogether, the sample consisted of 889 pages. Several pages contained more than one link to the target page; therefore, the total number of analyzed links was 1,102. Table 4 displays the most frequently assigned values for the attributes link context, link placement and relationship between linked area (the vicinity of the hypertext link to the target), and the target. During the content analysis, values were assigned to link context, link placement, link tone, link intention, and relationship. Only two targets contained a substantial percentage of links with negative intention: Tony Blair’s official biography (46.7% links with negative intention, i.e., with anchor texts “liar” or “poodle”) and the jewwatch.com page (20.7% links with negative intention with anchor texts like “peckerwood” or “anti-Semitic site”). The attribute “link intention” conveyed very similar information to “link context;” therefore, it was decided not to display the results in the table.

Table 4 shows that even 10 to 40 months after the Google bombing started (depending on the specific Google bomb), 32.7% of the links appeared on the source pages clearly in order to raise the link count of the targeted page. In addition, at least a portion of the links pointing to scientology.org are probably “disguised” link-count raising links, for example, mirror sites and affiliate sites pointing to the homepage of scientology.org. In the next section, the linking patterns from a time perspective for each Google bomb are discussed separately.

Discussion

David Gallagher

This Google bomb was intended to be an “ego bomb” (Hiler, 2002a). Journalist David Gallagher declared that he wanted to be the most famous David Gallagher on the Web. Another well-known David Gallagher is the movie and TV star (<http://www.imdb.com/name/nm0302356/#actor1990>). It took about three months for the journalist David Gallagher’s blog to become the number one result on Google in response to the query *David Gallagher*.

Table 3 Summarized results of the content analysis of the source pages

Google bomb	URL of the target pages	# analyzed pages	Creator	Page type	
David Gallagher Scientology	www.lightningfield.com	69 pages	individual	97.1% blog	95.7%
	www.scientology.org	98 pages	organization	81.6% content page	64.3%
	www.xenu.net	97 pages	individual	78.4% blog	49.5%
French military victories Weapons of mass destruction	www.albinoblacksheep.com/text/victories.html	16 pages	individual	87.5% blog	68.8%
	www.coxar.pwp.blueyonder.co.uk/ www.treas.gov/offices/enforcement/ofac	78 pages 73 pages	individual company individual government/military	98.7% 31.5% 16.4% 15.1%	91.0% 24.7% 24.7%
poodle	www.number-10.gov.uk/output/Page4.asp	165 pages	government/military	54.5% blog	38.2%
			individual	38.2% news item/ press release	37.0%
jew	www.poodleclubofamerica.org/ en.wikipedia.org/wiki/Jew	9 pages	organization	44.4% resource list	55.6%
		188 pages	individual wiki	49.5% 44.7%	48.9% 43.6%
	www.jewwatch.com/	63 pages	individual	87.3% content page	36.5%
Arabian gulf	arabian-gulf.info	33 pages	individual	90.9% blog	90.9%

Table 4 Summarized results of the content analysis of the links to the target pages

Google bomb	Abbreviated URL	# analyzed links	Link context		Link placement		Relationship between linked area and target	
David Gallagher	lightningfield	95 links	navigation	55.8%	menu/logo	43.2%	target useful	37.9%
			resource list	37.9%	sidebar	37.9%	aids navigation	55.8%
Scientology	scientology	138 links	navigation	50.7%	menu/logo	45.7%	source affiliated with target	44.2%
			resource list	27.5%	part of a list	23.2%	aids navigation	12.3%
	xenu	103 links	Google bomb	53.4%	sidebar	40.8%	Google bomb	57.3%
			resource list	19.4%	embedded	23.3%	target useful	13.6%
French military victories	albinoblacksheep	16 links	Google bomb	62.5%	embedded	68.8%	Google bomb	100.0%
Weapons of mass destruction	coxar	78 links	Google bomb	74.4%	sidebar	52.6%	Google bomb	88.5%
			embedded	43.6%				
	treas	74 links	general content	50.0%	embedded	50.0%	expands information on source page	43.2%
			resource list	45.9%	part of a list	44.6%	target useful	39.2%
poodle	number-10	195 links	navigation	46.7%	menu/logo	46.7%	aids navigation	46.7%
			Google bomb	44.6%	sidebar	34.4%	Google bomb	45.6%
			resource list	88.9%	part of a list	100.0%	target useful	77.8%
			general content	48.2%	embedded	51.0%	Google bomb	48.6%
jew	poodleclubofamerica	9 links	Google bomb	42.9%	sidebar	38.0%	expands information on source page	43.7%
			general content	48.2%				
	wikipedia	245 links	Google bomb	42.9%	sidebar	38.0%	expands information on source page	43.7%
			link only	33.7%	top & bottom of page	33.7%	Google bomb	48.9%
Arabian gulf	arabian-gulf	57 links	navigation	20.7%	notices area	21.7%	aids navigation	20.7%
			Google bomb	78.9%	embedded	56.1%	Google bomb	60.3%
					sidebar	36.8%		

After three and a half years, his blog was still number one for this search. However, in our sample only a single link was inserted with the clear purpose of raising the link count to the journalist's home page. Most of the links (59%) were inserted from his own blog, in order to facilitate navigation within the site (self-links). Google does not disclose any details of its ranking algorithm, thus we have no information about the way it treats self-links. The remainder of the links were categorized as a sign of appreciation for David Gallagher's photo blog, as all of these links appeared on the blogrolls of the pages linking to David Gallagher's photo blog. A few other pages discussed the photoblog in slightly more detail. Thus it was concluded that although massive linking to David Gallagher's blog started out as a Google bomb, as of August 2005 linking to this page is done either for navigational purposes (self-links) or as a sign of genuine appreciation. This is *not* an active Google bomb any more; the "bombing links" have been replaced with genuine links.

Scientology

The rivalry between the two competing pages (www.scientology.org and www.xenu.net) is almost as old as the David Gallagher Google bomb. In spite of this, the results of our analysis are strikingly different. Emotions are still at work more than three years after the issue erupted. We set the date of origin of these bombs at March 2002, when the Church of Scientology filed a DMCA complaint against [xenu.net](http://www.xenu.net), although the rivalry between the two sides existed before that (Wouters, n.d). The site "Operation Clambake" (<http://www.xenu.net>) was established in 1996 (according to the subtitle on the homepage: "Undressing the Church of Scientology since 1996"). Scientology is a hot topic on the Web, as can be seen from its coverage by the Open Directory (<http://www.dmoz.org>). It has five categories that are related to the Church of Scientology and to its opponents:

- ◆ Society: Religion and Spirituality: Scientology
- ◆ Society: Religion and Spirituality: Opposing Views: Scientology
- ◆ Society: Religion and Spirituality: Religious Studies: New Religious Movements: Scientology
- ◆ Society: Issues: Intellectual Property: Copyrights: Digital Millennium Copyright Act: Google Erasure of Anti-Scientology Links
- ◆ World: Deutsch: Gesellschaft: Religion and Spiritualität: Religions- und Sektenkritik: Scientology.

Analysis of the links to the homepage of the Church of Scientology shows that most of the links emanate from affiliate sites: 17% came from [scientology.org](http://www.scientology.org) (self-links), 68% were identified as pages from sites directly affiliated with [scientology.org](http://www.scientology.org) (e.g., whatisscientology.org, ironhubbard.com, home.scientology.org, [scientology.net](http://www.scientology.net)), 6% were maintained by members of the Church of Scientology, and only 8% came from non-affiliated sites. Such a large percentage of affiliated sites in the list of linking pages seems to support claims that the affiliate sites were created in order to raise the link count of [scientology.org](http://www.scientology.org) (Operatingthetan, 2002).

On some of the examined pages we found more than one link to www.scientology.org—in total, 138 links were located on the 98 pages examined. The pages from the [scientology.org](http://www.scientology.org) site usually contained three separate links to the homepage (a total of 45 links). The 75 links from the affiliated sites most often appeared on the menu bar or as part of a list of links under a “related links” section, usually at the bottom of the page—only four links were embedded in the textual content of the site. We conclude that this page is still actively promoted by sympathizers of the Church of Scientology.

The site competing to be the number one site for the query *scientology* is “Operation Clambake” (www.xenu.net)—a fierce opponent of the Church of Scientology. This page was the third result for the query *scientology* on Google. Here, too, we examined a random set comprising 20% of the link pages identified by Google (see Table 1). Of 97 source pages, only 6% were self-links from the [xenu.net](http://www.xenu.net) site and about half of the pages (49%) were blog pages. Some individuals were more active than the owner of the site in promoting it, for example 23% of the pages were from doc.weblogs.com, and 14% were from www.skepticfiles.org.

The context of 53% of the links was identified as “Google bombing”—mainly links without any specific explanation on the sidebars of the blog pages or on the menu bar of some content pages. Thus, linking to www.xenu.net, even after more than three years, is still mainly for Google bombing purposes. Both pages likely continue to be actively promoted because the tension between the sympathizers and the opponents of the Church of Scientology has not been resolved.

French Military Victories

This could be defined as a humorous, political Google bomb. The bomb appeared in February 2003, and still occupies position number one on Google when one searches for *French military victories*. The page looks like a Google result page and states that “Your search —french military victories—did not match any documents” (see Figure 2).

Sixty-nine percent of the analyzed pages with links to this page were blog pages. Here 69% of the links appeared in the text of the blog postings and not on the blogs’ sidebar, as an interesting, humorous item worth mentioning, and not as a concerted attempt to bomb the page. Thus it would seem that this page remains number one for the specific query, because users always like to have a laugh. Also, its placement is not the result of a classical Google bomb, where Web page authors insert a link to the specific page with the sole purpose of promoting that page. Instead, they discuss the content of the page in their blogs as an interesting issue.

Weapons of Mass Destruction

The page <http://www.coxar.pwp.blueyonder.co.uk/> is far from being a top page. This bomb, like the one concerning *French military victories*, is humorous and political (see Figure 3). A possible explanation for its current rank is that the page has been “Google washed” (Orlowski, 2003)—that is, new, more popular pages on the topic

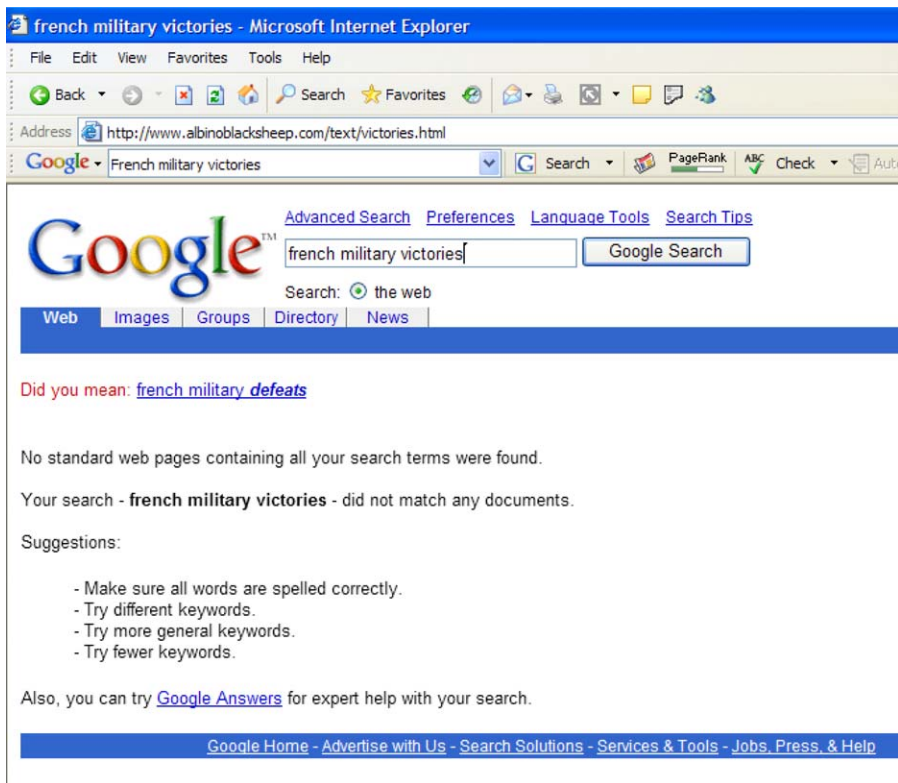


Figure 2 The top result for *French military victories*

appeared and pushed down the bombed page. This explanation is partially supported by the fact that on August 7, 2005, the top result for this query was a page of the U.S. Treasury's Office of Foreign Assets Control (www.treas.gov/offices/enforcement/ofac/), while on September 25, 2005 the top result was a page on weapons of mass destruction in the Middle East by the Center for Nonproliferation Studies (<http://cns.miis.edu/research/wmdme/>). Likely due to current interest in the topic, the ranking of the results has changes as new pages on the topic have appeared.

Most of the links (74%) appeared in the context of Google bombing; that is, the links were seemingly established with the sole purpose of raising the link count to the page. Only 8% of the pages discussed the Google bombing issue. Almost all of the analyzed pages (91%) were blog pages. Blog pages are often sources of Google bomb links (Kahn & Kellner, 2004).

We also analyzed a sample of the pages pointing to the U.S. Treasury's Office of Foreign Assets Control. In this case, 43% of the links appeared in order to expand on the information already appearing in the source page, and another 39% of the source pages listed the target as a useful site that provides information on the topic. Here the distributions of the link context and of the relationship between the source and the



These Weapons of Mass Destruction cannot be displayed

The weapons you are looking for are currently unavailable. The country might be experiencing technical difficulties, or you may need to adjust your weapons inspectors mandate.

Please try the following:

- Click the  Regime change button, or try again later.
- If you are George Bush and typed the country's name in the address bar, make sure that it is spelled correctly. (IRAQ).
- To check your weapons inspector settings, click the **UN** menu, and then click **Weapons Inspector Options**. On the **Security Council** tab, click **Consensus**. The settings should match those provided by your government or NATO.
- If the Security Council has enabled it, The United States of America can examine your country and automatically discover Weapons of Mass Destruction. If you would like to use the CIA to try and discover them, click  [Detect weapons](#)
- Some countries require 128 thousand troops to liberate them. Click the **Panic** menu and then click **About US foreign policy** to determine what regime they will install.
- If you are an Old European Country trying to protect your interests, make sure your options are left wide open as long as possible. Click the **Tools** menu, and then click on **League of Nations**. On the Advanced tab, scroll to the Head in the Sand section and check settings for your exports to Iraq.

Figure 3 The page at <http://www.coxar.pwp.blueyonder.co.uk/>

target are considerably different from the distributions characteristic of links to Google bombed pages.

Poodle

This is a British political joke; the poodle is supposed to be Prime Minister Tony Blair, and the targeted page, with this anchor text, is his official biography (www.number-10.gov.uk/output/Page4.asp). The same page is also being bombed with the anchor text "liar." The liar Google bomb seems to be even more successful, because on google.com the Blair biography was number four for *liar* and number eight for *poodle* (of course, none of these words appears on the page itself) as of August 7, 2005. As stated above, this Google bomb was successful (the official biography was ranked number one for the query *poodle* when the searches were limited to UK pages only).

The analyzed source pages can be partitioned into two groups: self-links from the site www.number-10.gov.uk (the 10 Downing Street official Web site) and blog pages

with negative opinions about Tony Blair; 55% of the pages were from the site www.number-10.gov.uk (self-links) and 38% were blog pages. The large number of self-links is due, in large measure, to the fact that the link to Tony Blair's biography appears on the menu bar of the site, which also appears to be on each page of this large site. The most common anchor texts of the links that were not from the number10.gov.uk site were: liar (50%), poodle (17%), and Lame Duck (14%)—illustrating the negative attitude of these Web page authors towards Tony Blair. Almost all of the non self-links appeared in the context of Google bombing. In contrast, the 89% links to the current top result for *poodle*, the Poodle Club of America (www.poodleclubofamerica.org/), appeared as part of a resource list related to the dog breed poodle.

Jew

This Google bomb is from March 2004. Its aim was to replace the then number one page, the homepage of the Jewwatch site (www.jewwatch.com), with the Wikipedia entry *jew* (en.wikipedia.org/wiki/Jew). The *jewwatch* site is an anti-Semitic site, and it did not seem appropriate to the Google bombers that such a site should be top-ranking for the query *jew*. The *jewwatch.com* homepage was counter-Google bombed by sympathizers of the site, who inserted links with the anchor text “*jew*” that pointed to www.jewwatch.com. The content analysis was carried out on data retrieved on August 7, 2005, when the Wikipedia entry was ranked as the number one result and *jewwatch.com* as result number three. Figure 4 shows the top results returned by Google for the query *jew* on August 7, 2005.


For this Google bomb, unlike all the other Google bombs discussed in the study, we have information about the linking patterns to the targeted pages both from August 2004 (Bar-Ilan, 2006) and from August 2005 (the current study). Thus for this Google bomb we were able to compare the linking characteristics at two different points in time, one near the creation of the Google bomb and the other one year after the first characterization.

First, we describe the major findings for the Jewwatch homepage. Sixteen percent of the examined pages were from the *jewwatch.com* site (16% - self-links), and 25% of the pages from christianparty.net/wm/—a site sympathizing with Jewwatch.

One hundred links to the Jewwatch home page were located on these pages (on some pages there was more than one link; 78% of these links had a positive or neutral attitude towards this site; while 22% were negative (including anchor texts like *peckerwood* or *anti semitic site*).

When comparing the distribution of the page type of the linking pages, considerable changes are evident between the results of August 2004 and August 2005. In August 2004, 45% of the pages were forum/discussion list pages (mainly from stormfront.org—the site of a white nationalist community), whereas in August 2005, only 8% were forum/discussion list pages. We revisited all the pages from stormfront.org that were identified by Google as linking to the homepage of Jewwatch in August 2004 but were not listed in August 2005. All of the 120 pages

[Sign in](#)


[Web](#) [Images](#) [Groups](#) [News](#) [Froogle](#) [Local](#) [more »](#)

[Advanced Search](#) [Preferences](#)

Web Results 1 - 100 of about 4,240,000 for [jew](#) [definition] (0.10 seconds)

[Offensive Search Results](#) Sponsored Link

www.google.com/explanation We're disturbed about these results as well. Please read our note here.

[Jew - Wikipedia, the free encyclopedia](#)

Discussion of the difference between Jewish religion and ethnicity, with notes on the Jews' history, beliefs, and culture.
en.wikipedia.org/wiki/Jew - 101k - 4 Aug 2005 - [Cached](#) - [Similar pages](#)

[Jew Watch - Wikipedia, the free encyclopedia](#)

According to its supporters, **Jew Watch** reports accurate information regarding ... **Jew Watch** features an archive of opinion, writings, articles and links, ...
en.wikipedia.org/wiki/Jew_Watch - 23k - [Cached](#) - [Similar pages](#)
[\[More results from en.wikipedia.org \]](#)

[Jew Watch](#)

Keeping a close watch on Jewish communities, organizations, monopoly, banking, and media control worldwide.
www.jewwatch.com/ - 33k - [Cached](#) - [Similar pages](#)

[Jew Watch - Jewish Entertainment](#)

Melissa Joan Hart- Mother's father devout orthodox **Jew** Ken Wahl - Wiseguy star Jewish? ... Paula Abdul - famous singer (Mother is French canadian **Jew**) ...
www.jewwatch.com/jew-entertainment-folder.html - 66k - [Cached](#) - [Similar pages](#)
[\[More results from www.jewwatch.com \]](#)

[Judaism 101: Who is a Jew?](#)

A **Jew** is any person whose mother was a **Jew** or any person who has gone through the formal process of conversion to Judaism.
www.israfan.org/whinisjew.htm - 21k - [Cached](#) - [Similar pages](#)

Sponsored Links

[Are Jews free from hate?](#)

Take the Newz Crew challenge and learn what other teens have to say!
www.NewzCrew.org

[Christ Was Not Crucified](#)

He became Christ after crucifixion. See Acts 2:22-23, Acts 10: 39-40
www.Christianity-TruthorFiction.com

[Jewish Questions Answered](#)

Get Answers to Jewish Questions Now Live Assistance Always Available.
www.AskMoses.com

[The New Anti Semitism](#)

and what to do about it take action Now!
www.newantisemitism.com/

Figure 4 Results of the query *jew* on August 7, 2005

were still available; however, out of these 120 pages, only 34 had links to the Jewwatch.com page (in 2004 all of these had links). This was mainly due to changes in the signature files of the participants in the discussion list—previously their signatures included links to www.jewwatch.com (obviously in order to raise the link count to this page), but by August 2005 those links had disappeared. Thus although the number of link pages Google reported and displayed has not changed between the two data collection points (294 pages), there were significant changes in the distribution of those links according to site and page type.

We analyzed the content of 188 randomly selected pages, 20% of the total number of displayed pages that linked to the Wikipedia entry “*jew*.” Forty-five percent of the pages were other Wikipedia entries (self-links). These self-links, unlike all the other self-links examined in this study, were not inserted for navigational purposes, but served as pointers to additional information. The links between different entries are inserted in order to enhance the interconnection among the different encyclopedia entries. This interlinking is encouraged, and the wiki software allows for the easy creation of links within the system. Almost all of the remaining pages (50%) were blog pages. Eighty-seven percent of the links from blog pages were related to Google bombing. Sixty-nine percent of the links from blogs appeared on the sidebar of the blogs, and often the purpose of the link (Google bombing) was clearly marked.

Here, too, considerable differences were found between the links Google displayed in August 2004 and in August 2005, although the total number of reported

links was similar (2,830 versus 2,790). There was a large rise in the percentage of Wikipedia pages (9% versus 45%) and a considerable drop in the percentage of forum/discussion list pages (11% versus 2%). The drop in the number of forum/discussion list pages was mainly caused by the disappearance of pages from the www.bowlingfans.com forum. In August 2004, 82 pages were listed from this site that were not displayed by Google in August 2005. The August 2004 version of these pages had an invisible link with the anchor text “jew” to the Wikipedia entry on jew on each and every posting. All these messages and message threads (except for one) were still available on the Web in August 2005; however none of them linked to the Wikipedia entry any more.

Consider, for example the page <http://www.bowlingfans.com/ubb/ultimatebb.php/topic/25/532.html>. This page was captured by the Internet Archive on June 22, 2004 (see Figure 5). At that time, there was a link to the Wikipedia entry on the sidebar of the page (the link is invisible; only after using the search feature of the web browser does the anchor text “jew” become visible, as shown in Figure 5). The same page was captured on October 1, 2005—the link was no longer present, although there had been no change to the contents of the postings.

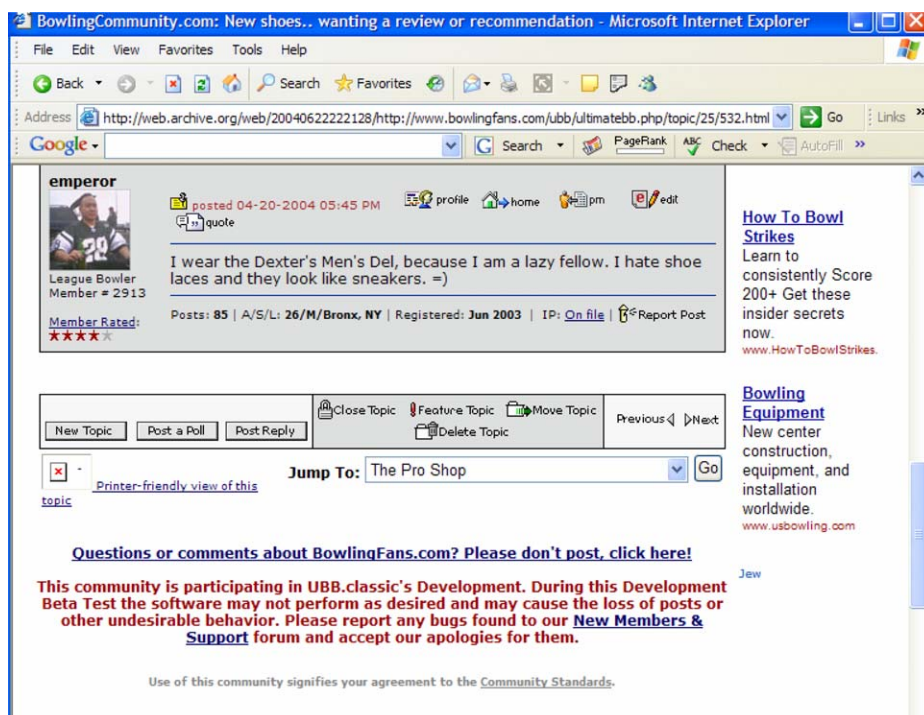


Figure 5 A page from bowlingfans.com as of June 22, 2004

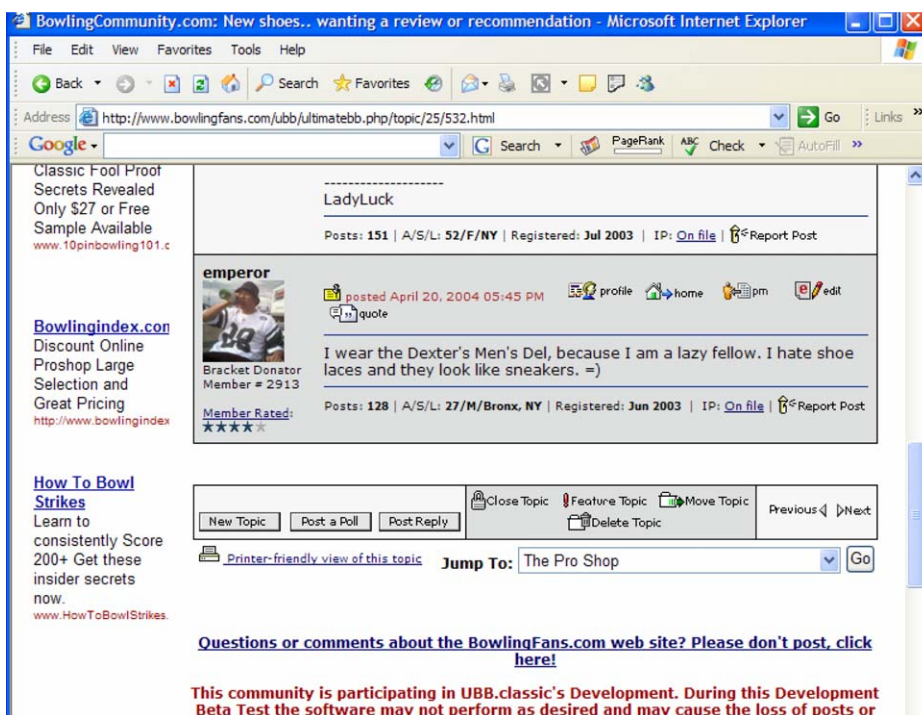


Figure 6 The same page as of October 1, 2005

Arabian Gulf

This is the youngest Google bomb on our list and has strong political undertones. According to El-Najjar and Habibi (2005), the name of the Gulf has been disputed for a long time. This bomb was created as a protest by Persian Web authors against the 2004 edition of the *Atlas of the World* of the National Geographic Society, in which the area was termed the Persian Gulf, with Arabian Gulf given as an alternative name (in smaller print and in parentheses). In response to heavy Iranian protest, in December 2004, the Society published an *Atlas Update*, removing the parenthetical reference and adding a note: “Historically and most commonly known as the Persian Gulf, this body of water is referred to by some as the Arabian Gulf.” (*National Geographic*, 2005, Plate 75). In spite of this update, the Google bomb is “alive and well,” maintained mostly by Persian bloggers (often the blog posts in the examined pages were in Persian—a language unfamiliar to the author, so an analysis of their content is not included here). Fifty-six links on 33 source pages were identified; all except three of the pages were blog pages (91%). Seemingly (for the Persian pages this is only a guess based on the placement of the link and/or the other nearby links) almost all of the links were inserted in order to promote this protest page, which looks like a 404 page and says: “The Gulf You Are Looking For Does Not Exist” (<http://arabian-gulf.info/>); see Figure 7.

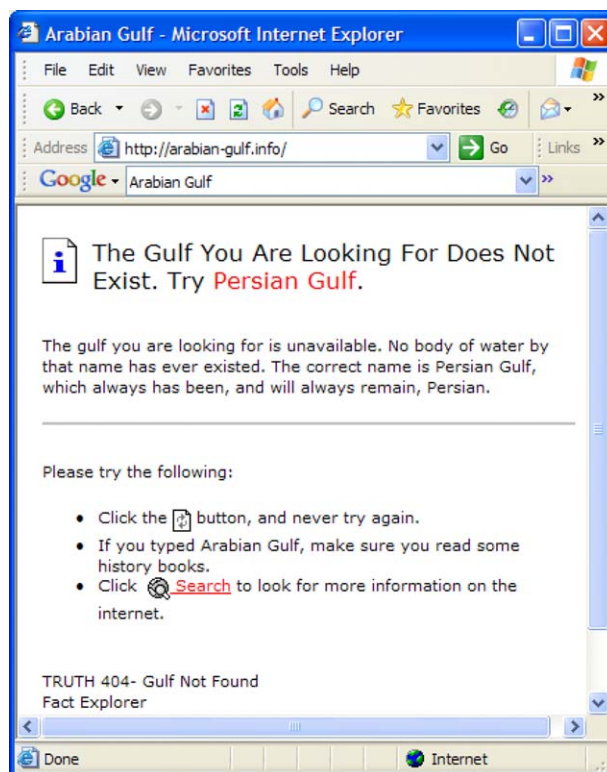


Figure 7 The top result for *Arabian Gulf*

Conclusions

Google bombing is a technique to manipulate search results. At first Google seemed to ignore Google bombs. The *New York Times* (Hansell, 2003, n.p.) quoted Craig Silverstein from Google as stating, “[we] just reflect the opinion on the Web, for better or worse.” Later, however, Google’s official line changed somewhat when they realized that Google bombs do not always reflect the opinion on the Web: “We don’t condone the practice of googlebombing, or any other action that seeks to affect the integrity of our search results ... [p]ranks like this may be distracting to some” (Mayer, 2005, n.p.). This quotation was also part of the page entitled “Why these results?” that appeared as a sponsored result when one searched for *miserable failure* or *liar* on Google. Finally, just recently (Cutts, 2007), Google decided to take action against Google bombing, because “over time, we’ve seen more people assume that they are Google’s opinion” (n.p.).

This study analyzed Google bombs before Google decided to minimize their impact (Cutts, 2007). Out of the nine Google bombs studied, six were still successful even after a considerable period of time. A closer examination showed that one of these bombed pages, *David Gallagher*, was no longer the number one result for this

search because of Google bombing, but because the site was appreciated by the blogger community; and the *French military victories* bomb did not have the characteristic linking pattern of Google bombs. This leaves four “proper” Google bombs that retained top placements over relatively long periods of time (*scientology*, *poodle*, *jew*, and *Arabian gulf*). These results seem to indicate that bombs involving emotions and that are related to politics and/or religious issues have a better chance of remaining successful than other types of bombs. However, it would be premature to make any far reaching conclusions based on such a small sample.

This study began with the expectation that most Google bombs would disappear over time (and two years is a relatively long time on the Web), similar to the diminishing interest in “yesterday’s news” in the more traditional communication media and studies of obsolescence in bibliometrics. However, it turned out that almost half of the Google bombs studied remained active for long periods of time. Some reasons could be continued interest, emotional involvement (mainly when the bombs are related to politics or to beliefs), or simply because Web authors do not update their pages, although this alone is not enough in case a new, popular page appears on the topic.

Bloggers are heavily involved in Google bombing. They create large quantities of postings, and these postings are often archived. Bloggers heavily affect not only the growth of the Web but also its link structure (Broder et al., 2000). They can easily format and re-format their blogs and simply add or remove links from the blogroll and sidebar of their blogs, affecting all postings on their sites, old and new. With one simple edit, they can change the linking patterns of thousands of blog pages. An archived posting will contain the exact content of the original posting, but with formatting and surroundings that may be different from those found when it was originally published. This is an intriguing way of rewriting Web linking history.

Another prevalent means of promoting a page is to add large numbers of self-links. These links can be interpreted either as legitimate navigational aids or as a means to increase the link count to a specific page. A more sophisticated way of inserting self-links is to set up affiliated sites. Google and the other search engines that take into account links and anchor texts in their ranking algorithms are aware of most of these techniques (Henzinger, Motwani & Silverstein, 2002). Nonetheless, Google bombing can still occur successfully using these techniques.

This special section of *JCMC* on search engines has raised, among others, two questions that are relevant to this study: 1) What are the effects of search engine use on mass- and interpersonal communication?, and 2) Is all content created equal in the eyes of search engines? The search results presented here, rather than showing interpersonal and mass communication being affected by search engines, shows how the search engine (in this case, Google) is being affected by its users.

Regarding the second question, at first Google tried to ignore Google bombing. However, close to the publication date of this article—on January 25, 2007—Google announced that it had changed its ranking algorithm in order to minimize the impact of many Google bombs (Cutts, 2007). No details of the change were provided,

but one may assume that “defusing of Google bombs” is achieved by *not* treating all content as equal. As of January 31, 2007 this newly introduced change defused the *miserable failure* Google bomb and the *liar* Google bomb (aimed at Tony Blair’s biography). Yet in spite of the Google announcement, the *poodle* Google bomb at Google’s UK site is still active. Journalist David Gallagher’s homepage is now only the third result for the query *David Gallagher*, but there are no changes in the placement of the top results for *scientology*, *French military victories*, *jew*, or *Arabian Gulf*; thus seemingly the recent change only partially affects Google bombs. It remains to be seen what the future holds for these and other Google bombs.

Notes

- 1 Queries are displayed in italics.
- 2 Refined queries based on this method would allow breaking the search results into smaller portions, and would allow one to retrieve more than 1,000 results.

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