Linkins, Jason. "Rick Santorum's "Google Problem." HuffPolitics Blog (February 16, 2011) http://www.huffingtonpost.com/2011/02/06/rick-santorum-google-problem_n_824117.html (Accessed September 2013).

Shreves, Ric. *Drupal Search Engine Optimization.* London: Packt Publishing, 2012.

Sullivan, Danny. "Should Rick Santorum's Google Problem Be Fixed? Search Engine Land (September 21, 2011). http://searchengineland.com/should-rick-santorums-google-problem-be-fixed-93570 (Accessed June 2013).

Túñez, M. and J. Sixto. "Social Networks, Politics and Commitment 2.0: Spanish MPs on Facebook." *Revista Latina de Comunicación Social,* v.66 (2011).

Vergeer, Maurice. "Politics, Elections and Online Campaigning: Past, Present and a Peek Into the Future." *New Media and Society*, v.15/1 (2013).

Search Engine Optimization

Search engine optimization (SEO) is a common procedure that involves designing or modifying a Web site in order make it appear in search engine results more frequently, more prominently (i.e., closer to the top), and in response to a wider range of potential search terms. Like many Web-related phenomena, SEO techniques are constantly changing to accommodate the Web's developing technologies and exigencies. Today, according to the Pew Research Center's Internet and American Life Project, a 10-year survey following Web use practices from 2002 to 2012, most Web users access online content by first using a search engine. Their study found that search has remained one of the most popular of all Internet activities. Accordingly, a Web site that optimizes for search ranking can draw many more visitors than one that does not. Scholars such as Laura Granka; Victor Asal and Paul Harwood; and Lucas D. Introna and Helen Nissenbaum have argued that the powers of search engines and their optimization have political stakes that Web users ignore at their peril.

As more people rely upon the Web for information, communication, entertainment, and commerce, search engines are becoming increasingly influential gatekeepers to the resources that millions of users seek online. Search engines use complex search algorithms that can grant or deny access to resources that users may not otherwise be aware exist. In this capacity, they are primary access points to the treasured resources accessible to those who use the Web; moreover, their incredible power to delimit access also influences the capital advantage that individuals, organizations, and companies with Web sites stand to gain when their sites are visited by more people.

Laura Granka has argued for more transparency on behalf of search engines and their algorithms to make the political playing field more level. For instance, Web users and designers alike might want greater exposure to information and content that search engine optimization could conceivably grant if search algorithms were made more transparent. Victor Asal and Paul Harwood have similarly called attention to the political ramifications of search engines' growing power, and the resultant higher stakes of their optimization: "Any feeling of virtual sovereignty, or perception that the Internet is an egalitarian space, is quashed when the mechanics of search engine algorithms are unraveled. Search engines are not egalitarian." From this perspective, SEO (though legal) has the capacity to privilege some Web sites over others. The process of optimizing a Web site for a search engine, therefore, can be seen as a political act.

Search Algorithms

Though specifics of search algorithms are not always made public, they generally take as input a sequence of words (search terms) and return as output links to Web pages that evaluative criteria (algorithms) indicate contain the best encapsulation of the information the user sought. Because search terms can be ambiguous, applicable to multiple subjects, or because two people looking for the same information might enter substantially different search terms to find it, search engines need to develop very particular sets of rules whereby they translate inputted search terms into proper directions to locate the requested information. Search engines operate by

first creating a database, or archive, that associates Web pages on the Internet with information. This process involves "crawling" the Web with computer programs sometimes referred to as "spiders" that visit Web pages and index the information in a database. Search engine algorithms must then identify, from a search's textual input, what exactly it should select from its archive of the Web to return as output. These algorithms must decide, from the multitude of Web pages that contain some or all of the search terms, which to rank higher and which to rank relatively lower in the output. The decisions a search engine makes in this process inevitably privilege some information at the exclusion of other information, making the effort of SEO a political struggle for inclusion.

Even slight differentiation in these choices can lead to significant differences in search results. It is not uncommon, then, for one search engine to return different results from another search engine given the same search terms. This phenomenon reflects not only a search engine's different restrictions and algorithms, but also the SEO techniques that a given Web site employs in relation to a particular search engine's parameters. Optimization techniques, therefore, often involve targeting a specific search engine's known rules for finding and ranking online content.

Commonalities

Though different search engines follow variable criteria to help them crawl the Web and identify relevant information, common elements exist across search engines, giving practitioners of SEO a basis for better optimization strategies. In particular, SEO commonly involves a variety of techniques and procedures associated with strategically changing or influencing the user-accessible content of a Web site or the parts of a Web site that a search engine sees, but users do not. As search algorithms evolve, the meaningful SEO techniques also evolve. Though it was once thought optimal to modify metatags contained in a Web site's code in order to enable a search engine to classify and categorize the site in particular ways, such as according to its keywords, title, and description, this process proved susceptible to manipulation by "spamming," so many search engine algorithms no longer privilege metatags as much as they once did. Though

title and description metatags tell a search engine how a site characterizes itself (therefore these titles and descriptions still appear next to a link in actual search results), other more substantial factors are now thought to be more integral to SEO. In particular, search algorithms are thought to value, among other factors, the following properties of a Web site: freshness of content, apparent authority and trustworthiness, number and quality of inbound and outbound links (i.e., links going to and leading out from a Web site), and both connectivity with, and popularity among social networks

Web sites such as the *Huffington Post*, well known for appearing widely in search results, rose to prominence in the latter half of the 2000s by aggressively pursing these and other SEO techniques. The phenomenon of "Google bombing" is another example of how aggressive pursuit of SEO techniques can powerfully influence the results of a given search. The political ramifications of such enterprises are made especially evident in the Google bombing of former Republican U.S. Senator Rick Santorum. Angered by Santorum's public comparison of homosexuality with bestiality, gay-rights advocate Dan Savage easily used available SEO strategies to alter what results came up first in a Google search of "Santorum." Instead of calling up the conservative politician's Web site, the top-ranked Google search results offered a lewd definition of "santorum" related to a sex act.

Chris Ingraham
University of Colorado at Boulder
David Spiegel
Institute for Advanced Study

See Also: Algorithmic Authority; Findability; Googlearchy and Politics; *Huffington Post*; Search Engine Bias.

Further Readings

Asal, Victor and Paul G. Harwood. "Ailing Grievances Online: Search Engine Optimization and the Fate of Minorities at Risk." *Journal of Information Technology and Politics*, v.4/3 (2007).

Granka, Laura A. "The Politics of Search: A Decade Retrospective." *Information Society*, v.26 (2010).

Introna, Lucas D. and Helen Nissenbaum. "Shaping the Web: Why the Politics of Search Engines Matters." *Information Society*, v.16 (2000).

Pew Research Center. "Search Engine Use 2012." Internet and American Life Project. http://pew internet.org/~/media//Files/Reports/ 2012/PIP_Search_Engine_Use_2012.pdf (Accessed May 2013).

Politico. "Rick Santorum Contacted Google, Says Company Spreads 'Filth.'" http://www.politico.com/news/stories/0911/63952.html (Accessed June 2013).

Sydell, Laura. "How Rick Santorum's 'Google Problem' Has Endured." NPR (January 6, 2012). http://www.npr.org/2012/01/06/144801671/why-santorum-google-problem-remains (Accessed September 2013).

Seattle 1999 WTO Protests

The Battle of Seattle refers to the protests that took place in Seattle against the third World Trade Organization (WTO) Ministerial Conference from November 29 to December 3, 1999. Considered the first global protests between the hegemonic globalized order and the alter-globalization social movement, as well as a relevant episode on the configuration of the latter, the Seattle anti-WTO protests are also an example of a social movement's appropriation of information and communication technology for activism. From the first call for the protests, information and communication technologies were widely used by participating organizations for planning, organizing, articulating, and making it visible.

The wide repertoire of cyber-activist strategies and Web-based actions put in practice by organizers and protesters included the broadened use of e-mail, alternative and counterinformative Web sites, discussion boards, virtual sit-ins, and shadow/fake/spoof sites. The articulation of offline and online actions during the Battle of Seattle explains why it is highlighted as a foundational event when analyzing how the Internet has influenced social movements' tactics and actions.

According to different sources, between 50,000 and 100,000 people participated in the protests. On the opening day of the meeting, tens of thousands of protesters took over downtown Seattle, occupying the streets. They intended to shut down the conference by surrounding the WTO conference site, forming human barricades to block traffic, and controlling street intersections so that delegates could not cross from their hotels to the convention center. Participants displayed a wide variety of artistic practices, including dancing, playing music, drumming, creating giant puppets, costumes, street theater, huge balloons, and large banners with anti-WTO messages.

The Internet was used as a permanent source of information about the situation on the streets and police tactics, updated by protesters who were onsite and connected to the Web, and shared through e-mail, networks, or alternative Web sites. At the same time, specifically Web-based actions were developed. Thousands of e-mails requesting information were sent by activists to the WTO site, causing the crash of its server, and a virtual sit-in was organized. A virtual sit-in consists of simultaneous, continuous access to a specific Web site by many users, aiming to generate a huge amount of traffic on the site, and discouraging people from accessing it because of its slow connection response. From November 30 to December 3, it is estimated that more than 450,000 people inundated the WTO site, making the WTO's server unavailable for certain periods and the conference server intermittently very slow.

Although nonviolent action predominated, some individuals, in a formation known as Black Bloc, engaged in property destruction and acts of vandalism, breaking corporate chain-store windows, vandalizing storefronts, and painting graffiti at targeted businesses. This produced confrontations between protesters and the police, who charged against the protesters, shooting rubber bullets and pepper spray at the crowd and driving people out with volleys of tear gas. Hundreds of people were arrested, the city declared a state of emergency in downtown Seattle, and it set up a restricted access zone that protesters called a "no protest" zone, in what they considered a suspension of the basic rights of free speech and assembly. Publicized by worldwide media coverage, city