



## CHAPTER 11\*

# Googling Google

## Search Engines as Market Actors in Library Instruction

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### Introduction

There is a large body of research on corporate ownership and control of traditional media, such as print, television, and radio.<sup>1</sup> Comparatively, research about corporate control of what we see online is underdeveloped, yet search engines are often the first place students uncritically look for research as opposed to the library website, catalogs, and discovery services.<sup>2</sup> Dr. Safiya Noble shows that Google image searches for black women often perpetuate and reinforce dominant narratives involving racism and misogyny.<sup>3</sup> As Google is often seen as neutral, such search results are presented as “natural,” the way things are, when in fact they are the products of capitalism, hegemonic patriarchy, and white supremacy. Interrogating results such as these is one goal of this lesson plan, along with getting students to think critically about, to problematize, the everyday tools used in the research process and to explore links between capitalism and racism, misogyny, and homophobia.

The setting for this lesson plan is a first-year orientation or introductory class (100 level) with a research component, but it can be adapted to upper-level classes. It was conceived as a standalone one-shot session, but it can be part of a semester-long library instruction program or faculty collaboration.

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In a computer lab, students, library staff, and faculty can explore and learn together, in a flatter, less hierarchical setting than a more traditional lecture. Computers also give students power and control over their research and exploration; instead of passively receiving information, they are participating in knowledge creation, making a lab the optimal location for practicing critical pedagogies in learning about the political economy of search engines, information economies, and the effects of corporate media on democratic, pluralistic societies.<sup>4</sup>

## Learning Outcomes

- Articulate clearly how algorithms such as PageRank influence information-seeking behavior and search results
- Explain Google's data security and privacy issues
- Create searches that show critical thinking and awareness of how Google works

## Materials

Computers: for instructor with a projector, and for students.

## Preparation

You may want to run searches in Google prior to doing so in the classroom to get an idea of what might appear on the first page of the search results.

## Session Instructions

1. State an overview of the learning outcomes, which is to explore how Google works; show that Google is not neutral and benign, but rather is a market actor with biases that makes money off of our searches; and discover how we can make it work better for us when doing research.
  - a. Ask for a show of hands as to how many people in the room, including faculty, have used Google for research. Fellow librarians, raise your hands as well.
2. Ask the students to search for something related to the class we're in, or if teaching a first-year orientation, a topic that interests them. Pick one of their searches to post on a projector screen, interactive whiteboard, or large monitor.

3. Draw students' attention to the number of results. Note that Google double-counts links to pad its stats, so to speak.<sup>5</sup> A link you see on page two might be repeated on page ten, for example.
  - a. Ask students how many pages into the search results they've traveled, and if their efforts were rewarded on page three, page five, or page ten.
4. Call attention to the ads that are often on the right-hand side of the screen, as well as the top and bottom. These are different from the search results and are one of the ways that Google makes money. Companies, people, organizations buy ad space based on search terms, so if you search for cupcakes, look what we get. Google knows where we are, as we'll get locally relevant advertisements. Internet Protocol addresses are how Google knows our location and tailors search results to where we are.
5. Ask students to notice what kind of results we got when we searched. In particular, look at the addresses of the results on the first page and see what they end in, such as .com for commercial business enterprises, .edu for educational, .gov for government websites, and .org for organizations, which are often nonprofit. There's more art than science to deciding which of these kinds of sites is credible. Dot-coms are for-profit, but a site like WebMD.com, owned by Viacom, which also owns CBS and MTV, can be a useful site for health information. Health professionals update this site. Dot-orgs often are nonprofits, but it's not like the National Rifle Association is going to be a credible source on gun control, for example. Organizations often have biases and agendas.
6. Ask students what they know about how Google works—as in, how did we get these results in this order? Google's giving us a combination of what's popular, which itself can be manufactured, as JCPenney has done,<sup>6</sup> and what it thinks is relevant to us.
  - a. Discuss search engine optimization (SEO), the ability to be found, via algorithms like PageRank, in a search engine. Run a search that demonstrates SEO.
  - b. By being popular, these sites on the first page of results can sell ads on their own websites for more money.
7. Demonstrate how to get more granular, drill down and be more specific with search terms to eliminate much of the effect of SEO. Add action words like *research* or *analysis* to a search, which may bring up Google Scholar, a transition point to discuss what it means to put an article through the peer-review process, taking care to note that just because something is peer-reviewed, that doesn't make it true.<sup>7</sup>
8. Point out that scholars use language that their peers will understand, but we might not. And because of that, it's better to use regular Google, first.

Read up on your topic in things like newspapers—hey, primary source documents!—and even something like *Wikipedia*. It'll help you get some background information on a topic and will help prepare you for what comes next with peer-reviewed materials. So if you're using Google first, I think you're doing it right. And scholarly sources can be found using regular Google, not Scholar, often ending in .edu, .gov, or .org. Not everything in Scholar is scholarly.

- a. Please don't pay for articles via Google Scholar. Ask a librarian, use a library database.
9. Do a search for *beautiful women* and click on the images. Note all the white faces. We live in places that overwhelmingly value white, heteronormative standards of beauty. Google reflects that, and contributes to that. This is what Google thinks we want, what has value to us. Per Noble, these results have monetary value to Google; that is, Google profits off these racist, sexist search results.<sup>8</sup>
  10. Run the same search logged in and out of Gmail and note what changes. The results? The ads?
    - a. Our searches have monetary value for them. Recall that thanks to IP addresses, Google knows where we are. Based on other things we search for, especially if we're logged in to Gmail, either personally or through our college or university, there's a lot that can be found out about us, packaged, and sold to advertisers and used for Google's internal purposes.<sup>9</sup>
  11. Wrap up by stating that Google's not a bad place to go when we're getting started, but we must use it wisely. There's a reason we see what we see when searching, and the more "academic" we make our searches, the better off we'll be, the less search engine optimization, the less overt racism, sexism, and homophobia we'll experience.
  12. Acknowledge that Google Scholar can be a good place to look once we're comfortable with the background information we've looked at on a topic, and don't be afraid to check out the second and third pages of both regular Google and Scholar. Reiterate that students should not pay for scholarly articles. Library databases will often have those at no additional cost.
  13. Leave time for comments, questions, and thoughts from students, faculty.

## Assessment

Using e-mail or a learning management system (LMS), follow up with the students, asking if they have altered their searching strategies and techniques as a result of the lesson, taking note to stress that it is fine if they do not. After all, librarians continue to use Google products and platforms, including the search

engine, in a variety of ways. On a discussion board, ask students to reflect on the learning outcomes, perhaps in a paragraph, and have them comment on each other's thoughts, continuing the dialogue. Short quizzes or surveys, delivered via an LMS, can also be administered to assess students' search habits.

## Reflections

Google can be a good starting place for undergraduate research, and students often feel more comfortable using search engines as opposed to databases.<sup>10</sup> Educators can build on this comfort while fostering an atmosphere of critical inquiry around the practices of search engines. The goal here isn't to scare students, or faculty, but to be aware that Google isn't just a tool to use; it uses us as well and does so to make money. Our searches are monetized, and we are consumers on the site; we are meant to see advertisements. We also see the reproduction of dominant narratives concerning race, ethnicity, gender, class, and sexuality, among others.

## Final Questions

Beyond Google, what other tools that we library instructors use also use us? In terms of algorithms, what biases might commercial and library subscription databases have? What about in terms of privacy and tracking? Google is not a *fait accompli*, there are other options out there. What might search and discovery look like, post-Google?

## Notes

1. See Jürgen Habermas, *The Structural Transformation of the Public Sphere*, trans. Thomas Burger with assistance by Frederick Lawrence (Cambridge, MA: Harvard University Press, 1989); Edward Herman and Noam Chomsky, *Manufacturing Consent* (New York: Pantheon Books, 1988); and Robert W. McChesney, *Telecommunications, Mass Media, and Democracy*. (New York: Oxford University Press, 1993); among others.
2. Cathy De Rosa, *College Students' Perceptions of Libraries and Information Resources* (Dublin, OH: OCLC Online Computer Library Center, 2006), <https://www.oclc.org/content/dam/oclc/reports/pdfs/studentperceptions.pdf>.
3. Safiya Umoja Noble, "Google Search: Hyper-visibility as a Means of Rendering Black Women and Girls Invisible." *In Visible Culture*, no. 19 (October 2013). <http://ivc.lib.rochester.edu/google-search-hyper-visibility-as-a-means-of-rendering-black-women-and-girls-invisible>.
4. Michelle Reale, "Critical Pedagogy in the Classroom: Library Instruction that Gives Voice to Students and Builds a Community of Scholars," *Journal of Library Innovation* 3, no. 2 (2012): 80–88.

5. “Duplicate Content.” Google Console Help Center. Accessed December 11, 2015 <https://support.google.com/webmasters/answer/66359?hl=en>.
6. Charles Arthur, “How Low-Paid Workers at ‘Click Farms’ Create Appearance of Online Popularity,” *Guardian*, August 2, 2013, <https://www.theguardian.com/technology/2013/aug/02/click-farms-appearance-online-popularity>; David Segal, “The Dirty Little Secrets of Search.” *New York Times*, February 11, 2011, [http://www.nytimes.com/2011/02/13/business/13search.html?\\_r=0](http://www.nytimes.com/2011/02/13/business/13search.html?_r=0).
7. See, for example, A. J. Wakefield et al., “RETRACTED: Ileal-Lymphoid-Nodular Hyperplasia, Non-specific Colitis, and Pervasive Developmental Disorder in Children,” *Lancet* 351, no. 9103 (1998): 637–41.
8. Safiya Noble, “Searching for Girls: Identity for Sale in the Age of Google” (presentation, ACRL 2015, conference of the Association of College and Research Libraries, Portland, OR, March 24, 2015).
9. Charles Duhigg, “How Companies Learn Your Secrets,” *New York Times*, February 16, 2012, <http://www.nytimes.com/2012/02/19/magazine/shopping-habits.html>.
10. De Rosa, *College Students’ Perceptions*.

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