this issue quickly.\textsuperscript{7}
These human and machine errors are not without consequence, and there are several cases that demonstrate how racism and sexism are part of the architecture and language of technology, an issue that needs attention and remediation. In many ways, these cases that I present are specific to the lives and experiences of Black women and girls, people largely understudied by scholars, who remain ever precarious, despite our living in the age of Oprah and Beyoncé in Shondaland.
One limitation of looking at the implications of search is that it is constantly evolving and shifting over time. This chapter captures aspects of commercial search at a particular moment—from 2009 to 2015—but surely by the time readers engage with it, it will be a historical rather than contemporary study. Nevertheless, the goal of such an exploration of why we get troublesome search results is to help us think about whether it truly makes sense to outsource all of our knowledge needs to commercial search engines, particularly at a time when the public is increasingly reliant on search engines in lieu of libraries, librarians, teachers, researchers, and other knowledge keepers and resources.

What is even more crucial is an exploration of how people living as minority groups under the influence of a majority culture, such as people of color and sexual minorities in the United States, are often subject to the whims of the majority and other commercial influences such as advertising when trying to affect the kinds of results that search engines offer about them and their identities. If the majority rules in search engine results, then how might those who are in the minority ever be able to influence or control the way they are represented in a search engine? The same might be true of how men’s desires and usage of search is able to influence the values that surround women’s identities in search engines, as the Ogilvy campaign might suggest. For these reasons, a deeper exploration into the historical and social conditions that give rise to problematic search results is in order, since rarely are they questioned and most Internet users have no idea how these ideas come to dominate search results on the first page of results in the first place.
entered with digital information tools? And who among us did not have to bargain in this way? As a Black woman growing up in the late twentieth century, I also knew that the presentation of Black women and girls that I discovered in my search results was not a new development of the digital age. I could see the connection between search results and tropes of African Americans that are as old and endemic to the United States as the history of the country itself. My background as a student and scholar of Black studies and Black history, combined with my doctoral studies in the political economy of digital information, aligned with my righteous indignation for Black girls everywhere. I searched on.

Figure 1.2. First page of search results on keywords “black girls,” September 18, 2011.
Figure 1.3. First page of image search results on keywords “black girls,” April 3, 2014.

Figure 1.4. Google autosuggest results when searching the phrase “why are black people so,” January 25, 2013.
Figure 1.5. Google autosuggest results when searching the phrase “why are black women so,” January 25, 2013.

Figure 1.6. Google autosuggest results when searching the phrase “why are white women so,” January 25, 2013.
Figure 1.7. Google Images results when searching the concept “beautiful” (did not include the word “women”), December 4, 2014.

Figure 1.8. Google Images results when searching the concept “ugly” (did not include the word “women”), January 5, 2013.
What each of these searches represents are Google’s algorithmic conceptualizations of a variety of people and ideas. Whether looking for autosuggestions or answers to various questions or looking for notions about what is beautiful or what a professor may look like (which does not account for people who look like me who are part of the professoriate—so much for “personalization”), Google’s dominant narratives reflect the kinds of hegemonic frameworks and notions that are often resisted by women and people of color. Interrogating what advertising companies serve up as credible information must happen, rather than have a public instantly gratified with stereotypes in three-hundredths of a second or less.

In reality, information monopolies such as Google have the ability to prioritize web search results on the basis of a variety of topics, such as promoting their own business interests over
Figure 1.10. Automated headline generated by software and tweeted about Keith Lamont Scott, killed by police in North Carolina on September 20, 2016, as reported by the Los Angeles Times.
complexities of human intervention involved in vetting of information, nor do they pay attention to the relative weight or importance of certain types of information. For example, in the process of citing work in a publication, all citations are given equal weight in the bibliography, although their relative importance to the development of thought may not be equal at all. Additionally, no relative weight is given to whether a reference is validated, rejected, employed, or engaged—complicating the ability to know what a citation actually means in a document. Authors who have become so mainstream as not to be cited, such as not attributing modern discussions of class or power dynamics to Karl Marx or the notion of “the individual” to the scholar of the Italian Renaissance Jacob Burckhardt, mean that these intellectual contributions may undergird the framework of an argument but move through works without being cited any longer. Concepts that may be widely understood and accepted ways of knowing are rarely cited in mainstream scholarship, an important dynamic that Linda Smith, former president of the Association for Information Science and Technology (ASIS&T) and associate dean of the Information School at the University of Illinois at Urbana-Champaign, argues is part of the flawed system of citation analysis that deserves greater attention if bibliometrics are to serve as a legitimating force for valuing knowledge production.

Brin and Page saw the value in using works that others cite as a model for thinking about determining what is legitimate on the web, or at least to indicate what is popular based on many
The public’s as well as the Jewish community’s interest in accurate information about Jewish culture and the Holocaust should be enough motivation to provoke a national discussion about consumer harm, to which my research shows we can add other cultural and gender-based identities that are misrepresented in search engines. However, Google’s assertion that its search results, though problematic, were computer generated (and thus not the company’s fault) was apparently a good-enough answer for the Anti-Defamation League (ADL), which declared, “We are extremely pleased that Google has heard our concerns and those of its users about the offensive nature of some search results and the unusually high ranking of peddlers of bigotry and anti-Semitism.” The ADL does acknowledge on its website its gratitude to Sergey Brin, cofounder of Google and son of Russian Jewish immigrants, for his personal letter to the
organization and his mea culpa for the “Jew” search-term debacle. The ADL generously stated in its press release about the incident that Google, as a resource to the public, should be forgiven because “until the technical modifications are implemented, Google has placed text on its site that gives users a clear explanation of how search results are obtained. Google searches are automatically determined using computer algorithms that take into account thousands of factors to calculate a page’s relevance.”

If there is a technical fix, then what are the constraints that Google is facing such that eight years later, the issue has yet to be resolved? A search for the word “Jew” in 2012 produces a beige box at the bottom of the results page from Google linking to its lengthy disclaimer about the results—which remain a mix of both anti-Semitic and informative sites (see figure 1.13). That Google places the responsibility for bad results back on the shoulders of information searchers is a problem, since most of the results that the public gets on broad or open-ended racial and gendered searches are out of their control and entirely within the control of Google Search.

Figure 1.13. Google’s bottom-of-the-page beige box regarding offensive results, which previously took users to “An Explanation of Our Search Results.” Source: www.google.com/explanation (no longer available).

It is important to note that Google has conceded the fact that anti-Semitism as the primary information result about Jewish people is a problem, despite its disclaimer that tries to put the onus for bad results on the searcher. In Germany and France, for example, it is illegal to sell Nazi memorabilia, and Google has had to put in place filters that ensure online retailers of such are not visible in search results. In 2002, Benjamin Edelman and Jonathan Zittrain at Harvard University’s Berkman Center for Internet and Society concluded that Google was filtering its search results in accordance with local law and precluding neo-Nazi organizations and content
All of these practices of search engine optimization and Google bombing can take place independently of and in concert with the process of crawling and indexing the web. In fact, being found gives meaning to a website and creates the conditions in which a ranking can happen. Search engine optimization is a major factor in findability on the web. What is important to note is that search engine optimization is a multibillion-dollar industry that impacts the value of specific keywords; that is, marketers are invested in using particular keywords, and keyword combinations, to optimize their rankings.

Despite the widespread beliefs in the Internet as a democratic space where people have the power to dynamically participate as equals, the Internet is in fact organized to the benefit of powerful elites, including corporations that can afford to purchase and redirect searches to their own sites. What is most popular on the Internet is not wholly a matter of what users click on and how websites are hyperlinked—there are a variety of processes at play. Max Holloway of Search Engine Watch notes, “Similarly, with Google, when you click on a result—or, for that matter, don’t click on a result—that behavior impacts future results. One consequence of this complexity is difficulty in explaining system behavior. We primarily rely on performance metrics to quantify the success or failure of retrieval results, or to tell us which variations of a system work better than others. Such metrics allow the system to be continuously improved upon.”

The goal of combining search terms, then, in the context of the landscape of the search engine optimization logic, is only the beginning.

Much research has now been done to dispel the notion that users of the Internet have the
The Cultural Power of Algorithms

The public is minimally aware of these shifts in the cultural power and import of algorithms. In a 2015 study by the Pew Research Center, “American’s Privacy Strategies Post-Snowden,” only 34% of respondents who were aware of the surveillance that happens automatically online through media platforms, such as search behavior, email use, and social media, reported that they were shifting their online behavior because of concerns of government surveillance and the potential implications or harm that could come to them. Little of the American public knows that online behavior has more importance than ever. Indeed, Internet-based activities are dramatically affecting our notions of how democracy and freedom work, particularly in the realm of the free flow of information and communication. Our ability to engage with the information landscape subtly and pervasively impacts our understanding of the world and each other.

An example of how information flow and bias in the realm of politics have recently come to the fore can be found in an important new study about how information bias can radically alter election outcomes. The former editor of Psychology Today and professor Robert Epstein and Ronald Robertson, the associate director of the American Institute for Behavioral Research and Technology, found in their 2013 study that democracy was at risk because manipulating search rankings could shift voters’ preferences, substantially and without their awareness. In their study, they note that the tenor of stories about a candidate in search engine results, whether favorable or unfavorable, dramatically affected the way that people voted. Seventy-five percent of participants were not aware that the search results had been manipulated. The researchers concluded, “The outcomes of real elections—especially tight races—can conceivably be determined by the strategic manipulation of search engine rankings and . . . that the manipulation can be accomplished without people being aware of it. We speculate that unregulated search
Figure 2.1. First page of search results on keywords “black girls,” September 18, 2011.
In the case of the first page of results on “black girls,” I clicked on the link for both the top search result (unpaid) and the first paid result, which is reflected in the right-hand sidebar, where advertisers that are willing and able to spend money through Google AdWords⁴ have their content appear in relationship to these search queries.⁵ All advertising in relationship to Black girls for many years has been hypersexualized and pornographic, even if it purports to be just about dating or social in nature. Additionally, some of the results such as the UK rock band Black Girls lack any relationship to Black women and girls. This is an interesting co-optation of identity, and because of the band’s fan following as well as possible search engine optimization strategies, the band is able to find strong placement for its fan site on the front page of the Google search.
Figure 2.4. Snapchat faced intense media scrutiny in 2016 for its “Bob Marley” and “yellowface” filters that were decried as racist stereotyping.

Published text on the web can have a plethora of meanings, so in my analysis of all of these results, I have focused on the implicit and explicit messages about Black women and girls in both the texts of results or hits and the paid ads that accompany them. By comparing these to broader social narratives about Black women and girls in dominant U.S. popular culture, we can see the ways in which search engine technology replicates and instantiates these notions. This is no surprise when Black women are not employed in any significant numbers at Google. Not only are African Americans underemployed at Google, Facebook, Snapchat, and other popular technology companies as computer programmers, but jobs that could employ the expertise of people who understand the ramifications of racist and sexist stereotyping and misrepresentation and that require undergraduate and advanced degrees in ethnic, Black / African American, women and gender, American Indian, or Asian American studies are nonexistent.

One cannot know about the history of media stereotyping or the nuances of structural oppression in any formal, scholarly way through the traditional engineering curriculum of the large research universities from which technology companies hire across the United States. Ethics courses are rare, and the possibility of formally learning about the history of Black women in relation to a series of stereotypes such as the Jezebel, Sapphire, and Mammy does not exist in mainstream engineering programs. I can say that when I teach engineering students at UCLA about the histories of racial stereotyping in the U.S. and how these are encoded in computer programming projects, my students leave the class stunned that no one has ever spoken of these things in their courses. Many are grateful to at least have had ten weeks of discussion about the politics of technology design, which is not nearly enough to prepare them for a lifelong career in
Figure 2.5. Google search on “Asian girls,” 2011.
Figure 2.6. Google search on “Asian Indian” girls in 2011.
Figure 2.7. Google search on “Hispanic girls” in 2011.
Figure 2.8. Google search on “Latina girls” in 2011.
Figure 2.9. Google search on “American Indian girls” in 2011.
Figure 2.10. Google search on “white girls” in 2011.
The leading thinking about race online has been organized along either theories of racial formation or theories of hierarchical and structural White supremacy. Scholars who study race point to the aggressive economic and social policies in the U.S. that have been organized around ideological conceptions of race as “an effort to reorganize and redistribute resources along particular racial lines.” Vilna Bashi Treitler, a professor of sociology and chair of the Department of Black Studies at the University of California, Santa Barbara, has written extensively about the processes of racialization that occur among ethnic groups in the United States, all of which are structured through a racial hierarchy that maintains Whiteness at the top of the social, political, and economic order. For Treitler, theories of racial formation are less salient—it does not matter whether one believes in race or not, because it is a governing
I responded again, “If Google isn’t responsible for its algorithm, then who is?” One of Ali’s Twitter followers later posted a tweak to the algorithm made by Google on a search for “three white teens” that now included a newly introduced “criminal” image of a White teen and more “wholesome” images of Black teens.

Figure 2.12. Kabir Ali’s tweet about his searching for “three black teenagers” shows mug shots, 2016.
What we know about Google’s responses to racial stereotyping in its products is that it typically denies responsibility or intent to harm, but then it is able to “tweak” or “fix” these aberrations or “glitches” in its systems. What we need to ask is why and how we get these stereotypes in the first place and what the attendant consequences of racial and gender stereotyping do in terms of public harm for people who are the targets of such misrepresentation. Images of White Americans are persistently held up in Google’s images and in its results to reinforce the superiority and mainstream acceptability of Whiteness as the default “good” to which all others are made invisible. There are many examples of this, where users of Google Search have reported online their shock or dismay at the kinds of representations that consistently occur. Some examples are shown in figures 2.14 and 2.15. Meanwhile, when users search beyond racial identities and occupations to engage concepts such as “professional hairstyles,” they have been met with the kinds of images seen in figure 2.16. The “unprofessional hairstyles for work” image search, like the one for “three black teenagers,” went viral in 2016, with multiple media outlets covering the story, again raising the question, can algorithms be racist?
Figure 2.14. Google Images search on “doctor” featuring men, mostly White, as the dominant representation, April 7, 2016.

Figure 2.15. Google Images search on “nurse” featuring women, mostly White, as the dominant representation, April 7, 2016.
Understanding technological racialization as a particular form of algorithmic oppression allows us to use it as an important framework in which to critique the discourse of the Internet as a democratic landscape and to deploy alternative thinking about the practices instantiated within commercial web search. The sociologist and media studies scholar Jessie Daniels makes a similar argument in offering a key critique of those scholars who use racial formation theory as an organizing principle for thinking about race on the web, arguing that, instead, it would be more potent and historically accurate to think about White supremacy as the dominant lens and structure through which sense-making of race online can occur. In short, Daniels argues that using racial formation theory to explain phenomena related to race online has been detrimental to our ability to parse how power online maps to oppression rooted in the history of White
Supremacist debasement of Black women. Dressed in blackface, he adorned the top of a cake he made that was a provocative art experiment gone wrong, at the expense of Black women. These images are just one of many that make up the landscape of racist misogyny. After an outpouring of international disgust, Liljeroth denied any possibility that the project, and her participation, could be racist in tone or presentation.\(^{57}\)

![Google search for Sara Baartman](image)

**Figure 2.17.** Google search for Sara Baartman, in preparation for a lecture on Black women in film, January 22, 2013.
During slavery, stereotypes were used to justify the sexual victimization of Black women by their property owners, given that under the law, Black women were property and therefore could not be considered victims of rape. Manufacture of the Jezebel stereotype served an important role
Figure 2.20. One dominant narrative stereotype of Black women, the Jezebel Whore, depicted here over more than one hundred years of cultural artifacts. Source: Jim Crow Museum of Racist Memorabilia at Ferris State University, www.ferris.edu.
Although Google changed its algorithm in late summer 2012 and suppressed pornography as the primary representation of Black girls in its search results, by 2016, it had also modified the algorithm to include more diverse and less sexualized images of Black girls in its image search results, although most of the images are of women and not of children or teenagers (girls). However, the images of Black girls remain troubling in Google’s video search results, with narratives that mostly reflect user-generated content (UGC) that engages in comedic portrayals of a range of stereotypes about Black / African American girls. Notably, the White nationalist Colin Flaherty’s work, which the Southern Poverty Law Center has described as propaganda to incite racial violence and White anxiety, is the producer of the third-ranked video to represent Black girls.

Porn on the Internet is an expansion of neoliberal capitalist interests. The web itself has opened up new centers of profit and pushed the boundaries of consumption. Never before have there been so many points for the transmission and consumption of these representations of
organizations through a variety of “hacktivist” online takedowns, as seen in figure 3.3. 

Figure 3.1. Google search on the phrase “black on white crimes” in Los Angeles, CA, August 3, 2015.
Figure 3.2. Google search on the phrase “black on white crimes” in Madison, WI, August 5, 2015.

Figure 3.3. On May 14, 2014, NewNation.org published this notice on its website to alert its members to the hack.

The following email was received on 1/24/2013 5:59 PM
Subject: NNN Reporters Newsroom Forum Contact Us Form - Site Feedback

The following message was sent to you via the NNN Reporters Newsroom Forum Contact Us form by thepriest (mailto:fuckhoff@sharklasers.com).

Your hateful and racist forum has been targeted. Your venomous hatred will no longer be tolerated. Tonight you have seen your site taken down by very basic attacks. Many more will follow. Your days of spreading hate and offering an open forum for these vitriolic and disgusting beliefs are over.

We are Anonymous. We are Legios. We do not forgive. We do not forget. Expect us.

#OnRacism

IP Address: 108.60.131.13
User Name: thepriest
User ID: 7622
Email: fuckhoff@sharklasers.com (an 'anonymous' throw-away email service)
teachers, books, history, and experience. Search results, in the context of commercial advertising companies, lay the groundwork, as I have discussed throughout this book, for implicit bias: bias that is buttressed by advertising profits. Search engine results also function as a type of personal record and as records of communities, albeit unstable ones. In the context of commercial search, they signal what advertisers think we want, influenced by the kinds of information algorithms programmed to lead to popular and profitable web spaces. They galvanize attention, no matter the potential real-life cost, and they feign impartiality and objectivity in the process of displaying results, as detailed in chapter 1. In the case of the CCC, 579 websites link into the CCC’s URL www.conservative-headlines.com from all over the world, including from sites as prominent as yahoo.com, msn.com, reddit.com, nytimes.com and huffingtonpost.com.

Figure 3.4. Cloaked “news” website of the White supremacist organization CCC, August 5, 2015.

A straight line cannot be drawn between search results and murder. But we cannot ignore the ways that a murderer such as Dylann Roof, allegedly in his own words, reported that his racial awareness was cultivated online by searching on a concept or phrase that led him to very narrow, hostile, and racist views. He was not led to counterpositions, to antiracist websites that could describe the history of the CCC and its articulated aims in its Statement of Principles that reflect a long history of anti-Black, anti-immigrant, antigay, and anti-Muslim fervor in the United States. What we need is a way to reframe, reimagine, relearn, and remember the struggle for racial and social justice and to see how information online in ranking systems can also impact behavior and thinking offline. There is no federal, state, or local regulation of the psychological impact of the Internet, yet big-data analytics and algorithms derived from it hold so much power in overdetermining decisions. Algorithms that rank and prioritize for profits compromise our
on the open web and what belongs to communities with shared values, to be shared within a community:

In talking to some queer pornographers, I’ve learned that some of their former models are now elementary school teachers, clergy, professors, child care workers, lawyers, mechanics, health care professionals, bus drivers and librarians. We live and work in a society that is homophobic and not sex positive. Librarians have an ethical obligation to steward this content with care for both the object and with care for the people involved in producing it.  

![Figure 4.1. Call to librarians not to digitize sensitive information that was meant to be private, by Tara Robertson.](image)

*On Our Backs* has an important history. It is regarded as the first lesbian erotica magazine to be run by women, and its title was a cheeky play on the name of a second-wave, and often antipornography, feminist newspaper named *Off Our Backs*. *On Our Backs* stood in the sex-positive margin for lesbians who were often pushed out of the mainstream feminist and gay liberation movements of the 1970s–1990s. What Robertson raises are the ethical considerations that arise when participants in marginalized communities are unable to participate in the decision making of having content they create circulate to a far wider, and outsider, audience. These are the kinds of issues facing information workers, from the digitization of indigenous knowledge from all corners of the earth that are not intended for mass public consumption, to individual representations that move beyond the control of the subject. We cannot ignore the long-term consequences of what it means to have everything subject to public scrutiny, out of context, out of control.

Ultimately, what I am calling for is increased regulation that is undergirded by research that shows the harmful effects of deep machine-learning algorithms, or artificial intelligence, on society. It is not just a matter of concern for Google, to be fair. These are complex issues that span a host of institutions and companies. From the heinous effects manifested from Dylann Roof’s searching on false concepts about African Americans that may have influenced his effort
left with a very small “core.” An image that shows the complexity of these overlapping categories is that of a huge Venn diagram with many sets limited by Boolean ANDs. The white AND male AND straight AND European AND Christian AND middle-class AND able-bodied AND Anglo mainstream becomes a very small minority . . . , and each set implies what it is not. The implication of this image is that not every person, not every discourse, not every concept, has equal weight. Some discourses simply wield more power than others. 

Arguably, if education is based in evidence-based research, and knowledge is a means of liberation in society, then the types of knowledge that widely circulate provide a crucial site of investigation. How oppressed people are represented, or misrepresented, is an important element of engaging in efforts to bring about social, political, and economic justice.

![Google search](https://example.com)

Figure 5.1. Google autocorrects to “himself” rather than “herself.” Search sent to me by a colleague, June 16, 2016.

We have to ask ourselves what it means in practical terms to search for concepts about gender, race, and ethnicity only to find information lacking or misrepresented, whether in the library database or on the open web. Olson’s notion that cultural metaphor is the basis of the construction of classification systems means these cultural metaphors are profoundly represented in the notions of the “Jewish Question” or the “Race Question.” These subject headings suggest both an answer and a point of view from which the problems of Jews and race are presupposed. Simply put, to phrase “Jewish” or “race” as a question or problem to be answered suggests a point of view on the part of the cataloger that is quite different from how a Jewish person or a racialized person might frame themselves. It is here that the context and point of view of library and information science professionals who are responsible for framing people and communities as “problems” and “questions” is important. By examining the ways that Black people specifically have been constructed in the knowledge schemes, the African American studies professor and philosopher Cornel West aptly describes the positionality of how this community is depicted in the West:

Black people as a problem-people rather than people with problems; black people as
knowledge discoverable. Part of the issue is trying to understand who the audience is for knowledge and naming and organizing information in ways that can be discovered by the public. Berman cites Joan Marshall’s critiques of the underlying philosophy of the Library of Congress’s subject-cataloging practices and the ways that they constitute an audience through organizational bias, wherein a “majority reader” is established as a norm and, in the case of the Library of Congress, is often “white, Christian (usually Protestant) and male.” Indeed, these scholars are taking note of the influence that categorization systems have on knowledge organization and access. What is particularly important in the interrogation of these marginalizing information-management systems is Berman’s reference to the Algerian psychologist Franz Fanon’s articulation of the mechanics of cultural “brain washing” that occurs through racist cataloging practices. Berman underscores that the problems of racial representation and racism are deeply connected to words and images and that a racist worldview is embedded in cataloging practices that serve to bolster the image and domination of Western values and people (i.e., White, European, and North Americans over people of African descent). The library practitioner Matthew Reidsma gave a recent gift to the profession when he blogged about library discovery systems, or search interfaces, that are just as troubled as commercial interfaces. In his blog post, he details the limitations of databases, the kinds of gender biases that are present in discovery tools, and how little innovation has been brought to bear in resolving some of the contradictions we know about.

Figure 5.2. A call to the profession to address algorithmic bias in library discovery systems by Matthew Reidsma attempts to influence the field of information studies. Source: Reidsma, 2016.

I sought to test the call that Reidsma made to the profession to interrogate library information management tools by conducting searches in a key library database. I looked in the largest library image database available to academic libraries, ArtStor, and found troublesome practices.
of metadata management there too. Undoubtedly, these kinds of cataloging stances can be evaluated in the context of the field of library science, which is largely averse to teaching and talking about race and the White racial gaze on information. I have published several articles with colleagues about the challenges of teaching about race in the library and information studies classroom and the importance of integrating theory and training of information workers around issues of social justice in the profession. I interpret these kinds of cataloging mishaps as a result of the investment of the profession in colorblind ideology. Unable and unequipped to think through the complexities of systems of racialization, the profession writ large struggles to find frameworks to think critically about the long-term consequences of misidentification of people and, in this case, concepts about works of art.

Figure 5.3. Search in ArtStor for “black history” features the work of a series of European and White American artists, March 2, 2016. The first result is work by Thomas Waterman Wood.
Figure 5.4. *On to Liberty*, an oil on canvas by Theodore Kaufman, a German painter, is the first item under “African American stereotype.”

Figure 5.5. A satirical piece by the artist Damali Ayo and her online piece *Rent-A-Negro*, which is a critique of liberal racial ideologies that tokenize African Americans. The work is cataloged as “racism.”
Imagine instead that all of our results were delivered in a visual rainbow of color that symbolized a controlled set of categories such that everything on the screen that was red was pornographic, everything that was green was business or commerce related, everything orange was entertainment, and so forth. In this kind of scenario, we could see the entire indexable web and click on the colors we are interested in and go deeply into the shades we want to see. Indeed, we can and should imagine search with a variety of other possibilities. In my own imagination and in a project I am attempting to build, access to information on the web could be designed akin to the color-picker tool or some other highly transparent interface, so that users could find nuanced shades of information and easily identify the borderlands between news and entertainment, or entertainment and pornography, or journalism and academic scholarship. In this scenario, I might also be able to quickly identify the blogosphere and personal websites.

Such imaginings are helpful in an effort to denaturalize and reconceptualize how information could be provided to the public vis-à-vis the search engine. In essence, we need greater transparency and public pressure to slow down the automation of our worst impulses. We have automated human decision making and then disavowed our responsibility for it. Without public funding and adequate information policy that protects the rights to fair representation online, an escalation in the erosion of quality information to inform the public will continue.
Figure C.2. My last Google search on “black girls,” June 23, 2016.
Epilogue

Between the time I wrote this book and the day it went into production, the landscape of U.S. politics was radically altered with the presidential defeat on November 8, 2016, of former secretary of state Hillary Clinton by Donald Trump. Within days, media pundits and pollsters were trying to make sense of the upset, the surprise win by Trump, particularly since Clinton won the popular vote by close to three million votes.

Immediately, there were claims that “fake news” circulating online was responsible for the outcome. Indeed, as I gave talks about this book in the weeks after the election, I could only note in my many public talks that “as I’ve argued for years about the harm toward women and girls through commercial information bias circulating through platforms like Google, no one has seemed to care until it threw a presidential election.” Notably, one remarkable story about disinformation (patently false information intended to deceive) made headlines about the election results.

This new political landscape has dramatically altered the way we might think about public institutions being a major force in leveling the playing field of information that is curated in the public interest. And it will likely be the source of a future book that recontextualizes what information means in the new policy regime that ensues under the leadership of avowed White supremacists and disinformation experts who have entered the highest levels of public governance.

Figure E.1. Google search for “final election results” leads to fake news. Source: *Washington Post*, November 14, 2016.
Agencies that could have played a meaningful role in supporting research about the role of information and research in society, including the Institute for Museum and Library Services, the National Endowment for the Humanities, and the National Endowment for the Arts, are all under the threat of being permanently defunded and dismantled as of the moment this book goes into production. In fact, public research universities are also facing serious threats in cuts to federal funding because of their lack of compliance with the new administration’s policies. This has so radically altered the research landscape to the political right that scientists and researchers marched on Washington, D.C., on April 22, 2017, in response to orders that government-funded scientists and researchers stop conducting and disseminating research to the public. The potential for such a precedent may extend to public research universities, or at least many faculty members are working under the premise that this may not be out of the realm of possibility over the next four to eight years.

In this book, I have argued that the neoliberal political and economic environment has profited tremendously from misinformation and mischaracterization of communities, with a range of