Search engines no longer merely shape public understanding and access to the content of the World Wide Web: they shape public understanding of the world. Search engine results produced by secret, corporate-curated “search scripts” of algorithmic and human activity influence societies’ understanding of history, and current events. Society’s growing reliance on online platforms for information about current and historical events raises the stakes of search engines’ content moderation practices for information providers and seekers and society. Public controversies over the results returned by search engines to politically and morally charged queries evidence the growing importance, and politics, of corporations’ content moderation activities.

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1 Langdon Winner, Do Artifacts Have Politics?, 109 DAEDALUS 121, 123 (1980) (proposing that technical systems can reflect the “politics” of a particular community).
Despite public concern with the political and moral impact of search engine results, search engine providers have resisted requests to alter their content moderation practices, responding instead with explanations, directions, and assistance that place responsibility for altering search results on information providers and seekers.

This essay explores a public controversy around the results Google’s search engine returned to the query “did the holocaust happen” in order to understand how different imaginaries of the script of search contribute to the production of problematic results and shape perceptions of how to allocate responsibility for fixing it. Using Madeleine Akrich’s conception of a script—the roles and expectations prescribed to, and demanded of, the users by the designers of a technology\(^2\)—we unpack mismatches that fuel public objections to the results and corporate resistance to changing the script that produced them. Public objections are grounded in well-founded imaginaries of search engines not merely as providers of relevant information, but at least with respect to human rights atrocities such as the holocaust, as stewards of authoritative historical truth. Corporate resistance to altering the search script is rooted in a deep commitment to engineering logics which tether search engine performance to observational measures of user satisfaction, coupled with limited recognition of the role search results play in constructing the need being satisfied and a general reluctance to diverge from the search script to remove content protected by the First Amendment. Despite this resistance, we believe Google and other search engine providers are not completely wedded to the current search script, just reluctant to move without clear guidance and concerned with the potential consequences of rescripting other speech.

The essay concludes by offering a way forward grounded in developments in business and human rights. The emerging soft law requirement that businesses respect and remedy human rights violations entangled in their business operations provides a normative basis for rescripting search. The final section of this essay argues that the “right to truth,” increasingly recognized in human rights law as both an individual and collective right in the wake of human rights atrocities, is directly affected by Google and other search engine providers’ search script. Returning accurate information about human rights atrocities—specifically, historical facts established by a court of law or a truth commission established to document and remedy serious and systematic human rights violations—in response to queries about those human rights atrocities would make good on search engine providers’ obligations to respect human rights but keep adjudications of truth with politically

\(^2\) Id. at 211.
legitimate expert decision makers. At the same time, the right to freedom of expression and access to information provides a basis for rejecting many other demands to deviate from the script of search. Thus, the business and human rights framework provides a moral and legal basis for rescripting search and for cabining that rescription.

II. AN ALGORITHMIC BREAKDOWN

In December of 2016, Carole Cadwalladr began to highlight in the Guardian and Observer various apparent failures of Google Search. The failures she describes are various ways in which Google Search, in its various forms, seems to misinform about or otherwise malign and harm women, blacks, Muslims, and Jews. Cadwalladr critiques: the search predictions (or autocomplete or “search suggestions”) that appear in a dialog box for many queries as they are being typed; the search results (generally she noted the first page of search results); and, several other features of the search engine results page (SERP) including featured snippets (which she, following others, calls “direct answers”), the answer box that sometimes appears offering a short excerpt presented as directly answering a query, as well as the suggested searches at the bottom of some SERPs.

For the purposes of this Essay we will focus on one particular algorithmic breakdown identified by Cadwalladr, the search results for the query, “did the holocaust happen.”

On December 11th, 2016, in a piece filed under the Opinion section of the Guardian, Cadwalladr reported that the first result for the query “did the holocaust happen” was a white nationalist, white supremacist website that denied the historical fact of the Holocaust. She reportedly discovered this serendipitously through the search prediction, or suggestion, Google offered to complete for her partially formed query “did the hol” into the search box.

Cadwalladr expressed moral outrage at this failure by Google and writes how Google placing that site at the top of the search results indicates that “according to Google, it’s the most authoritative source on the internet on the “question” of whether or not the Holocaust actually happened.”

4 Id.
5 Id.
Cadwalladr imputes the failure to what Google communicates through search results, rather than the search engine results page itself. Her failure analysis is wide ranging. She argues that Google was "gamed" and "owned" by hate sites, that Google is responsible, and that this is also "Our" (society's) problem. Yet, ultimately, Cadwalladr identifies Google as responsible for promulgating or disseminating hate speech and lies. She writes: "Google writes the code that drives the algorithm that returns the results. How they write this code, what they use to assess authority and credibility, how that enables [this particular Holocaust denial website] to spread its lies and spew its poison is entirely its responsibility." While resting primary responsibility on Google's "business model . . . built around the idea that it's a neutral platform. That its magic algorithm waves its magic wand and delivers magic results without the sullying intervention of any human . . . " she accuses society of "colluding with it in broadcasting hate speech and lies."

Google attempted to distance itself from the views of the hate sites appearing in their search results and explained the "objective" nature and complexity of search. Google's spokesperson stated that "the goal of search is to provide the most relevant and useful results for our users," and that results are a "reflection of the content that exists on the web." The spokesperson added that they don't always get it right, but explained that Google's engineers "prefer to take a scaleable algorithmic approach to fix problems" rather than "fix the results of an individual query by hand."

While there was widespread reporting that Google would not change the search results, various parties, including Google, took corrective action. The reporting, from Cadwalladr and others, on the failure was a type of corrective action itself in two ways. Indirectly, the reporting triggered a range of actions from a diverse set of actors specifically aimed at changing the search results. Directly the articles on the failure itself became part of the corpus of potential search results responsive to the problematic query, Google's search engine later returned Cadwalladr's and others stories as search results to the problematic query.

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6 Id.
7 Id.
8 Id.
9 Id.
10 Id.; see also Carole Cadwalladr, Google, Democracy and the Truth about Internet Search, GUARDIAN (Dec. 4, 2016, 5:00 AM), www.theguardian.com/technology/2016/dec/04/google-democracy-truth-internet-search-facebook [https://perma.cc/F65P-GEVV].
III. **Analysis of the Algorithmic Breakdown**

The perception expressed by Cadwalladr, Sullivan, Black, and others that Google search had failed reveals a set of expectations about the function of Google search. Yet surely the search engine was not broken as it returned results according to Google’s script. Understanding the source of the perception of brokenness requires a deeper analysis of users’ expectations and beliefs about qualities of the results of search. Given the fully constructive nature of search results—there is no single or set of search results that are the correct answer to a given query, and given the inability to know what resources are omitted in results, users do not have an easy way to fully evaluate search engine performance. Nonetheless these claims of brokenness turn on claims that the results failed to meet expectations of quality, and that stakeholders were able to assess that failure.

Breakdowns or failures, as others have noted shed light on public expectations of a technical artifact’s function. They allow us to explore the mismatch between the roles and expectations prescribed to, and demanded of, the users by the designers, and the behavior and expectations of users (in this case, both speakers (those making content available on the internet) and seekers) and society as a whole. This exploration can help us identify both conceptual misunderstandings, as well as misunderstandings arising due to implementation.

The perceptions of the results returned by Google’s search engine to the query “did the holocaust happen” reveal how mismatches between the competing imaginaries of Google and users of its search engine

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11 Lucas D. Introna & Helen Nissenbaum, *Shaping the Web: Why the Politics of Search Engines Matters*, 16.3 INFO. SOC’Y 169 (2000) (When searching for information, however, it is difficult (if not impossible) to make such a conclusive assessment, since the locating of information also serves to inform one about that which one is looking for.).


14 Introna & Nissenbaum, *supra* note 11, at 169–185 (“Search engines are important because they provide essential access to the Web both to those with something to say and offer and to those wishing to hear and find.”).

15 Akrich, *supra* note 12, at 211.
contribute to the definition and perception of the failure.\textsuperscript{16} The public imaginaries of the function of Google’s search engine lead users to expect certain qualities of search results. Those expectations conflict with both Google’s imagination of search and the actual mechanics of search—what we call the \textit{script of search}. Our examination of users’ search imaginaries and unpacking of the \textit{script of search} reveals the source of the perceived failure—a failure to adhere to the quality of truthfulness about the fact of the holocaust grounded in users’ conception of Google search as a steward of knowledge. This conflicts with Google’s understanding of its role as a mirror reflecting users interests recursively from user to user, and the search script which embeds the norms of search engineers, along with commitment to freedom of expression. The outcome of these mismatched expectations lead users and society to construe Google search results that deny the historical truth of the holocaust as a failure of search for which Google is to blame. While Google signals some displeasure at the results, it sticks to the script of search which deflects responsibility for taking actions to produce search results that provide historical truths about the Holocaust onto other participants.\textsuperscript{17}

A. Understandings of Search

Cadwalladr and Black are outraged at Google for the role search plays in shaping people’s knowledge, thinking, and memory of the Holocaust. Against this outrage, Google positions itself as serving user interests and, to that end, \textit{reflecting} (not endorsing) the Web content most aligned with user search interests. The statements reveal different search imaginaries. Unpacking them brings some clarity to how mismatched

\textsuperscript{16} See generally Bucher, supra note 12, at 31-42 (explaining the concept of an algorithmic imaginary). Bucher's use of “algorithmic imaginary” (“the way in which people imagine, perceive and experience algorithms and what these imaginations make possible”) demonstrates algorithms acting through the imaginaries of individuals and is not to be confused with (national) “sociotechnical imaginaries,” “collectively imagined forms of social life and social order reflected in the design and fulfillment of nation-specific scientific and/or technological projects” that “describe attainable futures and prescribe futures that states believe ought to be attained,” in Sheila Jasanoff & Sang-Hyun Kim, \textit{Containing the Atom: Sociotechnical Imaginaries and Nuclear Power in the United States and South Korea} 47.2 \textit{MINERVA} 119, 120 (2009). “Algorithmic imaginaries” in Bucher and “search imaginaries” in this paper are imaginaries of functions and functionings, implicated in but not principally about futures or values. In this, “imaginary” as used in this paper is also distinct from the “search engine imaginary,” which uses the sociotechnical imaginary concept, in Astrid Mager, \textit{Search Engine Imaginary. Visions and Values in the Co-production of Search Technology and Europe} 47(2) \textit{SOC. STUD. SCI.} 240 (2017).

\textsuperscript{17} Both content creators and those users interpreting search engine results pages.
conceptual (the work search engines do in the world) and operational (how search engines perform that work) expectations contribute to the construed failure of these results of search.

1. Portrayals of Google Search

What is the function of search? What is Google’s role in the ecosystem of the Web? Numerous competing, complementary and overlapping analogies—or imaginaries—have been offered to explain what Google Search does. We shall categorize two such imaginaries as index and stewardship, and examine how engineers producing the search engine within each imaginary understand their work as objective relevance. We will contrast these imaginaries with a diffractive model of search, which more accurately reflects the actual mechanics of search—the script of search—in the next section.

a. Index

Google describes itself as an index. Google’s Securities and Exchange Commission filing for initial public offering includes a succinct mission statement “to organize the world’s information and make it universally accessible and useful.”\(^ \text{18} \) The prospectus summary, and an accompanying letter to shareholders from founders Sergey Brin and Larry Page, explain that Google “maintains the largest online index of web sites and other content” which they make “freely available to anyone with an Internet connection.”\(^ \text{19} \) Courts too have noted the critical role Google and other “electronic reference tools”\(^ \text{20} \) play in “help[ing] [to] index and improve access” to the increasing array of online information.\(^ \text{21} \)

b. Stewardship

The stewardship model draws a more institutional image of search engines—they are not only pointing to, but guarding and tending the corpus of the world’s knowledge. Google positions its services within this institutional stewardship model in several contexts. For example, in the Books and Library projects, and related litigation and policy disputes, Google aligns itself with the values, sensibilities, and functions of


\(^ {19} \) Id.

\(^ {20} \) Kelly v. Arriba Soft Corp., 336 F.3d 811, 818 (9th Cir. 2003).

\(^ {21} \) Perfect 10, Inc. v. Amazon.com, Inc., 508 F.3d 1146, 1165 (9th Cir. 2007).
libraries. In public statements and court filings, Google fashions itself as a steward of information, seeking to ensure books are protected for posterity and through novel methods of access made widely and democratically available to spread knowledge and enable research.

More directly relevant to our inquiry, in battles to limit its responsibilities to remove content, Google has, to some extent, cast Google Search in this stewardship model. Google and other platforms face pressure to remove or delist content of many forms from governments and private parties. In the U.S., platforms have wide latitude to choose whether and how to moderate content created or developed by others under a statutory framework designed to encourage pro-social moderation policies by limiting potential liability for both over and under curation. A separate regulatory framework establishes voluntary safe harbors against secondary liability for copyright infringement for platforms that host or locate user generated content. Both regulatory frameworks aim to limit third parties’ ability to force platforms to actively police content. This generally speech protective orientation aligns with Google and other platforms’ veneer of content agnosticism. In contrast, the European General Data Protection Regulation, which came into force May 25, 2018, adopted the right to be forgotten framework developed in the European Court of Justice’s decision in *Google Spain SL, Google Inc. v. Agencia Española de Protección de Datos, Mario Gosteya González* (hereinafter González). Where individuals raise privacy objections to search engine results, Google must evaluate and unless the individual’s privacy interest is countered “by the preponderant interest of the general public in having . . . access to the information” Google must remove those results from search queries on the individual’s name. In González the court required Google to delist search results containing accurate historical facts (announcing a foreclosure auction on Costeja González’s home) which were explicitly required to be published and remained publicly available at the newspaper’s web sites. Explaining Google’s dismay at the González

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22 Google Spain SL, Google Inc. v. Agencia Española de Protección de Datos, Mario Gosteya González, C-131/12, Judgment, C. 131 (E.C.J. 2014). The González decision found that Google had an obligation to delist search results that would normally be returned under the script of search in response to queries on an individual’s name where those results interfered with the privacy of the individual. This ruling clarified that Google, as a data controller under data protection law, had an independent obligation to comply with the EU data protection law, and in this instance, because the information interfered with González’s privacy and was no longer necessary for the purpose of auctioning his home it overrode “the interest of the general public” in having access to private information, and therefore had to be removed from Google’s search results.

23 *Id.* ¶ 81.
decision, Google’s senior vice president of corporate development and chief legal officer David Drummond, wrote:

The court also decided that search engines don’t qualify for a “journalistic exception.” This means that The Guardian could have an article on its website about an individual that’s perfectly legal, but we might not legally be able to show links to it in our results when you search for that person’s name. It’s a bit like saying the book can stay in the library, it just cannot be included in the library’s card catalogue.  

In doing so, Drummond ties Google’s activities to those of libraries and librarians, as well as newspapers. His objection to the court’s ruling rests on its interference with Google’s role as a steward of knowledge and protector of the public’s interest in equitable and unfettered access to diverse information sources.

Drummond furthers this connection when he describes the principles that inform the analysis of the “public interest” in the right-to-be-forgotten removal process Google established in response to the court ruling:

When it comes to determining what's in the public interest, we're taking into account a number of factors. These include whether the information relates to a politician, celebrity, or other public figure; if the material comes from a reputable news source, and how recent it is; whether it involves political speech; questions of professional conduct that might be relevant to consumers; the involvement of criminal convictions that are not yet “spent”; and if the information is being published by a government.  

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24 David Drummond, We Need to Talk About the Right to Be Forgotten, GUARDIAN (July 10, 2014 5:05 PM), https://www.theguardian.com/commentisfree/2014/jul/10/right-to-be-forgotten-european-ruling-google-debate [https://perma.cc/K9G2-XME7]; see also Mark Stephens, Only the Powerful will Benefit from the ‘Right to be Forgotten’, GUARDIAN, (May 18, 2014 11:32 AM), https://www.theguardian.com/commentisfree/2014/may/18/powerful-benefit-right-to-be-forgotten [https://perma.cc/G58X-9NJM] (Similarly, in explaining the danger of the European Court of Justice ruling establishing the “right to be forgotten” the chair of Global Network Initiative wrote that “the most troubling implications of the judgment are its impact on political speech and processes” due to the foreseeable removal of “news stories and other items of critical importance to an honest accounting of history.”).

25 Drummond, supra note 24.
Drummond’s factors reflect the freedom-of-expression-related interests served by libraries and other stewards of knowledge, further bolstering the salience of the stewardship imaginary of search.

Modern libraries and archives may not physically house or control all of the works they steward. Thus, casting Google as a steward of records and information they do not physically or logically control is not as far-fetched as it might initially seem.

c. Objective Relevance

How do search engineers portray search and their role in it? Interviews of “senior engineers and technical executives involved with directing code development” at “major search engine companies,” by Van Couvering “articulate the unspoken assumptions of search engine producers . . . about search engine quality”26 and how it relates to the function of search. Based on her conversations, Van Couvering documented two competing definitions of quality. The first figured as a market schema producing “high customer satisfaction” where the customer is the advertiser and quality has a connection to the reality that search is an advertising support service that must produce value and revenue. The second is a “science-technology schema” focusing on producing “very relevant responses to queries,” and positions search users as the customer to be served.27 Because engineers did not see themselves as experts in business they “act[ed] discursively to reclaim their abilities to control search by acting as experts on an objective measure of search quality”28 and used relevance, with the objectiveness borrowed from information science, as a way for to talk about satisfying the customer and defend against efforts to serve advertisers. That subjective satisfaction was made to be “objective” in the minds and norms of the search engineers through the metric of relevance.

Relevance both emerged from and shaped the identity and role of search engineers. The focus on meeting measures of relevance as customer satisfaction through objective engineering methods constrains the articulation and pursuit of other goals and other methods.29 While the search engineers could articulate their work as customer satisfaction, they struggled to articulate the public good, as their perspectives “provide little

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27 Id. at 884.
28 Id. at 885.
29 Id. at 882 (“[T]he focus on relevance constrains the articulation of other quality goals.”).
scope to raise issues of public welfare, fairness, or bias.” Van Couvering writes of “the minor public service schema” that “the difficulty its proponents have in articulating it, as well as the opposition of others to hearing it articulated, suggest how difficult it would be to build up an alternative kind of structure within which search engines could operate.” Lucas Itrona and Helen Nissenbaum in their classic article examining the technical design and incentives of search engines, *Shaping the Web: Why the politics of search engines matters*, reached a similar conclusion, that the incentives of the market would lead to search engine behaviors inconsistent with the ideology of the Web as a public good.

Below we explore further the function of search in order to describe it in a way that provides for exactly such an alternative articulation.

2. De-Scriptions of Search

Understanding conflicting visions of search yields some insight into why users’ perceived the search results as a failure of the Google search, while Google viewed it as, perhaps a failure, but not a failure of search. Examining how the function of search is performed—its script—provides additional insight into the basis for the perceptions of failure. Focusing on the script of search—as opposed to imaginaries about it—reveals, the roles and responsibilities Google ascribes to searchers for query formulation and the interpretation of search results, and speakers for site construction. “Pay[ing] close attention to the actual rather than aspirational practices” also reveals that the perceived failure resides in a distinction and a gap between search results (the links to websites as ranked in a SERP) and results-of-search (the results of the entire query-to-conception experience of conducting a search and interpreting search results).

We rely on Madeleine Akrich’s device *script* to do this unpacking. A *script* is the result of a "vision of (or prediction about) the world"
inscribed in the technical object.\textsuperscript{35} The script of search is "[t]he technical realization of the innovator's beliefs about the relationships between an object and its surrounding actors." "[L]ike a film script," the script of search "define[s] a framework of action together with the actors and the space in which they are supposed," both predicted and expected, "to act."\textsuperscript{36} The script of search represents "a large set of technically delegated prescriptions addressed by the innovator to the user."\textsuperscript{37} Where "stabilized technologies...have been ‘black boxed’,"\textsuperscript{38} as with Google search, disputes and breakdowns provide a unique opportunity to see and describe the hidden roles and responsibilities it assigns.

The script of search assigns multiple responsibilities to users (both searchers and speakers) of which they were likely unaware. These hidden assignments contributed to the perceived failure of the results.

a. Search Formulation

Google assigns searchers with the responsibility of query formulation. Searchers, though, may fail to identify the significance of that role. Google Search does sometimes give suggestions for optional ways to complete queries (what Google calls “autocomplete search predictions”).\textsuperscript{39} It did so in this instance, suggesting that Cadwalladr ask if the Holocaust happened as she reportedly had typed only ‘did the hol.’\textsuperscript{40} But even when presented with an autocomplete prediction the user is ultimately responsible for rejecting or accepting it as a query formulation appropriate for their search goal.

There is little indication to searchers of when their specific formulation of a query will result in “distorted or incomplete pictures.”\textsuperscript{41} For some queries, Google provides a “People also ask” box above search results and a “Searches related to” section at the bottom, a hint that query formulation matters. At the time of this writing, they do not provide those tools for the query “did the holocaust happen,” in part perhaps because sometimes those helping hands were themselves viewed as problematic.\textsuperscript{42}

\textsuperscript{36} \textit{Id.}
\textsuperscript{37} \textit{Id.} at 211.
\textsuperscript{38} \textit{Id.}
\textsuperscript{39} Google Search Help, \textit{Autocomplete Policies}, GOOGLE, support.google.com/websearch/answer/7368877?hl=en [https://perma.cc/4VBC-5P2F].
\textsuperscript{40} Cadwalladr, \textit{supra} note 3.
\textsuperscript{42} Cadwalladr, \textit{supra} note 10.
Google acts in the gap between the user’s query and the content. There is a tremendous amount of content on the web documenting the historicity of the Holocaust. When the Google spokesperson states that “search results are a reflection of the content across the web,” they omit the significance of the specific phrasing of the query. The significance of assigning users the obligation to appropriately formulate queries is seen when particular queries produce undesirable results due to peculiarities in language use. For example, for a time, when a user’s query included the word “jew”, Google provided an explanation that “jew” produced largely anti-Semitic results while “jewish” returned neutral and affirming results because of which speakers use those terms, and how and when they are used. The particular formulation of a query crucially mediates a searcher’s access to content in the index.

Lawrence M. Hinman wrote, on the responsibility of search engines, that search engines are “the gatekeepers of the web, helping people to reach their desired destinations.” But people’s ability to describe their destination determines where they land. The query formulation is a role that Google has assigned to the searchers, a role that searchers may not be fully aware of the import of and a role framed by Google’s articulation of search. To the extent that we might usefully understand search results as to some extent being “a reflection of the content across the web,” we must acknowledge that searchers queries shape and direct the mirror.

b. Search Speech

Speakers make choices that make them more or less likely to be indexed and returned in response to particular searchers’ queries. Speakers who were bearing witness to the historical fact of the Holocaust failed to follow, or perhaps were oblivious, to the role Google’s script assigned to them. Speakers rely on search to be made visible and heard. Speakers providing factually accurate information about the holocaust failed to produce content that “performed” optimally for Cadwalladr’s query. Or, they had content that addressed that query in detail and in the language of the query, but they failed to engage the Search Engine Optimization (SEO) techniques required to outperform Holocaust denial sites.

43 Cadwalladr, supra note 10.
45 Id.
Speakers may have simply failed to purchase advertisements on that query. Cadwalladr drew attention to the role of AdWords on the search engine results page (by purchasing an ad on the query in question and linking it to the Wikipedia page on Holocaust denial) and in the process revealed Google’s Ad Grant program—and perhaps failures in or with it. One of Cadwalladr’s pieces described how she was able to put a paid advertisement above the non-sponsored search results for the “did the holocaust happen.”

Her next article discussed, after a response from Google, the Google Ad Grant program. This is a Google program that offers a set amount of free advertising to qualified nonprofits. But this part of the script was also not followed. While this form of speaking, through the donated advertisements, may not require as sophisticated SEO techniques or sufficient financial resources, it still would have required an awareness that this search was being conducted and that those other search results were performing as they did. Or, it would have required that the appropriate agent in those organizations be aware of the Google Ad Grant program. Google had assigned roles that were unevenly acted by particular kinds of content producers.

c. Search Results & Results-of-Search

As the frame shifts from traditional information mediation to algorithmically-generated mediation do others know their new roles? The library, the directional sign, and similar analogies suggest something about search engines—not just about the function, but about the logics and values they ascribe too. Yet the logics and values of those analogies do not flow, and those who wrongly believe they do may find themselves sorely led astray by outputs that they wrongly believe to be informed by them.

What Google intends to convey about the sites on its SERPs and what searchers and speakers believe Google is conveying about the sites on its SERPs appear to diverge. Cadwalladr wrote that “according to Google, [that Holocaust denial article is] the most authoritative source on the internet on the ‘question’ of whether or not the Holocaust actually happened.”

While it is evident that Google also saw this search result as problematic, it seems that searchers apparently interpreted the search results differently from what Google expected. Google’s search results,

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46 Cadwalladr, supra note 10.
48 Cadwalladr, supra note 3.
the listing of and linking to sites on a search engines results page, are distinct from the results-of-search, what searchers experience Google as communicating about those sites. Google’s algorithms return results for a query that are intended to be “the most relevant and useful” or “high-quality and authoritative” results. To Cadwalladr, along with many other searchers and commentators as evidenced in comments on her articles, a site’s presence as the top result is an indication of Google's assignment of authoritativeness. The placement of that site at the top of the search results was seen as an assignment, or granting, or certification of authority. Searchers are not treating the search results as the result of the performance of diffractive interaction between and within their query, speakers, and Google. What is made available to be found through search by speakers and Google, and practices of querying and of interpretation of search results by searchers are constitutive of the interaction and anticipated interactions of each. Searchers are not taking up the assigned task of complex interpretation, perhaps because the complex interactions that constitute search are obscured. The lack of clarity about the interpretive task of interpreting a SERP, leaves searchers to construct their own understanding of their role. Their construction is guided by imaginaries informed by Google’s aspirational and simplified articulation of the goal of their algorithms. The script is vague and at times is being mis-understood by the searcher.

IV. RE-SCRIPTING SEARCH

Individuals on a quest for knowledge expect archives, libraries, and other institutional stewards of knowledge to provide accurate, authoritative answers. As the institutional home of history, these entities play a particularly important role in maintaining accurate historical facts and supporting accurate remembrance of human rights atrocities.

Dominant imaginaries that envision search engines as indexes and stewards of knowledge generate similar public expectations of the results

49 Bucher, supra note 12 (This analysis and distinction between search results and results-of-search is developed from Bucher’s “algorithmic imaginary.”).
50 Cadwalladr, supra note 10.
52 Cadwalladr, supra note 3.
of Google’s search script—that it too should provide accurate historical facts about human rights atrocities such as the holocaust. Search engine producers and users believe search to be performing some of the functions of archives and libraries, yet the normative commitments of those institutions and their professionals have not fully followed the migration of function.54 Most significantly, the logic of relevance, calibrated through iterative observations of searchers interaction with search results that guides search engine design is at odds with the normative commitments that guide curation, organization, and access to information. While libraries and archives share a commitment to providing access to “all expressions of ideas through which any and all sides of a question, cause, or movement may be explored” librarians duties to their patrons and society are broader and include cultivating critical assessment of information, as well as providing authoritative and accurate information resources.55 Understood from this vantage point Cadwalladr and Black’s outrage at the results offered by Google’s search script are more understandable and their demand for action to produce more historically accurate results more compelling. As James Grimmelmann argues users view search engines as a trusted advisor who “listens to a user's description of her goals in the form of a search query, performs research on her behalf, uses its expert judgment to sift through what it has learned, and reports back to her with recommendations on which websites to visit and which ones to ignore” therefore “a search result is problematically "biased" when it constitutes bad-faith advice to the user.”56

In 2000 Introna and Nissenbaum wrote that “Search engines constitute a powerful source of access and accessibility within the Web” and urged recognition that what was at stake in the “politics of search engines” was nothing short of “the broader struggle to sustain the democratic potential of traditional media, the Internet, and the World Wide Web in particular.”57 The stakes today are greater still, for in 2018

54 See also Michael A. DeVito, From Editors to Algorithms: A Values-Based Approach to Understanding Story Selection in the Facebook News Feed, 5.6 DIGITAL JOURNALISM 753 (2017) (comparing the curation criteria in journalism and Facebook newsfeed and concluding that “[t]his leaves us with a combination of a business and a personal concern as the core of Facebook’s algorithmic values, in direct contrast to the combination of a novelty and a societal concern that drive news values”).


57 Introna & Nissenbaum, supra note 11, at 171.
the politics of search engines shapes many more individuals’ knowledge and understanding of the world and its history. As Tarleton Gillespie writes of algorithms more generally, these are the "emerging tools of public knowledge and discourse."\textsuperscript{58} Survey results from 2012 indicate that 54% of American adults use a search engine every day.\textsuperscript{59} If the results of Google’s search script cast doubt on the historical fact of the Holocaust it has implications not just for societies understanding of what information can be found on the Web but for our collective understanding and remembrance of one of the worst human rights atrocities in history.

There are multiple reasons why search engine developers have not fully embraced the normative commitments of archives and libraries. Some reasons are pragmatic and operational, while others stem from internal and external concerns about the incredible power content platforms exercise over the information environment. The pragmatic and operational aspects are significant, yet well understood by search engine providers that make content moderation decisions under multiple corporate policies and legal frameworks every day. The political question as to whether there is a basis for Google to break with its standard search script and handle queries about the holocaust, and potentially other human rights atrocities, differently is more challenging.

The obligation on businesses to respect human rights that are implicated by their business practices provides both a basis and an impetus for Google to ensure that search results provide accurate historical facts about the holocaust in response to queries about whether it occurred. The perception that Google search was broken due to the query results for “did the holocaust happen” rests, at least in part, in the expectations of the public that Google’s search engine, like other stewards of information, would answer this potent question truthfully, bearing witness to the horrors of the holocaust. The collective “right to truth” about human rights atrocities is implicated by Google search, and the obligation to respect it provides a normative basis to rescript search.


A. Basis for Action: The Responsibilities of Businesses to Respect Human Rights

There is a path to producing more relevant results to the query “did the holocaust happen” that offers Google and other search engines the ability to take the moral high ground and avoid the slippery slope of arbitrating truthfulness. The United Nations’ (UN) Protect, Respect and Remedy Framework as elaborated upon by the United Nations’ Guiding Principles on Business and Human Rights to respect human rights (UNGP) affirms the corporate responsibility to respect human rights grounded in social expectations. Together with the growing recognition of the collective aspect of the “right to truth,” the corporate responsibility to respect human rights provides a normative basis for re-scripting search. The responsibility to respect human rights requires affirmative action not just passive avoidance. It requires businesses to "avoid infringing on the human rights of others” and to “address adverse human rights impacts with which they are involved.” The U.S. government signaled support for the UNGP approach, with the State Department “encourage[ing] stakeholders to treat the Guiding Principles as a “floor” rather than a “ceiling” for addressing issues of business and human rights, and to recognize that implementing the Guiding Principles should be a continuous process.63

While the obligations established under the UNGP are not legally binding, and the UNGP does not establish a framework of


62 Framework, supra note 60, ¶ 11.

accountability,\textsuperscript{64} the UNGP provides a pragmatic basis for integrating respect to human rights into corporate processes tied to the concept of social license.\textsuperscript{65} More importantly for our purposes, Google, along with several other U.S. and European companies in the information and communication technology sector have independently subscribed to a set of voluntary principles\textsuperscript{66} designed to protect the human rights of freedom of expression and privacy in corporate activities and to undergo external assessments to promote accountability.\textsuperscript{67} The principles, developed by the Global Network Initiative, a multi-stakeholder organization, along with the accompanying implementation guidelines\textsuperscript{68} provide an evolving framework for responsible company decision-making in support of free expression and privacy rights.

Human rights impact assessments (HRIA) are the key method of implementing the corporate responsibility to respect human rights. HRIA assists businesses in identifying and addressing “adverse human rights impacts through their own activities”\textsuperscript{69} and those “directly linked to their operations, products or services by their business relationships, even if they have not contributed to those impacts.”\textsuperscript{69} The Global Network Initiative’s implementation guidelines provide an example of the goals, scope, and range of activities encompassed in a HRIA. It requires participating companies to “carry out human rights due diligence to identify, prevent, evaluate, mitigate and account for risks to the freedom of expression and privacy rights that are implicated by the company’s

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\textsuperscript{69} GNI Principles, supra note 66, ¶ 13.
products, services, activities and operations” to assess “actual and potential human rights impacts on individuals, integrating and acting upon the findings, tracking responses, and communicating how impacts are addressed . . .” and where due diligence identifies “circumstances when freedom of expression and privacy may be jeopardized or advanced . . . employ human rights impact assessments and develop effective risk mitigation strategies as appropriate . . .”

The scope of the rights corporations are responsible for respecting under the Guiding Principles is expansive. The UNGP states that the human rights that business enterprises must respect include “at a minimum . . . those [rights] expressed in the International Bill of Human Rights and the principles concerning fundamental rights set out in the International Labour Organization’s Declaration on Fundamental Principles and Rights at Work.” However, the commentary emphasizes that “[b]ecause business enterprises can have an impact on virtually the entire spectrum of internationally recognized human rights, their responsibility to respect applies to all such rights.” The UNGP emphasizes the need to pay attention to rights related to the companies work and the need to attend to the rights of historically or otherwise marginalized people. Together, these statements suggest that Google should identify the human rights specifically associated with the business of search, and consider how the rights of marginalized populations might be differentially impacted by the service.

What does it mean for Google to respect human rights in the context of search? What rights are most likely to be impacted by search? Google—and other companies that provide platforms that support the creation, location, and exchange of information—provide a partial answer to this question. Over the years, these companies have identified a subset of human rights that are affected by the user-facing aspects of their

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70 Implementation Guidelines, supra note 68.
71 GNI Principles, supra note 66, ¶ 12.
72 Id. ¶ 12; see Framework, supra note 60, ¶ 52 (stating that “there are few if any internationally recognized rights business cannot impact—or be perceived to impact—in some manner” based on a review of over three hundred reports of alleged corporate-related human rights abuses).
73 Framework, supra note 60, ¶ 52 (“It may be useful for operational guidance purposes to map which rights companies have tended to affect most often in particular sectors or situations.”).
74 GNI Principles, supra note 66, ¶ 12 commentary (directing enterprises to “respect the human rights of individuals belonging to specific groups or populations that require particular attention” and referencing UN instruments that attend to the “rights of indigenous peoples; women; national or ethnic, religious and linguistic minorities; children; persons with disabilities; and migrant workers and their families.”).
businesses—freedom of expression and privacy. As a founder of the Global Network Initiative, a multi-stakeholder organization that established a voluntary code of conduct to make good on the recognition that “Information and Communications Technology . . . companies have the responsibility to respect and protect the freedom of expression and privacy rights of their users,” Google has formally acknowledged the connection between its business activities and freedom of expression.

The search imaginaries discussed above suggest that Google, and other search engines, should consider the impact of search on the right to truth and the related duty to preserve memory.

The right to truth, and the related state duty to preserve memories, have deep historical roots but have emerged as a fixture of human rights law most clearly and effectively through the Inter-American Commission on Human Rights (IACHR) and the Inter-American Court of Human Rights (IACtHR). Those institutions have led the development of jurisprudence on the right to truth for individual victims, and more importantly for our purposes, society as a whole. The IACtHR, in a string of cases, has grounded the right to truth in several different Articles of the Inter-American Convention on Human Rights. While the European Court of Human Rights has recognized the right to truth, including the collective nature of the right, it has tethered it to Article 3 of the European Convention on Human Rights’ prohibition on torture and inhuman or degrading treatment or punishment—as part of the duty to investigate secret detentions, torture and rendition and secure accountability of public officials for gross and systematic human rights violations committed in the context of State counter-terrorism initiatives. This is a narrower perspective that limits who can enforce the right.

Numerous other rights are implicated by relationships with employees, contractors, partners (including governments), suppliers, and shareholders. These are outside the scope of our current consideration.

GNI Principles, supra note 66.

See Panepinto, supra note 61, at 745 (discussing IACtHR cases linking the “right to truth” to Articles 1 Obligation to Respect Rights, 8 Right to a Fair Trial, 13 Freedom of Thought and Expression, and 25 Right to Judicial Protection).

Al Nashiri v Poland, App No 28761/11, ¶ 495 (E.C.H.R. 24 July 2014) (“[T]he right to the truth regarding the relevant circumstances of the case does not belong solely to the victim of the crime and his or her family but also to other victims of similar violations and the general public, who have the right to know what has happened.”).

Id. (“Furthermore, where allegations of serious human rights violations are involved in the investigation, the right to the truth regarding the relevant circumstances of the case does not belong solely to the victim of the crime and his or her family but also to other victims of similar violations and the general public, who have the right to know what has happened.”).

Panepinto, supra note 61, at 753 (“As such, the right to the truth as a collective matter strengthens the right to know held by specific individuals and groups, but the Court is yet
broader protection—supported by the UN Special Rapporteur on behalf of the Human Rights Council of the United Nations as well as the UN High Commissioner for Human Rights—would ground the right to truth in Article 10’s right to receive information. So while recent ECtHR cases affirm the collective aspect of the right to truth and its importance, the ECtHR has not provided a clear path to protecting the collective dimension outside enforcement by directly affected individuals. The full contours of the right to truth are still emerging, but it is a fixture of international human rights law and deeply entangled with Web search.

Given Google’s GNI commitment to protecting freedom of expression, it is fitting that the foundation for the collective right to truth rests in part in the right to freedom of expression. Article 19 of the UDHR establishes the right to freedom of opinion and expression which encompasses the right to access information, together with Article 8 which establishes the right of victims to effective remedy, it forms the basis for the right to truth. Google is not independently obliged to protect the right to truth or support the state duty to preserve memory, or provide the

to afford a clear, actionable right to the truth to satisfy that collective dimension.

81 See Al Nashiri v. Poland, App No 28761/11, ¶ 495 (E.C.H.R. 24 July 2014) (discussing the written and oral comments of the United Nations Special Rapporteur on the promotion and protection of human rights and fundamental freedoms while counteracting terrorism—submitted also on behalf of the Human Rights Council of the United Nations and the UN High Commissioner for Human Rights—on the scope of the right to truth as construed in contemporary human rights law arguing that “the collective dimension of the right could only be fully reflected through the rubric of the right to receive information under Article 10.) The right to receive information and the right to truth about gross and systematic human rights violations were inextricably intertwined.” Id. at 183.

82 Id. (noting the discrepancy between the Court’s growing recognition of the collective dimension of the right to truth and the “small number of claimants . . . entitled to take legal action”).

83 Panepinto, supra note 61, at 742 (the right to truth “is framed as a right ‘in relation to other fundamental human rights by human rights bodies and courts’ and referred to as such in truth seeking mechanisms’); Id. at 764 (concluding that while it has not reached formal standing in public international law "its repeated uses across different fora can be interpreted as performative utterances that contribute to its practical existence in international law").


85 Id. at n.72. (“UDHR Article 19 thus establishes four crucial rights: the right to memory, the right to truth, and the rights (of historians and other scholars) relating to research (which is a form of freedom of information), and to publication and teaching (which are forms of freedom of expression).”); Panepinto, supra note 61, at 764 (explaining that both IACHR and ECtHR jurisprudence link the right to the truth to both the state duty to investigate, and “the individual and collective dimensions of the right to know about the past in the context of widespread violations that affect society as a whole”).
collective reparations that they support, under the Guiding Principles. But we believe they have a responsibility to respect these rights—and to provide remedies in cases where they fall short in the first instance—in the operation of search. The GNI provides a natural venue for Google, and other participants, to consider how to protect the collective right to truth in the context of search and other ICT services.

Archives play an important role in buttressing the right to truth and realizing the state’s duty to remember. In the context of reparations, archives support the collective right to truth solidifying and maintaining broad societal understanding of human rights abuses.86 Like technology, archives are neither good nor bad nor neutral.87 Archives exert social and political power.88 Those who determine their contents, and mediate access to them, play an important role in constructing social memory.89

Viewed through the public’s imaginaries of search and the growing recognition of the collective right to truth, Google’s search results take on a different cast. Returning a top search result that denies the Holocaust—while simultaneously burying the unknown number of sites that memorialize the atrocities—feels more akin to vanquishing historical truth. As book burning was “a favorite type of ‘street theater’ competing with rival processions for the most common form of party identification” in sixteenth century France’s religious wars,90 search engine optimization techniques are used by white supremacist and neo-Nazi groups not just to espouse their hateful positions but as technological street theatre aimed at both metaphorically burning the books of historical truth and performance of neo-Nazi identity. If the fire and the ash heap were the ultimate forms of vanquishing in the paper age, demoting in Google’s search results, while less visually dramatic, can be all the more effective for its relative invisibility.

Google’s algorithms and processes were used to suppress access to the truth, or at the very least destabilize ongoing efforts to stabilize the collective truth and memories about what happened during the Holocaust.

87 Kranzberg’s First Law states “Technology is neither good nor bad; nor is it neutral.” Reflecting the position that the impact of technology is not fixed but rather influenced by social, economic, material, legal and other conditions. Melvin Kranzberg, Technology and History: “Kranzberg's Laws”, 27.3 TECH. & CULTURE 544, 545 (1986).
89 Id.
90 James O'Toole, Symbolic Significance of Archives, 56.2 AM. ARCHIVIST 234, 252 (1993).
Some may quibble with this interpretation: arguing that the truthful information about the Holocaust was still readily available—surely a far cry from destroyed or burned. Yet, concerns expressed by Google and countless others about the impact of the “right to be forgotten” delisting requirements on the public’s interest in an accurate recording of the past attest to the important role Google’s search results play in representing it. In the context of born digital video and audio files (files that have no analog), Jay D. Aronson has argued that the duty to preserve evidence for use in humanitarian, justice and accountability, and historical investigations “is shared by individuals and institutions whose missions are explicitly human rights-oriented and who are capable of doing so in a safe and secure way, as well as the privately operated platforms that serve as de facto public forums for media that clearly depict human rights violations and war crimes.” Search engines—particularly Google’s—play an extraordinarily important role in shaping social understanding of what is worth knowing. Allowing sites that deny human rights atrocities to “outrank” sites that accurately document these atrocities imperils the right to truth and memory and the collective reparation measures that support and sustain them both.

Joel A. Blanco-Rivera’s recounting of the creation of the Muro de la Memoria (Wall of Memory) with photos of the desaparecidos (the disappeared) culled from the archive of the Comision Nacional de Verdad y Reconciliacion (CNVR) and other domestic archives illustrates the significant symbolic, as well as documentary and research role, archives play in solidifying collective memory. The importance of sustaining a collective memory with an accurate and shared core of ideas about central, well-documented events, is key to the right to truth. While Google has no obligation to search for that truth, or create those records, the responsibility to respect requires that it faithfully surface them when asked questions about the literal fact of the occurrence.

The responsibility to respect is more pressing when one recognizes the damage done by symbolic acts of denial. The symbolic value of records is reflected in both their creation and destruction. In discussing the symbolic value of records James O’Toole explains the significance of the family Bible that records births and deaths as “part record, part artifact” valued for its power to “reconstruct the family across time and space.” O’Toole describes record destruction as “an important instrument of war,

93 O’Toole, supra note 90, at 238.
politics, or religion” noting that “[t]he victorious frequently symbolize and even celebrate their victory by gathering up and destroying the books and records of the vanquished.”

B. The Space for Action

The gap between search results and results-of-search provides a space for action. Acknowledging the difference between what Google Search engineers produce (the search results) and what their users (both searchers and speakers) experience (the results-of-search), allows Google to intervene, to act in the gap, without requiring their engineers to violate their professional commitments. This description provides space for an articulation of the public good (recall the description of the difficulty of that articulation in Van Couvering). An interstitial intervention by Google, bearing witness to the Holocaust, can preserve search, speech of others, and allow Google to fulfill its responsibility to respect human rights. We are not making an argument for a specific type of action, but identifying the responsibility and space for action and a correspondence with extant professional and normative commitments.

C. Avoiding the Slippery Slope: Circumscription and Objectivity

Rescripting search to respect the right to truth can be articulated within an engineer’s commitments and comfort zone. As in other areas of content moderation, Google can rely on the expertise of others to determine when this new script applies. The bearing witness script can, and should, rely upon the circumscribed results from truth commissions and other formal proceedings that produce evidence of human rights atrocities. Relying on factual accounts of human rights atrocities,

94 O’Toole, supra note 90, at 253.

95 There are many more actors and potential actors in a search script that could intervene. Some actors did intervene in this situation by producing content that would perform for Google's algorithm (noted above). While that may have worked for a time in this situation, relying on content producers to consistently perform for the search algorithm and the searchers’ queries is problematic given the contested playing field. This is not a stable solution for these sorts of problems because purveyors of misinformation will work to re-perform themselves. Various actors could also intervene to improve the public's search literacy. While this may prove beneficial—any evaluation of benefit would have to balance the increased effort required and the cost of increased search effort—it would compete with the articulation of search provided by Google itself.

96 In addition to such formal findings, we believe search engines could take note of formal laws that on their face provide evidence of human rights atrocities such as laws that allowed people to be owned and counted as property in the United States. This would allow search engines to prioritize accurate answers to the parallel question “did slavery
produced by expert public bodies, is well aligned with democratic governance concerns about unfettered, unobservable, and unaccountable content moderation environments. It avoids the slipperiness presented by in-house determinations. It does not invite search engines to define human rights atrocities nor identify specific instances of them, but rather to rely on other sources with the authority, legitimacy, and competency to do so. This carefully prescribed role for search engine companies is far narrower than the tasks implicitly and explicitly assigned under the so-called “right to be forgotten” provision of the GDPR. Given the respect for process and documentation of truth—an objectivity akin to but distinct from the goals and norms of the engineers—using the products of these human rights fact-finding bodies to inform how search results for relevant queries are scripted seems intellectually (even if not technically) easier to accommodate. In addition, Google need not act fully on its own to develop guidelines and processes for implementing this new obligation. The GNI provides a useful and ready forum for deliberation, action, and oversight.

While we advocate for rescripting search to realize the responsibility to respect the right to truth and memory, we do not propose that it yield a specific action or outcome. This is not an argument for removing from the index, de-listing for particular search terms, or an argument about whether such results should be pushed off the first page. It is also not a statement about a particular form or content of notice to accompany search results. Companies engage in a range of "code-supported information stewardship" to lower the relative accessibility of old information or preference newer information. There are a number of implementation issues that make rescripting far thornier than our high-level treatment here can fully acknowledge or attempt to resolve.

97 We recognize the value in people being able to use search engines to find grossly inaccurate or insincere representations of historical facts. It may be more appropriate to have such searchers “clarify their initial query” to indicate such an intent in certain situations and default to bearing witness through search results in answer to queries plausibly asking for facts about the world.” Tarleton Gillespie, *Algorithmically recognizable: Santorum’s Google problem, and Google’s Santorum problem*, 20.1 INFO. COM. & SOC’Y 63, 73 (2016).

98 Meg Leta Ambrose, *You Are What Google Says You Are: The Right to be Forgotten and In-formation Stewardship*, 17 INT’L REV. INFO. ETHICS 7, 25 (2012) (discussing various code-supported approaches to lowering the accessibility of old information or preferring newer information by Google, Twitter, and 4chan and suggesting they be used to engage in information stewardship to address the privacy concerns of private individuals).

99 Implementation issues include due diligence processes involved in initiating and reviewing rescripting, the continued historical bias as to what atrocities truth
however we believe that companies can draw on code-based and other approaches they’ve developed in other areas. We look forward to a dialogue on these questions with the many stakeholders, and to the innovative and diverse approaches that emerge.

CONCLUSION

Policymakers, academics, activists, and the press have assessed the implications of Google’s activities, and its interactions with governments and private parties, on freedom of expression and privacy. They have argued that Google’s actions are of paramount importance given its outsized role in shaping access to information on the World Wide Web. From critiques of their classification systems and content removal policies, to calls for greater transparency around removals in response to government and third-party requests as well as their own independent removals under Terms of Service violations, Google’s moderation policies are constantly scrutinized. This scrutiny rests on the reality that Google plays an important role in shaping societies knowledge of and access to information—and in doing so our understanding of historical events.

Our goal here was to identify the factors that contributed to the perception that Google’s search script was, for this particular query, broken. In doing so we hoped to identify opportunities for corrective action, but also to demonstrate the productiveness of ethnomethodological examinations of breakdowns for revealing operative facts, and opening up possibilities for action more generally. This particular failure is extra-algorithmic. It is not a failure of the algorithm writ small, but a failure in the articulation and application of the algorithm. We have argued that human rights law, and Google’s acknowledgement of the impact its business activities have on freedom of expression, provide a basis for allocating the responsibility to fix it to Google.

This essay offers a new logic for search scripts. A logic with moral force grounded in the growing recognition of corporate responsibility towards the particular human rights relevant to search engines. We offer it in hopes that it will help search engineers and content platforms be brave,

100 “Web search is critical to our ability to use the Internet. Whoever controls search engines has enormous influence on us all. They can shape what we read, who we listen to, and who gets heard. Whoever controls the search engines, perhaps, controls the Internet itself. Today, no one comes closer to controlling search than Google does.” James Grimmelmann, The Google Dilemma, 53 NYL SCH. L. REV. 939, 939 (2008); see also Introna & Nissenbaum, supra note 11; Hinman, supra note 41; Grimmelmann, supra note 56, at 869.
and bear witness to the atrocities of the past so society may remember and avoid them in the future.