



Looking “Under the Hood” of SEO Conversion: Paradoxical Goals and Moral Dilemmas Faced by the Digital Age Rhetorician

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Abstract: Digital rhetoricians, such as technical writers, SEO specialists, and social media marketers, are increasingly asked to balance ethical considerations in writing for both humans and algorithms. The need to rank highly on search engine results pages drives how search engine optimization (SEO) operates. An understanding of this often unseen, but ever-present appeal to a non-human audience, or what Michelle Gibbons calls “persona 4.0,” is crucial for professionals, instructors, and students alike. A reliance on search engines without awareness of their practices can perpetuate injustices against marginalized groups who are overlooked in the design of certain technologies. In this article, we discuss the implications of SEO and provide pedagogical approaches to improve students’ understanding of search engines.

Keywords: Search Engine Optimization, Digital Rhetoric, Ethics, Pedagogy, Persona Theory

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Introduction

Search engine optimization (SEO) is more than a marketing tool or a sales buzzword; it is a critical part of every individual's journey for online information, regardless of whether the human researcher in question realizes it. Technical writers play a key role in shaping the path to these answers, and their work has real ethical implications for the users who are presented with online content. We come to this project as two graduate students who have been grappling with a plethora of definitions for rhetoric and technical communication. In many of our past courses and experiences, we saw "technical" communication as practical and objective. However, with this assumption comes the danger of overlooking the injustices and prejudices woven into the "objective" technologies we rely on (Jones, 2020, p. 515).

As instructors, we have witnessed our students eagerly accepting the first search result without the curiosity to explore further, and most recently, accepting the response generated by Google's integrated search artificial intelligence system, Gemini, without question. We advocate for the need to educate ourselves as technical communicators and researchers, and we emphasize the importance of sharing this knowledge with our students across disciplines and courses. The momentum of activism begins with an awareness of the injustices present in an otherwise accepted system.

As instructors ourselves, we want to offer our own insights and experiences with our students and their use of search engines. In our First-Year Composition courses, we have both noticed the way that students immediately go to Google to find both academic research and explanations to their questions. While we understand the reliance on this platform, we also notice how unaware our students are of the way that their search engine algorithm works.

This unawareness and trust are not limited to our students: "In addition to the great trust that users place in search engines, there is also a lack of knowledge of how they function and where their revenue comes from... users have little knowledge of how search engines rank results" (Schultheiß & Lewandowski, 2021, p. 543). This trust and lack of understanding would not be problematic if not for the added layer of confidence that most searchers have in their searching abilities, often ranking their searching skills as "good" or even "very good." This demonstrates an imbalance of power between the stakeholder groups, with a clear disadvantage for the users (p. 543).

The sheer volume of individuals who rely on Google presents an even more apparent power imbalance with Google holding nearly 92% of the global share in the search engine market and consistently ranking as the most visited website in the world ("Search Engine Market Share Worldwide-January," 2024). In our own experience as instructors, we have seen students do a quick Google search on a topic and never click past the first search engine results page (SERP). This observation is mirrored in research observations, with the average searcher viewing "no more than three SERPs for any particular search query. In fact, the closer any particular web page ranks to the first position on the first SERP, the higher the chances are for searchers to view that particular web page" (Weideman, 2009). This is largely because searchers, and in this case, students, have come to view search engines as places where the "best" answers appear near the top. While the algorithm of Google tends to match searches to relevant results, students must

understand how search engine optimization works so that they can conduct more ethical and advanced research and bring critical thinking to their interactions with online spaces.

In this article, we have two main aims. The first goal is to present our readers with a better understanding of SEO and its intersection with social justice. We recognize that our audience may consist of researchers, instructors, graduate students, or technical writers, and we encourage each individual to consider how SEO impacts them both personally and professionally. Our second goal is to provide educators with a toolkit for incorporating these conversations into the classroom, to promote digital literacy and activism. We begin our piece with some brief overview information on SEO to ensure that all readers, regardless of their professional background, are able to engage in the later connections to social justice. We then include an interview with an SEO professional to demonstrate how SEO is used and understood in a sample workplace. By moving into case studies and practical suggestions for action, we hope to end by providing instructors and SEO professionals with a potential roadmap to spark conversations and enact change. We hope that this article encourages readers to question their search practices and pass on a sense of curiosity and awareness to future generations of content creators and students.

Investigating Persona Theory in Digital Rhetoric

Persona theory offers a nuanced lens for exploring the rhetorical situation beyond the traditional rhetorical triangle of audience, speaker, and text, particularly when examining the complex nature of digital spaces. In this framework, the first persona is the speaker, while the second persona represents the audience (Black, 1970, p. 111). Wander's (1984) concept of the third persona complicates this dynamic, identifying the "it" negated by the speaker – ideas, perspectives, or groups excluded or marginalized in discourse. Morris (2002) further enriches the theory with the fourth persona, which he defines as "a collusive audience constituted by the textual wink" (p. 230). The fourth persona encompasses marginalized, non-normative identities that recognize a speaker's attempt at "passing" as normative and remain silent to facilitate that effort. The fourth persona acts as an auditor, discerning hidden identities and supporting the speaker's rhetorical strategy.

Extending the fourth persona into the digital sphere, Gibbons (2021) introduces the machine as a new rhetorical audience—"persona 4.0." In her analysis, blogs, social media, advertisements, product listings, research articles, and news sites are not only written for human readers, they also covertly address a machine audience. This machine audience, embodied by search engine algorithms, determines which pages rise to the top of search engine results to capture the attention of unsuspecting users. SEO emerges as a critical aspect of persona 4.0, referring to the strategic processes of enhancing a website's visibility and ranking on search engine results pages (SERPs) through keyword optimization, content creation, and technical adjustments to increase organic traffic and address user search intent.

As Gibbons notes, "We think we find webpages, and we don't always realize how much it is the case that they find their way to us" (2021, p. 51). SEO relies on iterative guesswork and trial-and-error, underscoring its importance for rising generations of SEO specialists, copywriters, marketers, and technical writers. Persona 4.0 warrants attention in technical communication because audience analysis is a large part of crafting quality documentation for the intended users.

As John Gallagher points out, algorithms form a critical component of a writer's audience. In online spaces, algorithms “evaluate, structure, and influence” writing, and are thus treated as an audience that, while non-human, is always worthy of consideration (2017, p. 25).

SEO: A Brief History

While this section offers a basic overview of SEO, we would like to remind our readers that the seemingly objective and mechanical nature of SEO masks larger ethical issues, particularly issues of algorithmic discrimination, that we will discuss in greater detail in later sections.

What is SEO?

Search Engine Optimization (SEO) is the practice of improving a website’s visibility on search engine results pages (SERPs) to increase traffic and engagement (Davis, 2006). For instance, when a user searches for “best lunch spots near me?” SEO determines which websites appear at the top of the search results. Major search engines like Google use complex algorithms to sort through billions of web pages, evaluating factors such as content relevance, site structure, and user engagement to deliver results in seconds (Croft et al., 2015, p. 7). Websites that perform well in SEO often offer valuable content (note that “value” here is determined by the search engine) such as restaurant reviews, tutorials, or forums where users can interact.

To improve a website’s ranking, SEO specialists use various strategies. For example:

- **Keyword Optimization:** A recipe website targeting the search phrase “quick vegan meals” might include this exact phrase in its title, headings, and content. This ensures alignment with common user searches (“The Beginner's Guide to SEO,” n.d.)
- **Backlinks:** A blog post about eco-friendly travel might link to reputable sources like National Geographic or government tourism boards. These external backlinks signal credibility to search engines (Brin & Page, 1998).
- **Social Media Integration:** A small business might share blog posts or promotions on Instagram, Facebook, or X, creating additional traffic pathways and enhancing its search ranking (Tien, 2022).
- **Optimized Page Structure:** An online store might ensure its product pages load quickly, are mobile-friendly, and include clear navigation, all of which improve the user experience and are rewarded by search engines.

SEO specialists aim to increase organic (unpaid) traffic, avoiding over-aggressive techniques that might trigger penalties. For example, “keyword stuffing” – repeating the same term excessively – can lead to search engines lowering a site’s ranking. Other manipulative or deceptive tactics, such as creating “doorway pages” (thin, low-quality pages designed solely to redirect users), can result in severe penalties, including blacklisting. A literature review by Ziakis et al. (2019) highlights 24 key factors influencing website rankings. Among these, the quality and quantity of backlinks, the presence of keywords in title tags, and the overall site structure are consistently emphasized. Google’s PageRank algorithm, for instance, assigns a numerical score to backlinks based on their authority, helping distinguish reputable websites from spam (Ziakis et al., 2019, p. 9). Social media support has also grown in importance; linking a website to platforms like

Instagram or Facebook not only generates backlinks but also engages audiences across multiple channels.

Despite SEO's central role in digital marketing, formal education in this area remains limited. Universities have yet to develop dedicated degree programs for SEO, leaving most learning to on-the-job training or self-guided study. Free and paid certifications on platforms like LinkedIn Learning and HubSpot provide beginners with essential skills, including basic HTML, keyword research, copywriting, and analytics. For example, a beginner might learn to track website performance using Google Analytics or improve visibility by creating a sitemap. Additionally, agencies often train new hires to use SEO techniques tailored to their clients' needs.

Several online certification courses focus on improving customer experience, and while some mention "ethical" search engine optimization, these courses don't define or follow up on what is meant by ethical practices. Instead, the word "ethical" seems to be used as a placeholder for the word "successful," with the certification focused on practices that will lead to higher search engine rankings rather than a consideration of social justice issues (Introduction to Search Engine Optimization (SEO), n.d.).

By balancing technical knowledge and creative strategy, SEO professionals play a vital role in shaping how information is accessed and consumed online. Their work ensures websites remain visible, relevant, and user-friendly in an increasingly competitive digital landscape.

Google's Monopoly Over the Web

Google's PageRank algorithm has been integral to the development and evolution of SEO best practices, shaping the way websites craft and share content to attract traffic. Since its launch in 1997, Google has established an almost insurmountable dominance in the search engine market. As of December 2023, Google controlled 91.61% of the global search engine market share ("Search Engine Market Share Worldwide-January," 2024). Factors such as speed, relevance, and user-friendly design contributed to its meteoric rise, granting it access to vast amounts of user data to refine its search processes further.

For many, Google's influence is unsurprising. The company's name has become synonymous with searching itself, with individuals often saying they will "Google it" instead of "search for it." However, as Heffernan (2017) points out, this linguistic shift reflects a deeper reality: the act of searching through Google is not merely about discovering existing information. Instead, it is a process mediated by Google's decisions about what qualifies as searchable, its algorithmic hierarchy, and its power to incentivize content creators to optimize for Google's preferences.

This power allows Google to determine a great deal of what succeeds and what dies on the web, shifting the ranking of web pages according to their ability to follow Google's guidelines. With the development of the Panda algorithm in 2011, Google began to penalize low-quality and thin content websites, emphasizing the importance of user-centricity in SEO. This targeted approach to SEO revisions continued with the Penguin algorithm update of 2012, which was aimed to force SEO professionals to adapt their strategies away from unethical, spammy backlink profiles and instead focus on user experience rather than keyword optimization that presented unclear

content for users (Özkaya, 2023). These combined developments placed a great deal of the evolution of SEO practices in the hands of Google’s ever-changing algorithms.

This dual role as both a standard-setter and a beneficiary of SEO practices creates tension. In other industries, ethical standards are often set by independent professional organizations or regulatory bodies, ensuring a balance between industry needs and public accountability. In SEO, however, Google’s dominance means that its guidelines effectively function as the industry’s ethical code. The implications of Google’s monopoly also extend into issues of equity and representation, especially in the context of algorithmic discrimination. Search engines are not neutral; they reflect and perpetuate existing biases in their design and data (Belenguer, 2022). Marginalized voices, small businesses, and non-Western perspectives may find it harder to compete among search results directed by Google’s standards. Some critics claim that Google’s algorithms often privilege mainstream, advertiser-friendly content over alternative viewpoints, reinforcing existing inequalities in information access and representation (Nishad, 2024).

Addressing these challenges requires a broader conversation about the ethics of SEO and the role of corporate power in shaping digital spaces. Counter-balancing Google’s current dominance in the field is difficult to imagine, but the establishment of a third-party overseer of SEO guidelines would allow for less conflicts of interest and potentially more diversity and inclusion within Google’s search results.

Behind the Curtain Experiences with SEO: Copywriter & Technical Writer Training

While a discussion of SEO practices and their history helps to outline the way that persona 4.0 informs modern rhetoricians, we wanted to include commentary from an SEO professional who actively uses these practices, so that our readers can better understand the practical application of the strategies outlined above.

This individual [name redacted for privacy reasons] works at a company that specializes in health equipment for rehabilitative, fitness, and mobility needs. They have worked in SEO and digital marketing for 8 years. After studying creative writing in college, they began writing content for a small independently run company, where SEO was first introduced to them as a necessary yet vague concept. Their first boss continued to emphasize the need for SEO, without fully explaining how it functioned or what it did for the company: “It was intimidating at first, because you have a lot of power with it. They never really explained to me how it worked. They just really stressed that I had to do XYZ” ([name redacted], personal communication, January 24, 2024). As they point out, many enter businesses without a comprehensive understanding of the way that their actions impact consumers.

Despite the lack of direct SEO training they received while in their degree program, they note that many graduating college students are more familiar with concepts of SEO than they might realize. The use of hashtags in social media posts works in a similar way to draw a certain audience to specific content, allowing users to write for machines and algorithms while addressing a set group of users.

During the interview, this individual frequently commented on the way that they view writing for machines and humans as intricately interwoven in a way that no longer causes them to pause and ponder their approach as they did at the start of their career: “It’s blended so well now that it is one and the same for me. But it’s not all cons, because I think by giving a broad spectrum of words that could apply to something, you might be helping the searcher understand you better too” ([name redacted], personal communication, January 24, 2024).

There is a great deal of debate on best practices for learning about SEO, with some practitioners arguing that SEO is best learned on the job, while others believe that SEO should be more directly addressed in marketing and public relations majors in university programs. While studies have shown that students tend to have a good idea of what SEO is, they often do not have an understanding of how it applies to the work they do or see the underlying ethical implications of page ranking on search engine sites (Moody & Bates, 2013). This idea is furthered by this individual’s remarks, in which they recall the first time they truly stopped and reflected on the ethical implications of SEO strategies:

The ethics didn't even become that apparent to me until I got into the keywords that I was trying to incorporate into ads. Let's take Google for instance. There are certain categories they don't even want you advertising for because you might be taking advantage of someone who's in a really poor spot and you're offering your product up as their solution. You know, we sell health products, so I've seen that category ban get used on us, although ours is more of a utility. I feel like that's more geared toward people trying to sell pills.... ([name redacted], personal communication, January 24, 2024).

As this individual mentions, the products that websites sell are being directly marketed to consumers in need, although this need naturally varies in severity based on what product they are searching for. It is when these advertisements are written solely for the attention of algorithms that they become a danger to individuals who could potentially buy them, as words are chosen not due to relevance or efficacy, but instead to rank higher on search engine results pages to generate an immediate profit.

Developing students’ understanding of SEO and the ethical implications of its use, as we will later discuss in detail, is crucial. Even if students do not go into careers in digital marketing, the way they interact with online searches plays a major role in how they understand the world around them, as “searchers have come to understand that search engines attempt to provide the most relevant results first. This implies that if they do not obtain the ‘correct’ result within the first three SERPs (search engine results pages), the remaining results will also be irrelevant” (Visser and Weideman, 2014, p. 4). It is also crucial for students to understand the key role they can play in advocating for social justice within online spaces. Rather than accepting the system as an objective and unquestionable answer generator, they can be encouraged to question the practices and structures of the search engine system.

Knowledge of SEO is often something reserved for a set of professionals, but as our interviewee points out, “I didn't major in finance, but they still taught me about opportunity cost and what that means” ([name redacted], personal communication, January 24, 2024). Search engine optimization is something that everyone interacts with, whether that interaction is on the back

end as a digital marketer or on the front end as a user searching for information. The way that pages compete for these digital rankings has important implications for the way that individuals understand the answers to their search queries, with the first results they see often relied on as *the* answer to their question or *the* product for them. Technical writers play a key role in how answers are found in line with the algorithm of the search engine, and their work has real ethical implications for the searchers who are presented with online content. Students from all disciplines interact with and engage with this content for research and recreation, and they must understand the way these online spaces are designed.

As we will later discuss, we believe it is important for students to understand the far-reaching impacts of the words they choose and how they use them, particularly as it applies to online spaces. However, it would be unfair to discuss the ethical implications of individual writers' actions without a discussion of the larger power dynamics of the workplace, namely the way that corporations play a role in how SEO is carried out.

Ethical, Grey, and Unethical SEO Practices

In our discussion of the ethical implications and complications presented by SEO, we will borrow from Surma's definition of ethics as "the postmodern moral contexts of responsibility that guide different writers' or organizations' behavior or activities in relation to particular writing and reading contexts," as well as the "extent to which different readers are free or constrained to interpret those codes of value, belief, knowledge, or information in their reading of texts" (2005, p. 24). This approach considers the layered nature of sponsoring organizations, individual employees, and audiences. As mentioned in the above interview, writing with an algorithm in mind has become a seamless and automatic action for many SEO professionals, and by extension, something considered an objective and unavoidable part of many business practices.

What makes certain practices "unethical" is the underlying desire to trick a search engine into thinking that a website is more relevant to a user's search than it is. In contrast, ethical SEO actively makes websites more relevant to searches with no "trickery" involved. In essence, what makes SEO "ethical" is a genuine consideration of the writer's human audience. While an SEO professional may choose to use certain words that rank higher and receive more clicks, they are encouraged to approach SEO with an awareness of the human persona who could potentially view their words. While SEO is targeted toward search engine rankings, it also allows the writer to describe a product or webpage with a more varied vocabulary, which can help the searcher find more relevant content.

There is a danger here in the complacent acceptance of search engines as the sole determiner of "valuable" online content, especially with one company, Google, at the helm of these decisions. There is also a danger in teaching SEO as an objective, market-based strategy that is disconnected from real human impacts. In theory, an ethical SEO professional would want their webpage to rank highly not only because they have included the right words and links, but because their content is well-crafted for a human reader. In this section, we highlight the commonly accepted language surrounding SEO to emphasize how language solidifies our conceptualization of online spaces and ethical SEO use. We also spend time discussing how SEO

is used on a larger scale, to demonstrate how the decisions surrounding SEO use rarely occur on an individual level. We end with several examples of unethical SEO use so that readers can recognize its appearance in action and learn who can be impacted by unethical SEO use.

While many individuals refer to these practices as White Hat, Grey Hat, and Black Hat Practices, we have elected to use the terms Ethical, Unethical, and Combination SEO Practices. As The Association for Computers and the Humanities points out, “Although the words ‘black’ and ‘white’ in this usage aren’t understood as racist, it still promotes a color binary that could be construed as racist and obfuscates what is really at stake, which is ethical practices in coding” (Koeser, 2020). To ensure greater clarity, we will simply refer to these practices for what they are: the unethical or ethical use of SEO for profit of a corporation or seller.

Language Surrounding SEO

The language used to describe digital technologies shapes our understanding and use of online spaces. This language often goes unexamined, especially when it comes to the way we describe SEO practices or anthropomorphize algorithms as unquestionable designators of valuable content. Much of the conversation surrounding SEO uses vocabulary that tends to criminalize the activity of optimizing search engine results. Terms such as “gaming” make it seem like SEO specialists spend their workdays hacking search engines, throwing the keywords dice, and spamming search results without a care in the world. Negatively connotated vocabulary like “spam” can be associated with SEO practices, giving SEO a bad rap in the realm of digital marketing. Malte Ziewitz conducted a study with the hopes of “rethinking” this negative terminology and investigating what it is that SEO specialists do in the workplace and how they navigate the complicated ethical considerations involved in their work. Ziewitz demonstrates the anxiety within the world of SEO, quoting a participant in his study who described the practice of SEO as “the war zone of the ten blue links” (2019, p. 710). The “constant ‘fear of falling in rank’” leads companies and SEO specialists to be anxious about search engine performance, and as a result, place a large amount of money and resources into SEO to keep their website at the top of the search rankings (p. 710–711). Though Google claims that organic listings will be successful if the quality of the sites meets their standards, Ziewitz found through interning with UK-based SEO company, ProSEO, that there is a lot more that goes into a number-one ranking website besides pure website quality.

On Google’s “Search Engine Starter Guide” page, there is a section titled, “Things we believe you shouldn’t focus on.” Under this heading, practices like “keyword stuffing,” tracking “PageRank,” and “maximum or minimum content length” appeared as outdated and ineffective methods of SEO. Google instead encourages SEO specialists and companies to focus their efforts on “creating helpful, reliable, people-first content” as the key to success in ranking first in the search engine algorithm”. Google encourages website creators to focus on people first, then linking, cleaning up codes, and other SEO practices (“Google Search Essentials”). In this guide, practices that include primarily writing for the *machine* are placed in the category of “things we believe you shouldn’t focus on,” thereby placing a negative, or even unethical, connotation to the coding aspect of SEO. “People-first content” is an admirable goal, but many SEO specialists know that no search engine is perfect, and even the cleanest website with no hidden links or keyword stuffing may still not appear on Google’s top 20 results for a search query. It is the SEO

specialist's job to prioritize a user's connection with a website, while also realistically knowing that the SEO's ability to connect with what the search engine prefers is what drives success. However, as we will discuss in the next section, these decisions are rarely made by individuals and instead tend to be established by larger corporate initiatives.

Corporate Authority: How Companies Interact with SEO Ethics

Companies rely on SEO to enhance visibility and build genuine connections with their audiences, yet the pursuit of high search engine rankings often leads to ethical challenges. Practices like keyword stuffing and thin content (pages with minimal value or duplicate content) blur the line between legitimate optimization and manipulative tactics. While individual content writers and digital marketers may wish to prioritize ethical practices, their actions are frequently shaped by the profit-driven goals of their employers. This dynamic underscores the shared responsibility among individuals, corporations, and regulatory bodies to foster sustainable and transparent SEO strategies. Ultimately, long-term success in SEO depends on building trust and professional intimacy with audiences, even as practitioners navigate the challenges of competitive pressures and algorithmic secrecy.

SEO practitioners and the companies they represent face complex ethical terrain, marked by a fine line between legitimate digital marketing and practices perceived as manipulative or spam-like. Companies aim to build online "communities" by fostering relationships with audiences, maintaining engagement, and attracting new users through high search engine rankings. However, ethical dilemmas arise when these efforts prioritize algorithmic manipulation over genuine connection.

Brunton's analysis of "community" and "spam" illuminates this ethical tension. He describes "community" as a symbol of human connection and collaboration, while "spam" represents "an ever-growing monument to the most mundane human failings" (2012, p. 33). While SEO and spam differ fundamentally, practices such as keyword stuffing blur the ethical boundary. Spammers exploit SEO techniques to create temporary, high-ranking websites, tarnishing the reputation of legitimate SEO efforts. Ethical SEO practitioners strive to build authentic online communities rather than merely gaming the system.

In the attention economy, SEO becomes essential for amplifying reach and sustaining virtual communities. Yet, ethical concerns emerge when companies engage in deceptive practices such as embedding hidden content, purchasing low-quality links, or creating thin, doorway pages. These tactics aim to manipulate search engine rankings without serving users' needs. In response, Google imposes penalties, such as demoting or removing offending pages, to deter unethical behavior.

The corporate framework further complicates SEO ethics. Debs (1993) highlights how rhetorical choices are shaped by organizational structures, with companies speaking through the collective efforts of employees. As she notes, "An organization may have a physical location, identifiable if abstract characteristics, and even a history, but it will have no voice except through its members" (1993, p. 164). While individual digital marketers and writers exercise some agency, their work

is often dictated by company policies and goals. This dynamic creates tension between the ethical intentions of individuals and the profit-driven priorities of organizations.

Content writers frequently navigate this tension: “The company has more of an ethical responsibility because, at the end of the day, writers are given tasks. They’re not choosing what they want to write about” ([name redacted], personal communication, January 24, 2024). Writers may wish to challenge unethical practices, but corporate priorities often emphasize immediate gains over long-term stability, placing individuals in difficult positions. These relational power dynamics underscore the need to assess ethical responsibilities across both individual and organizational levels.

Despite widespread recognition of the need for ethical standards in SEO, the industry lacks a cohesive and universally accepted code of conduct. As Iredale & Heinze (2016) note, the global and cross-industry nature of SEO – spanning devices, borders, and countless sectors – poses significant challenges to regulation and oversight. Google’s guidelines encourage adherence to best practices, but enforcement mechanisms, such as penalizing unethical sites with lower rankings or removal from search results, often function as reactive rather than preventive measures. This enforcement gap allows some to exploit unethical tactics – such as keyword stuffing, thin content, or deceptive linking – briefly profiting at the expense of users and the integrity of search results.

A unified code of conduct for SEO could address these ethical challenges by establishing clear standards for acceptable practices at both individual and corporate levels. Such a framework might include principles like prioritizing user intent and transparency, avoiding manipulative or deceptive techniques, and maintaining accountability for content quality. A corporate-level code could also ensure that SEO practitioners and digital marketers are not pressured into creating unethical content that conflicts with their professional values. Additionally, an independent regulatory body or industry organization could oversee compliance, providing certifications or seals of approval to incentivize ethical practices. By aligning ethical guidelines with enforcement and professional accountability, the industry could foster trust, improve user experiences, and ensure long-term sustainability in digital marketing.

Case Studies & Further Examples of Unethical SEO in Action

The power of these punishments is best illustrated through a few large-scale examples. In 2011, a study of JC Penney’s ranking on Google for the New York Times revealed over 2,015 “link schemes” designed to draw in more organic traffic from pages with topics ranging from casinos to nuclear engineering and banking. Links to “cocktail dresses” and “casual dresses” spiked organic traffic to JC Penney’s website. When Google discovered this, they took immediate action, manually “demoting” the company’s search viewability. Before the penalties went into effect, JC Penney ranked No. 1 for searches for living room furniture. Two hours after penalties went into effect, they had sunk to No. 68 (Segal, 2011). A similar result occurred in 2013 when Rap Genius was caught offering promotional tweets to bloggers who used spammy links that circled back to Rap Genius’ website. The day after Google’s spam team caught wind of this, the site no longer ranked for most of the lyrics it had ranked for previously and did not even appear as a first-page result for the “Rap Genius” brand name (Rodriguez, 2013).

With so much of the search engine market being owned and operated by Google, and page rankings dependent on Google's algorithms, websites are encouraged to participate in ethical SEO practices, which include quality content writing, keyword research, good web design with internal linking across pages, and limited use of artificial intelligence. Ethical SEO professionals are those who research the keywords that are trending in searches and intersperse them in more organic ways that do not sacrifice the content and clarity of the webpage. Internal linking within sites allows websites to establish credibility with their audience of searchers (Pollitt, 2020).

While unethical practices tend to generate a high amount of organic traffic very quickly after implementation, ethical practices stand the test of time, as they are slowly checked and approved by search engine crawlers who are trained to spot and penalize those who do not follow Google's "Google Search Essentials," formerly known as "Webmaster Guidelines" (2024). However, a few corporations rely on a mixture of ethical and unethical guidelines, implementing practices such as cloaking (presenting one set of linked content to users and another to search engines), automating content, using expired domains, or linked exchanging, to name a few. These combinations of SEO practices toe the line of what Google accepts and attempt to sneak unethical practices past the algorithms' radar. However, these practices are still aimed at deceiving the algorithm rather than creating content with the users in mind. This approach, while financially beneficial at first, will cost the website that uses them in the long run (Turea, 2024).

Algorithmic Discrimination & User Trust in Search Engines

The unseen nature of algorithmic structures complicates the expected transparency between creator and consumer and implies a sense of hiding what is at work "under the hood" of the larger machine that is an online search. Companies do this for various reasons, sometimes to safeguard their hard-earned ethical SEO strategies and effective keyword research. In some instances, they use this presumed need for secrecy to take advantage of their customer base by employing unethical SEO practices.

In fact, "a subset of SEO practitioners have become notorious with exploiting SEO clients' lack of understanding of a search algorithm" (Iredale & Heinze, 2016, p. 112). Let us shift for a moment from the perspective of a corporation or employee to that of an individual searcher. Nilsson (2012) paints a particularly clear picture of how this deception operates in the following hypothetical scenario.

Say you are suddenly locked out of your car and need to call a locksmith. You do a quick Google search for "emergency locksmiths" and see that the top result is "24/7 Locksmith." What you don't know is that 24/7 Locksmith has misappropriated the address of a local mom-and-pop shop to appear as if they are a local company. When you call the phone number that has your nearby area code, you are directed to a phone bank in a different city. The phone bank eventually sends a locksmith to your location, but they end up charging you three times the price listed online (Nilsson, 2012, p. 802). Although this is a hypothetical scenario, it paints a clear picture that underscores the way that an individual searcher can be taken advantage of, especially in a time of panic or need.

The immense level of trust that users establish with the search engines they frequent often leads them to accept their search engine results pages (SERPs) as pages that present objective, clear answers to their questions, and overlook the long-studied fact that algorithms are often “biased, just like their designers” (Berlatsky, 2018). While algorithms are often perceived as logical systems devoid of emotion or the long-ingrained stereotypes that result in bias, racism, and gender discrimination, individuals often forget that these systems were built and designed by humans. Noble (2018) highlights how search engines do not offer an equal playing field. Instead, these search engines frequently privilege whiteness and discriminate against people of color, especially women of color.

This is evidenced in the way that searches of “black girls” or “Asian girls” on Google pull up results that frequently fetishize and sexualize these individuals, or how searches on “black on white crimes” led to racist hate sites, even though “white people commit the overwhelming majority of crime against white people” (Berlatsky, 2018). The lack of understanding of how search engines truly function presents real dangers, often escalating hate or driving individuals into deeper trenches of isolation and propaganda. While the government funds public radio and television in an attempt to use these public spaces for the public good, “Google, with its virtual monopoly on web search, arguably has more power over knowledge and information than television or radio in the modern era” (Berlatsky, 2018).

This is furthered by the adoption of searchers’ data for commercial or public use. This approach, commonly called “Big Data,” aims to repurpose and mine users’ interactions with websites and searchers. While this data can be used to advance science, energy, and transportation, it can also exclude certain populations. In a report published by the Federal Trade Commission, the misapplication of Big Data demonstrated that searchers could be “tracked or profiled based on their online activities and behaviors” (Ramirez et al 2016). This has tremendous implications for the safety and well-being of users who remain unaware of how their searches and investigations are tracked.

The Way Forward: Potential Solutions and Responses to Consider

Noble (2018) advocates for public competition between search engines, and the importance of greater public oversight of search engine practices. To add to this, we offer a few strategies and approaches targeted toward those who work in the SEO industry or those who are looking to potentially enter it in the future:

1. A Chorus of Voices Should Be Represented in Tech Creation and Advancement

Ensuring that the teams who work in search engine optimization are diverse is not just the right thing to do; it provides for a strong business model and ensures the longevity of a company. While it may seem evident, it is worth pointing out that the more homogenous or narrow a team is, the more likely their biases are going to be reflected in the way they design and interact with technology. Having a team that goes beyond the traditionally cis-gender white male SEO workplace ensures that content is created with a wider audience in mind. In a 2020 State of SEO survey, men outnumbered women working in the industry by 2-to-1 (DeLeon, 2020). Additionally, people of color continue to make up a

significantly smaller percentage than white individuals in the tech industry (Harrison, 2019). When it comes to SEO, a wide variety of individuals must be involved in these teams, to better represent the diversity of searchers who are interacting with this content.

In educational contexts, it is important that students learn how a diverse team is able to produce more engaging results. The experiences that each individual brings to a group ensures that the content is not only optimized for search engines but also designed for a wide variety of audiences.

2. The Flexibility of SEO: Remembering Your Human Audience

As we previously mentioned, algorithms can enforce oppression and discriminate against certain individuals. It is crucial to understand that SERPs are not always a reflection of the most “accurate” search, but they instead tend to display the organic results that are consistently ranking the highest and therefore generating the most traffic that will benefit the search engine. SERPs also vary tremendously based on a combination of factors, including time, search context (location, language, device type, and related results), and search personalization.

On Google’s Search Help website, they note that the timing of a user’s search plays the largest role in two users receiving such different SERPs. For example, if I search for something and thirty minutes later try to search the same thing, it is possible that a new update in Google’s ranking system could move my results around or introduce a new link entirely. The location in which I search, as well as the language that I search in and the device I use, impacts what results I am given. Additionally, after clicking on a web result and returning to my initial SERP, the search engine will provide me with other websites that align with what I am interacting with the most (Google Search Help Center). Understanding this variety in SERPs is important because it allows both SEO professionals and searchers to understand SEO as an everchanging and complex phenomenon. At the same time, it also introduces the danger of these mysterious inner-workings being black boxed by companies like Google. Creating a mystique around the optimization of SERPs serves to distance the SEO professional from the human audience, instead placing the persona of the algorithm as the primary audience one must appeal to when writing.

In many ways SEO professionals should approach keyword research with their customers in mind, and not lose sight of the very real, very human audience that interacts with and uses what they are selling or discussing. While companies need to rank highly on SERPs, they should also strive to stay engaged and dedicated to a genuine client-customer relationship, to better ensure their success over time as well as their larger impact within the digital sphere.

3. Integrating Ethical and Anti-Racist Workplace Language

Using inclusive language and rethinking the lingo used in SEO offices is a crucial step in creating a more ethically aware workplace. For example, instead of using words like

“master” and “slave” to describe the way one device controls other processes or functions, one can simply say “primary” and “replica.” Rather than propagating racial stereotypes with the use of “Black Hat” and “White Hat” tactics, one can instead say “Unethical and Ethical.” These changes are simple but move the needle towards the future rather than relying on outdated and unclear language.

In addition to the strategies mentioned above, we believe that by raising awareness of how search engine optimization works, particularly with students in the classroom, we can begin to shift the way the next generation interacts with and understands the world around them. This step is crucial in our opinion, as every student will engage with a search engine during their lifetime regardless of whether or not they enter the SEO industry after graduation.

Classroom Applications: A Suggestion for Implementation

As current instructors of Composition I (ENC1101), Composition II (ENC1102), and Professional and Technical Writing (ENC3250 and ENC2210), our suggestions for implementation are filtered through the lens of our current classrooms. However, we want to emphasize that we have taken a broad approach to allow our suggestions to be directly applicable to any classroom.

Incorporating SEO into Writing Prompts

In the pedagogical approaches of professional and technical writing (PTC), many scholars have emphasized the need to present students with hypothetical problems for educational development: “As students solve problems and begin to shape organizations’ decision-making, students require expertise in ethical reasoning and inclusivity” (Doan, 2022, p. 20). In PTC classrooms, students are often presented with a hypothetical scenario in which an affected audience and set of constraints (a rhetorical situation, though not always called that) ask them to come up with a solution to a problem. In writing a proposal, or in responding with negative news to a set audience, students can navigate challenging circumstances that mirror the real challenges they will likely face in the workplace. In the First Year Composition (FYC) classroom, students are often asked to complete academic research papers, spend time vetting sources, and check out their university library’s online or in-person collections. Students often interact with databases for the first time in FYC classrooms, and many of them use the default Google and Google Scholar to supplement their other research. Choosing to include lesson material about how scholarly (and popular) sources are ranked on different kinds of search engines not only increases their awareness of potential ethical concerns like citation bias, favoritism toward established journals, and cultural/linguistic marginalization, but also helps them practically be more equipped researchers and be able to explain why they chose each of their sources in an annotated bibliography assignment.

An instructor could also consider including the algorithm as an audience and ask students to balance their considerations of a client base with a set of keywords they must incorporate in their message to ensure their webpage ranks highly. The use of search engine optimization and the impact of unethical practices could also exist as some of the background contexts of these

prompts, with students being asked to explore at least four SERPs before choosing their popular sources for a research paper and then reflect on their experience.

In-class activities could briefly touch on the biases present in algorithms, with students doing a required reading on the history of algorithm bias and then reflecting on what they learned. These suggestions allow for a great deal of customization by the individual instructor but highlight how SEO can be briefly discussed and mentioned in any classroom.

Students need to be educated on persona 4.0, the algorithmic audience, that is becoming more prevalent in careers that traditionally did not include interacting in online spaces. Incorporating training in how SEO functions within the classroom setting allows students to be prepared to use search engines ethically when researching and also prepared to be able to function in industries where AI, SEO, and other methods of writing to an algorithm are becoming commonplace. By using persona theory as a framework, students can be encouraged to examine the larger implications of their rhetorical choices as they impact multiple populations and readers, both algorithmic and human.

We have included sample readings, writing prompts, and classroom discussion prompts below, which can be altered as needed to fit the needs of an FYC or a PTC classroom. The readings listed below are simply a starting point. By encouraging students to not only question their search practices, but actively engage in digital literacy exercises, instructors can ensure that students are prepared to both create for and engage with online search engines.

Readings

- Berlatsky, N. (2018, February 21). Google search algorithms are not impartial. they can be biased, just like their designers. *NBCNews*.
<https://www.nbcnews.com/think/opinion/google-search-algorithms-are-not-impartial-they-are-biased-just-ncna849886>
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Writing Prompts

Sample 1:

You are working as a copywriter for a medical supply store. It is your responsibility to generate copy (writing content) to describe the products the company lists on its website. Your supervisor asks you to write a 5-6 sentence product description for a new product, the Forearm Foam Crutches.

After much research, the marketing team has determined a list of keywords to use when writing in order to optimize your paragraph for Search Engine Optimization (SEO).

Using the existing Amazon bullet points for the product, and the list of keywords below, write the 5-6 sentence product description for the Forearm Foam Crutches. Remember, it is your job to balance your use of keywords with the needs of your audience. You are being asked to write for an algorithmic AND human audience, so take that into account when creating your paragraph.

KEYWORDS: open-cuff, foam, ergonomic, lightweight, aluminum, scratch-resistant, rehabilitation, injuries, post-surgery, recovery

***Consider following up the prompt with a group discussion about the process of negotiating what words to include and which ones to leave out. Additionally, students may wish to compare their paragraphs to the paragraphs written by their peers, to see different approaches to the same task.

Sample 2:

Pick a topic you are interested in learning more about, and find four sources (two popular, and two scholarly) on that topic. When you conduct your initial search, click to the fourth search engine results page.

What do you find on this page? How does it compare to the first page you landed on?

Working with your shoulder partner, look up the exact same thing your partner searched, using the SAME wording as them. How does your first SERP compare to theirs? What differences or similarities exist once you get to the 6th SERP?

Write down your answers to these questions so that you have them ready for a full-class discussion.

Sample 3:

In Michelle Gibbons' "Persona 4.0," she states that when you look under the hood, "what you tend to find is not anything like a tidy self contained engine, but rather vast, sprawling masses of interconnected systems" (Gibbons, 2021, p. 51). After taking a look at Google's spam policies,

what part of the “mess” of things that goes on under the hood of a Google search did you find most surprising? How do you allow Google to determine value in your own life?

Classroom Discussion Prompts

- What was the most recent thing you typed into a search engine? What search engine did you use, and why?
- On a scale of 1-10, with 1 being a novice and 10 being an expert, how comfortable would you say you are with using technology and understanding how it works? Why?
- How many search engine results pages do you click through when searching for an answer? Do you use a similar approach when searching for scholarly sources within a database?
- Have you ever heard the term “algorithmic discrimination”? What do you think it means? After writing down your tentative definition, conduct a quick online search to find out more about what algorithmic bias really means. Why might it be important for you to consider in your own future career?
- What is the role of search engines in your academic research? Do you believe you may possess implicit bias when choosing sources for your research? Where could these biases stem from and how do we combat them?
- What do you believe is the most ethical search engine? How can you tell?

Conclusion

The rhetorical situation that modern rhetoricians face, particularly concerning digital spaces and online content, requires an altered understanding of the audiences who are addressed and appealed to. By incorporating persona 4.0 into our understanding of the digital-age rhetorician, we can better address the evolving and dynamic environment of search engine optimization and question how content is written for machines as well as humans. A close examination of the foundations of SEO and the ways that it can be implemented ethically or unethically pulls back the curtain for SEO professionals, digital marketers, everyday searchers, and students. It also asks students to take into account what Karen Barad calls “intra-action,” or the understanding that things, objects, and apparatuses interact with one another, exchanging and influencing things in an inseparable manner (Gonzales et al., 2020, p. 434). In the case of SEO, this means seeing the search engine as more than an answer-generator, but instead a complex system created by people with biases; a system in need of constant re-evaluation and improvement.

Introducing learners to the ways that search engines organize and present content allows for a more critical approach to online searches and research. We present this work in an attempt to add to critical literacy, or “the ability to recognize and consider ideological stances and power structures and the willingness to take action to assist those in need” (Cook, 2002, p. 16).

Information circulates and is propelled forward by more than simple human conversation but by larger algorithmic, corporate, and organizational frameworks and structures. By asking students

and professionals to reconsider who they are writing for and how this impacts their choices, we hope to prompt a variety of individuals to consider “the relationship of the individual to the society in terms of situated webs or relations, including historical factors, the system of labor and production involved, and the class implications of these relations” (p. 16).

As we continue to address technological advancements such as artificial intelligence, page ranking algorithms, and machine learning models, we must strive to assess our role as rhetoricians, writers, instructors, and students as we critically assess and interact with these new methods of persuasion and communication.

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