Google

and the Culture of Search

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and Kylie Jarrett

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What did you do before Google? The rise of Google as the dominant internet search provider reflects a generationally inflected notion that *everything* that matters is now on the Web, and *should*, in the moral sense of the verb, be accessible through search. In this theoretically nuanced study of search technology's broader implications for knowledge production and social relations, the authors shed light on a culture of search in which our increasing reliance on search engines influences not only the way we navigate, classify, and evaluate Web content, but also how we think about ourselves and the world around us, online and off.

Ken Hillis, Michael Petit, and Kylie Jarrett seek to understand the ascendancy of search and its naturalization by historicizing and contextualizing Google's dominance of the search industry, and suggest that the contemporary culture of search is inextricably bound up with a metaphysical longing to manage, order, and categorize all knowledge. Calling upon this nexus between political economy and metaphysics, *Google and the Culture of Search* explores what is at stake for an increasingly networked culture in which search technology is a site of knowledge and power.

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Attempt the end, and never stand to doubt;
Nothing's so hard but search will find it out.

(Robert Herrick (1591–1674)
"Seek and Find," *The Hesperides*, 1647)

Search On.

(Google, 2010)

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PREFACE

Justin Esch and Dave Lefkow are friends who have long shared a love of all things bacon. Their quest to find a way to make *everything* taste like bacon reveals much about how a culture of search operates. In 2006, they decided to turn Justin's idea for a bacon-flavored sea salt-based condiment into a marketable product—Bacon Salt. They first searched the U.S. Patent Office database. Bacon Salt was not a registered trade name. Finding nothing like their idea on file, they developed and launched the product with minimal marketing—a website and an email to 200 friends and family. Search engine crawlers soon found and indexed their quirky site, followed shortly thereafter by people searching "bacon." There are a lot of bacon lovers on the Web, and within two weeks the fledgling business had sold out its initial production run of 700 units. Today the salty start-up sells several bacon-flavored products, including baconnaise, bacon pop corn, bacon croutons, bacon gravy mix, and even bacon lip balm. Its product line has moved onto the shelves of U.S. chain grocers such as Kroger, Albertsons, and Walmart.

Justin and Dave's excellent bacon adventure illustrates how search is instrumental to the way the Web works. Search allows us to make sense of the internet and, for many, including Justin and Dave, the everyday world within which we dwell. The two friends were featured on a 2007 episode of *The Story*, a U.S. radio program produced by American Public Media. Their interview with host Dick Gordon reveals a key aspect of the culture of search. Gordon asks the two men how they took their idea and sold it on the Web, what Gordon refers to as "the poor man's marketing plan."

JUSTIN: First of all, business-wise, if anyone wants to start a company, the single, most powerful tool that you'll ever have at your disposal and ever use is Google—I mean that thing got us through everything. Whenever we needed bottles or we needed,

like, lids for our product or label manufacturing or anything … we'd just jump on Google …

DAVE: Well, see, Justin thinks of this as this magic box where we just instantly found things. So I was doing consulting [in the online recruiting and employment industry] at the time. So I was actually the one who was digging into this magic box and trying to figure out, you know, how do we get things manufactured, how do we get it bottled … I'll just tell you, Justin, it wasn't as easy as just typing a couple of things into Google …

(American Public Media 2007)

Two broadly defined, seemingly contradictory, ways of viewing Google and search are on offer. Justin sees Google as "the thing" that got them "through everything" and points to it as indispensable for locating various business products and services. Dave, who views Google as a tool and less as an answer to all prayers, uses the phrase "magic box" to counter what he sees as Justin's magical thinking. When online search enters the picture, business practice and the world of political economy often intersect and overlap with metaphysical ways of thinking about the world of the divine and magic. By probing the intersection of material and metaphysical forces that drive the culture of search and the information machines upon which it relies, this book examines why this might be so.

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What did you do before Google? Answering the question demands that you not only consider how, or perhaps whether, you retrieved information, but also which particular search tools you may have used before the popularization of Google search. Taking these factors into account should prove revelatory of the astonishing naturalization of the process of search in your everyday life. If you were an early internet adopter, you may recall typing in telnet addresses to access online communities of knowledge from which you gathered information, including the kind that entertains. You may remember going to a public library, using card indexes, reference materials and resources, or asking librarians for guidance in person or by phone. But when you consider *how often* you may have made such trips to the local library, especially if you did not have ready access to research facilities at institutions of higher learning, the question of whether you would actively retrieve information becomes important epistemologically and even ontologically. Epistemologically in that while you may have made the round trip to the public library to research a particular health concern, would you have done so to determine whether it was Jason Bateman or Kirk Cameron who starred in the 1980s sitcom *Growing Pains*, or to satisfy a passing interest in what a high-school sweetheart was doing twenty years after graduation, or any of the other everyday searches we conduct on our ubiquitous Web devices?

Or, as is satirized by the *Chuck & Beans* cartoon (Figure 0.1), would you have resigned yourself to not knowing and the nagging discomfort of an unresolved debate or, worse still, have felt lost, not knowing how to proceed without networked information machines to answer your pleas? At a more ontological level, would the kinds of question that now can seem so pressing even have come
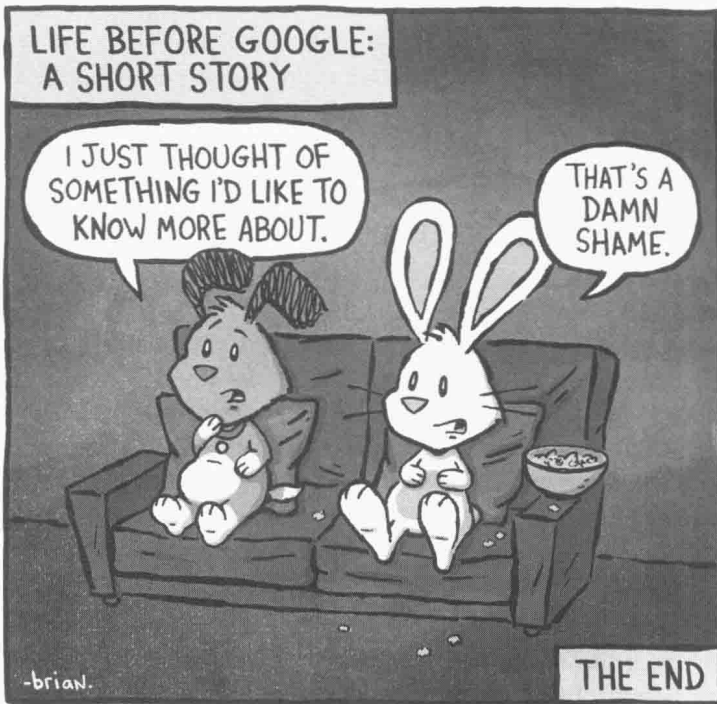
FIGURE 0.1 "Life before Google." Brian Gordon, artist. © Hallmark Licensing, LLC. By permission, Hallmark Cards

to mind? That today we retrieve information ranging from the life-altering to the trivial as a matter of course is illuminating. But illuminating of what? To search has become so natural and obvious a condition of using the Web, and the Web such a natural and obvious feature of the internet, that the specific contingency of these everyday practices has become obscured. Search is the ultimate commodity fetish. Often it will take a technical breakdown to expose the myriad moments of your everyday life almost instinctively or autonomically given over to some kind of search activity or device.

What did you do before Google? One of the authors of this book was asked this question by a fellow researcher. Despite having researched various aspects of the internet since 2000, being an early adopter of internet technologies, and able to name many prior and persistent search technologies, she was unable to name any she used *on a regular basis*. While aware she had conducted searches and relied on other forms of Web navigation, she could not recall them with any specificity. Her persistent use of Google had pushed aside recollection of any other search engine. And she is not alone. Typing into Google "What did you do before Google?" reveals this is an oft-asked yet just as oft-unanswered

question on newsgroups, lists, and blogs. And, indeed, many younger people have no experience of the Web before Google, which they first encountered as their browser's default search engine, and for whom the question makes little sense. This is also to say that Google has become so naturalized it no longer seems to have an origin. It's as if it always was—and therefore always will be—a part of us. To understand the ascendency of search and its naturalization, therefore, requires historicizing and contextualizing Google's rise.

Google You, Google Me

Google is search's most powerful innovator and driver. From its late 1990s inception, the algorithm PageRank™, which underpins Google's search technologies, transformed the practice and conceptualization of what it was to search the Web. Google established many of the ideological parameters of the culture of search. As an innovator through its famously relaxed corporate culture intended to foster engineering creativity, the firm actively encourages the kind of blue-sky thinking that produces a continual range of new services—including such "game changers" as Gmail, Google Street View and Google Translate, alongside spectacular flops such as Google Wave and Google Buzz. Google hires the brightest engineers and, when unable to secure first-mover advantage, purchases and absorbs the talent of an array of avant-garde technology start-ups, adding to its own pool of intellectual capital. It has been at the forefront of generating online advertising revenue, and it continues to "tweak" its main generator of capital, the PageRank algorithm. In September 2010, for example, it introduced Google Instant, a predictive search technology that provides instant feedback by automatically filling in potential keywords as searchers type. Achieving the autopoietic dynamic of a virtuous circle, digital search has increased in capability and sophistication as search practices and techniques have evolved in tandem, and Google and its suite of ever-changing, ever-growing technologies are at the core of an expanding culture of search.

Search remains the most performed internet activity.[1] In July 2011 alone, Americans conducted 19.2 billion core search queries, and Google processed 12.5 billion of them, commanding 65.1 percent of the U.S. search market (comScore 2011).[2] It processed 91 percent of searches globally during the same month (StatCounter 2011). Google's economic advantage currently rests on twin pillars: it has the best publicly available search engine, and its Android[3] platform ensures that everything available through Google search is accessible through mobile smart phones. The Android platform already provides Web connection for 150 million mobile devices worldwide, with 550,000 new activations daily (Page 2011) and Google processes 97.4 percent of mobile search worldwide (StatCounter 2011). This near monopoly on mobile search perhaps explains why the firm is developing self-driving automobiles in which, happily cocooned and online all of the time, we will efficiently navigate a mobile future dominated by

artificial intelligence, robotics, and location-based advertising while we do even more searching, gaming, chatting, and purchasing—in short, becoming ever more linked to the world exobrain.[4]

Google's centrality to the culture of search makes it the automating first among equals, yet we are mindful that Google-the-firm is but one component of the larger cultural dynamic we assess. At times we use "Google" to refer specifically to the firm and at others as a synecdoche for digital search and the culture of search it enables. The *Oxford English Dictionary* authorizes this understanding by listing "to google" as a transitive verb meaning "to search for information about (a person or thing)." At the beginning of the Web's rise, one of its more utopic promoters, Kevin Kelly, observed that the Web's logic relies on a shift from nouns to verbs: "A distributed, decentralized network [such as Google] is more a process than a thing … It's not what you sell a customer, it's what you do for them. It's not what something is, it's what it is connected to, what it does. Flows become more important than resources. Behavior counts" (1994: 27).[5] Kelly's ruminations allow us to highlight that search is foremost an activity well on its way to becoming a telos in and of itself. It is worth further noting that nouns-turned-verbs also operate to standardize responses to complex issues. Turning Google-the-firm into "googling" and "googled" points to at least three broad issues: 1. the central role of search activities as new forms of knowledge acquisition, production and meaning making; 2. the changing relationship and status of individuals and society to digital forms of information; and 3. the failure of political will to invest in public information infrastructure and the concomitant rise of private search corporations as principal drivers of issues 1. and 2.[6]

Yet search as an activity extends far beyond googling, Google Maps, Google Earth, Street View, and Google Books. It is operationalized across the Web as a way of life, and most of us have become in some way searchers—whether by researching family heritage on ancestry.com, seeking a date on sites like eHarmony and chemistry.com, looking for a job on monster.com or LinkedIn, seeking religious or spiritual guidance and inspiration through sites such as beliefnet.com, or electing to follow breaking news through hashtags on Twitter. Search makes it possible to play Chatroulette, to conduct academic research in electronic databases, to locate old friends on Facebook and classmates.com, to find allies willing to harvest crops in FarmVille or go on a quest in World of Warcraft. Search as a way of life further extends to automated personalized algorithms that suggest items for purchase on sites such as Amazon, eBay, and Netflix. It is the driving logic behind Apple's Genius, Pandora, and similar services that search databases to recommend songs users may like based on first having searched the content of their playlists. Apps such as Listen and SoundHound do the opposite by sampling an unknown song transmitted through a mobile device with sound capture capability and then returning search results on its title and artist, with appropriate links to purchase and download. Search steps out of

the screen when old friends meet f2f (face-to-face) after thirty years; when a person is fired after her employer finds an incriminating tagged photograph on Facebook; when the commodity found and purchased on eBay arrives direct via FedEx at the front door.

Search exerts powerful and myriad socio-economic and political influences on contemporary culture. As historian of the book Robert Darnton notes, "Search is the way we now live" (2009: 45), while theologian Philip Clayton calls our lived world a "Google-shaped world" (2010: 9). Search is increasingly understood as a public utility: "When you turn on a tap you expect clean water to come out, and when you do a search you expect good information to come out" (Swift 2009). Indeed, a profound transformation in the structure of feeling of our common world has taken place. The transformation is ongoing, yet there has been insufficient attention to what these changes may mean and how they articulate to a broader confusion between or conflation of information and reality.[7] More precisely, contemporary networked search practices at times exemplify the ways that reality itself seemingly has been subsumed into the informational sphere.

Online and mobile search practices and the algorithms that determine results are accepted by most searchers as utilitarian—though widely understood to be powerful, their very ubiquity has quickly naturalized them into the backgrounds, fabrics, spaces, and places of everyday life. As practices, they are above all efficient and convenient and therefore conceived as politically neutral as if efficiency and convenience were not *the* meta-ideologies of the contemporary technicized, consumerist conjuncture. The conception of search as purely utilitarian and therefore, for many publics, as politically neutral, extends to the purportedly neutral technologies upon which it relies. As if the sociometric search algorithms had somehow designed themselves.

It is humans who design these entities which can seem to take on lives of their own. Search algorithm coding, however, reflects the dispositions, the habitus, the assumptions of its coders. They operate within fields of engineering and technology development and diffusion that are in direct encounter with free market, libertarian, autocratic, democratic, utopian, and globalizing ideologies. One such disposition designed into these machines, exemplified by Google's broad ambition to organize the world's information and thereby achieve something like a hybrid steward–owner relationship to a global universal index or archive, is the West's progressive interest in automating the quest for enlightenment through technology. If we are beginning to incorporate "the searcher" as a component of personal identity, then we are also on the way to confirming search as a moral duty that calls on each searcher to contribute, in the form of her or his search and retrieval history, to the everlasting construction of a universal index or archive of which he or she already is a part. Easy, efficient, rapid, and total access to Truth is the siren song of Google and the culture of search. The price of access: your monetizable information.

Google Techno-Utopia

Broadly understood, in one way or another we have always been searchers, whether hunter-gatherers or information retrievers, and Google did not invent the technology of internet search. For these reasons neither the culture of search nor Google is totally "revolutionary." Rather, Google operates as a nexus of power and knowledge newly constituted through extremely rapid changes in networked media technologies and equally rapid changes in the social expectations and desires attending to them. The firm's rise reflects and benefits from a generational-inflected growth in the perception that *everything* that matters is now on the Web and that almost everything is already archived in some online database and *should*, in the moral sense of this verb, be accessible through search. We see this increasingly naturalized assumption reflected in many of our undergraduate students, for whom the internet and Google and the #hashtag now constitute their primary access to information.[8] Yet if everything that matters were available through searching the publicly accessible parts of the internet, it would be possible to make the Borgesian argument that the Map had swallowed the Territory. A service such as Street View, however, does seem to depict this impossibility as materially real, and there is a clear and widespread techno-utopian interest in collapsing distinctions between representation and referent, the network and life this side of the screen, by extending the parameters of search ever wider and in every direction, much like the intersecting ripples generated by splashing stones skipping across the surface of a tranquil pond.

Beginning in the 1920s and continuing into the early 1930s, IBM's motto developed by founder Thomas J. Watson, Sr. instructed us to "THINK." In the late 1990s Apple appropriated the instruction by asking potential consumers, through a series of highly successful advertisements featuring famous creative people, to "Think Different." If there is now such a thing as Think Google, it depends on the increasing apotheosis of networked information machines and the techniques and practices they enable. Business journalist Ken Auletta's history of the firm comments repeatedly on the driving force of the technological idealism and missionary zeal of Google founders Sergey Brin and Larry Page (2009: 22, 100–101, 114, 213–214, 289–291). Auletta quotes Brin in the firm's 2004 *Prospectus*: "[Google's aim is] greater than simply growing itself as large as it can be. I believe large successful corporations … have an obligation to apply some of those resources to at least try to solve or ameliorate a number of the world's problems and ultimately make the world a better place" (ibid.: 289). In "Letter from the Founders," submitted as part of Google's 2004 Initial Public Offering (IPO), Brin and Page declare, "Google is not a conventional company." Instead, Google would "focus on users, not investors" and would "be concerned not with 'quarterly market expectations' or paying dividends but rather with protecting Google's 'core values'" (ibid.). These core values center more on a belief in humanity's betterment through technology than on matters of business.