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You Are What You Compute (and What is Computed For You): Considerations of Digital Rhetorical Identification

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As digital technology becomes increasingly ubiquitous, it is necessary to rethink how our devices fundamentally alter the nature of identity. Using Burkean identification, this essay examines digital technology and its effect on the unconscious, argumentation, and public deliberation. I offer digital rhetorical identification *as a process of technological unconscious consubstantiality, through which users are provided and believe in information and argument based upon their digital substance. In current digital contexts, the substance of the Internet user has been drastically affected by the use of Internet "cookies." In tandem with server algorithms, cookies have become our "digital substance," formed out of personal search history and directed by consumerist aims. Cookies filter information for users based upon previous searches and other details, while operating silently on our machines. Consequently, the online circulation of knowledge serves as an echo chamber of personal desire and opinion rather than giving users diverse perspectives. This effect bleeds into offline rhetorical practices, limiting the circulation of public knowledge and argument.*

Key Words: Communication Technology, Cookies, Deliberation, Digital Rhetoric, Facebook, Google, Identification

Technology has progressed to the point where everyday users carry around and have access to massive amounts of data in their very pockets. Typically, consumers rely heavily on the Internet and other media to make choices about politics through blogs and news sites, what to buy through online shopping, and who we know through social networking. Consequently, we have become more than just "attached at the hip" with our digital devices; we have become one with them.[1] This essay provides a framework for understanding the relationship between technology, identity, and rhetoric. In reaction to the developments of various media technologies and through a critique of many of their policies, I offer an understanding of digital rhetorical identification which contends that part of our unconscious self is stored and accessed through digital technology, including its inherent programming, or algorithms, and user digital identifiers, or cookies. To

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[1] See Adriana de Souza e Silva's work for a thorough discussion of the consequences of digital technology and internet access being available in our pockets: Adriana de Souza e Silva, "From Cyber to Hybrid Mobile Technologies as Interfaces of Hybrid Spaces," *Space and Culture* 9 (2006): 261-278.

do so, I examine a few relevant lines of theory that inform our understanding of both digital technology and identity. From these theories, I advance the idea of "technological unconscious consubstantiality," which underscores the relationship between humans, identity, and our machines, directly affecting our ability to communicate. No longer can our identities be separated from our digital devices.

In a broad discussion of media studies, David Gunkel argues that in contemporary media studies "theorizing . . . lags behind and remains committed to outdated models and methodologies."[2] In his argument, the dominant mode of thought regarding the computer "situates technology as a tool or instrument of message exchange between human users."[3] As a consequence, communication theory positions computers and other digital technology as part of the channel that sends a message, rather than as an inherent part of the message itself.[4] Reliance on this perspective has insulated the computer; it appears as a neutral device through which we speak. Breaking from this paradigm, Gunkel looks to how the computer can be reconfigured to be a more active participant in any communication exchange. In this sense, the computer "actively participates in communicative exchanges as a kind of additional agent and/or (inter)active co-conspirator."[5] He calls this perspective a fundamental rethinking of media studies—"media studies 2.0"—that positions technology directly within communication. Similarly, I contend that, as an active participant in the communication exchange, computers need to be theorized as integral parts of communication and rhetoric.

To do so, I draw together Burkean rhetorical thought with new developments in both digital communication technologies and relevant theorizing regarding such devices. Kenneth Burke provides a theoretical foundation for thinking about identity and identification, and elements of his theorizing can illuminate discussions of technology, especially the use of online digital "cookies" and their respective algorithms. Gunkel recognizes that new theorizing in media studies 2.0 will necessarily borrow language and concepts from the previous. In this case, Burke's ideas can assist in rethinking the function and use of technology toward contemplating media studies 2.0. To that end, I engage in a foundational examination of how digital communication technology augments our unconscious processes of identification. In other words, I ask: What is the effect of digital technology on our identities as we communicate in a massively networked society? It is my contention that networked digital communication technologies have fundamentally altered the substance of Internet users, leading to changes in offline and online rhetorical interactions. I offer the concept of digital rhetorical identification as a means of comprehending the blurred nature of identity across offline and online contexts. These changes to our substance have had profound consequences on public deliberation and interaction, especially regarding stranger sociability.[6] To begin, I briefly summarize recent debates over online identity. Then, I turn to Burke's discussion of identification, substance, and consubstantiality as a preferred reading of online identity. Branching from Burke's theories, I outline digital rhetorical identification and its consequences.

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[2] David J. Gunkel, "Beyond Mediation: Thinking the Computer Otherwise," *Interactions: Studies in Communication and Culture* 1 (2009): 66.
[3] Gunkel, "Beyond Mediation," 64.
[4] This is in part because of the reliance on the Shannon and Weaver model of communication, which sees communication through reductionist parts. See Claude E. Shannon and Warren Weaver, *The Mathematical Theory of Communication* (Urbana, IL: University of Illinois Press, 1963).
[5] Gunkel, "Beyond Mediation," 64.
[6] Michael Warner, "Publics and Counterpublics," *Public Culture* 14 (2002): 49-90.

Digital Media and Identity

The idea that media affects identity is certainly not new. Famously, Marshall McLuhan depicted media as extensions of the human central nervous system. In this way, all technologies are instrumental extensions of our physical and nervous systems that increase our power and speed: "Rapidly, we approach the final phase of the extension of man—the technological simulation of consciousness, when the creative process of knowing will be collectively and corporately extended to the whole of human society, much as we have already extended our senses and nerves by the various media."[7] As extensions of our selves, media accentuate the physical and experiential form of the human body—television extends our sight while radio extends our hearing. Looking more specifically to literature on identity, the Internet has been lauded as a place for a fundamental rethinking of identity as anonymous, fluid, and unfixed, primarily through scholars like Sherry Turkle and Howard Rheingold.[8] However, as considerations of identity progressed, the concept has been challenged and rethought.[9] In what follows, I review a number of theorists and studies that examine identity as it intersects with digital technology.

Sherry Turkle's work has been well-recognized as offering an early glimpse into the complexity of online identity. She connects the nature of identity to a "larger cultural context," which is the "story of the eroding boundaries between the real and the virtual, the animate and inanimate, the unitary and the multiple self, which is occurring both in advanced scientific fields of research and in the patterns of everyday life."[10] Since her writings, the boundary has only become increasingly blurred, if not erased completely. Smart phones and tablet computers accompany the everyday user, providing a constant connection to the Internet. Turkle recognized that the increasing use of virtual space affects real life: "When people can play at having different genders and different lives, it isn't surprising that for some this play has become as real as what we conventionally think of as their lives, although for them this is no longer a valid distinction."[11] As a consequence of their online selves, users "shared a sense that their virtual identities were evocative objects for thinking about the self."[12] In this way, the online self was a psychological elaboration of the offline self, offering users the ability to explore the many fractured notions of identity. Similarly, Rheingold reflected on the malleability of identity online as one of the "great variables in cyberspace."[13] He argued, "The grammar of CMC (computer-mediated communications) media involves a syntax of identity play: new identities, false identities, multiple identities, exploratory identities, are available in different manifestations of the medium."[14] Each of these has profound psychological effects on the offline sense of self, as both Turkle and Rheingold argue; however, the complexities of the online self have drastically changed in the twenty years since these early works.

Rhetorical scholars have also examined the intersection between computer technology and identity, but often rely on a terminology that divides offline and online identity. Early on, Barba-

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[7] Marshall McLuhan, *Understanding Media: The Extensions of Man* (Cambridge: MIT Press, 1994), 3-4.
[8] Howard Rheingold, *The Virtual Community: Homesteading on the Electronic Frontier* (Cambridge: MIT Press, 2000); Sherry Turkle, *Life on the Screen: Identity in the Age of the Internet* (New York: Simon and Schuster, 1995).
[9] Helen Kennedy, "Beyond Anonymity, or Future Directions for Internet Identity Research," *New Media & Society* 8 (2006): 859-76.
[10] Turkle, *Life on the Screen,* 10.
[11] Turkle, *Life on the Screen,* 14.
[12] Turkle, *Life on the Screen,* 256.
[13] Rheingold, *The Virtual Community,* 53.
[14] Rheingold, *The Virtual Community,* 152.

ra Warnick recognized that distinguishing between author and audience is more difficult online, remarking that "Everyone is a rhetor, and everyone an audience."[15] James Zappen offers an integrated theory of digital rhetoric that attends to identity as a "a complex negotiation between various versions of our online and our real selves, between our many representations of our selves and our listeners and readers, and, not least (as Manovich suggests), between our many selves and the computer structures and operations through which we represent these selves to others."[16] Jeffrey Grabill and Stacey Pigg move beyond the bifurcation of virtual and real selves to position identity as a strategic performance and contextual interaction, but still ground their discussion in a division of online and offline self.[17] Additionally, Barbara Warnick and David S. Heineman extend two particular lines of thought on rhetorical identity—as a method of self-promotion or rhetorically constitutive—to digital rhetoric. [18] While fruitful, such analyses of rhetorical identity are limited in their appreciation for the structure of online media and social networking technology. The persistent belief in a split identity—offline and online—dismisses the contemporary ubiquity of such technology. While many see the two as influencing each other, the grammar of identity play maintains an offline and online self. In other words, it is not about how the virtual replaces or affects the real, but how *the virtual-online is the real-offline and the real-offline is the virtual-online.*

More recent scholarship has engaged this line of thinking. First, the notion of a separate, fluid online identity that problematizes offline identity has been rethought. In this critique, scholars argue that internet users do not engage in identity play and anonymity in the ways previously believed. Helen Kennedy argues that "online identities are often continuous with offline selves, not reconfigured versions of subjectivities in real life."[19] In her empirical research, she finds that users often dismiss notions of anonymity in favor of self-expression. Jenny Davis ties this movement to the structural components of popular social networking sites which "facilitates a self construction process where the actor's presentation is primarily overt . . . through which a 'real life' self can be presented in a (relatively) controlled way."[20] In other words, structural changes in popular websites, such as Facebook, feature real names rather than anonymous pseudonyms and users are rewarded for sharing actual offline information with others online.

Second, users of digital technology often conceptualize online identity in ways that are tied to traditional notions of embodied identity. As Megan Boler puts it: "While the hypes and hopes suggest that we can inhabit a communicative world where anonymity reigns and freedom of expression rules regardless of one's bodily identity, the actualities evidence that in fact, users rely on markers such as age, sex and location to make sense of online communication"[21] Similarly, Lisa Nakamura analyzes Chinese gold farmer machinima videos—videos made using recordings of gameplay—developed from *World of Warcraft*, a "theoretically body-free space," noting that

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[15] Barbara Warnick, "Rhetorical Criticism of Public Discourse on the Internet: Theoretical Implications," *Rhetoric Society Quarterly* 28 (1998): 77.

[16] James P. Zappen, "Digital Rhetoric: Toward an Integrated Theory," *Technical Communication Quarterly* 14 (2005): 323.

[17] Jeffrey T. Grabill and Stacey Pigg, "Messy Rhetoric: Identity Performance as Rhetorical Agency in Online Public Forums," *Rhetoric Society Quarterly* 42 (2012): 99-119.

[18] Barbara Warnick and David S. Heineman, *Rhetoric Online: The Politics of New Media* (New York: Peter Lang Publishing, 2012), 99.

[19] Kennedy, "Beyond Anonymity," 861.

[20] Jenny Davis, "Architecture of the Personal Interactive Homepage: Constructing the Self through MySpace," *New Media & Society* 12 (2010): 1115.

[21] Megan Boler, "Hypes, Hopes and Actualities: New Digital Cartesianism and Bodies in Cyberspace," *New Media & Society* 9 (2007): 153.

"the calculus of race, nation, and class result in user produced algorithms based on player behaviors, equipment type, language use, and player class that result in racist discourse, both in real-time interaction and in the construction of WoW's transmedited [sic] synthetic world."[22] In other words, players of the massively multiplayer online fantasy game assign representational meaning upon otherwise raceless classes through cultural markers. In short, users of digital technology rely upon physical characteristics of the body (age, sex, region, race, etc.) to make sense of identity online. Finally, theorizing about online identity has questioned the bifurcation of "real" and "virtual" selves. David Gunkel offers a philosophical critique of the very notions of real and virtual: "This ability to manipulate and reconfigure one's identity has been either celebrated as a significant advantage and gain for the real people who use the technology, or criticized for the way it facilitates deception, antisocial behavior and problematic forms of identity tourism. What the two sides of this debate share, despite their many differences, is an underlying belief in and dedication to the real, specifically, the real person who, it is assumed, exists behind the avatar in the so-called 'real-world.'"[23] Gunkel critiques this presumption, calling for a rethinking of how theories of identity and online social interaction presume an authentic sense of the offline self.

While these considerations of digital rhetoric are important, they do not fully account for the structural features and technological backdrop inherent to the predominant use of the internet. They approach the computer in the same manner that "media studies 1.0"[24] would, believing that the machine is a channel. They often neglect exploring how the technology structures speaking in the first place. In other words, critics need to attend to how the "behind the scenes" logics of online production and algorithmic methods inherently affect online identification and speech. Barbara Warnick echoes this concern: "programming and automation to achieve these outcomes [appealing to different audiences] have been built into electronic texts and should be taken into account by critics interested in how content is adapted to appeal to audience interests and needs."[25] She asks critics to look "under the hood" and branch out into other fields of technical expertise to examine how programming and production affects the reception and use of new media technologies. Similarly, Douglas Rushkoff warns that digital technologies are "more than mere tools: They are like living things, themselves."[26]

To fully appreciate how internet technology affects identification, it is necessary to examine the machine as an ontological component of the self, meaning that our digital devices are indeed parts of our bodies and identities. Gordon Calleja and Christian Schwager contend that the everyday use of and dependence upon technology pushes humanity closer to that of cyborgs, and that "digital machines are even changing our definition of self."[27] Drawing from Walter Ong's concept of interiorization,[28] Calleja and Schwager connect digital technology to literacy, believing that use of the internet has a direct effect upon our cultural and neuropsychological selves. "A technology is interiorized when its use becomes second nature to the majority of the culture

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[22] Lisa Nakamura, "Don't Hate the Player, Hate the Game: The Racialization of Labor in *World of Warcraft*," *Critical Studies in Media Communication* 26 (2009): 140.
[23] David Gunkel, "The Real Problem: Avatars, Metaphysics and Online Social Interaction," *New Media & Society* 12 (2010): 139.
[24] Gunkel, "Beyond Mediation," 66.
[25] Barbara Warnick, "Looking to the Future: Electronic Texts and the Deepening Interface," *Technical Communication Quarterly* 14 (2005): 330.
[26] Douglas Rushkoff, *Program or Be Programmed: Ten Commands for a Digital Age* (New York: OR Books), 8.
[27] Gordon Calleja and Christian Schwager, "Rhizomatic Cyborgs: Hypertextual Considerations in a Posthuman Age," *Technoetic Arts: A Journal of Speculative Research* 2 (2004): 4.
[28] Walter Ong, *Orality and Literacy* (New York: Routledge, 2004).

in question. Interiorization of a new technology influences the way thoughts are structured."[29] In other words, the widespread and commonplace use of digital technology fundamentally alters our brain patterns and cultural norms. This is especially true when our devices follow us. The internet no longer appears as a place that is accessed from desktop computers; it is everywhere, in our pockets, and always on.[30] Taking Warnick's call for critiques of technological structures[31] and Calleja and Schwager's positioning of the posthuman technobody,[32] I offer Kenneth Burke's understanding of rhetoric as a means of understanding the complexities of contemporary identification.

Burkean Identification

Rather than relying on identity as the central term for understanding digital media, I shift the discussion toward identification, drawing from rhetorical theorist Kenneth Burke. Identity theorizing, as discussed above, often relies upon the fixed understanding or performance of identity, whereas identification focuses on the process of identities meeting through communication. This provides a more pertinent understanding of digital technology as inherent to that process. So much of digital communication pertains to social networking and identifying with other individuals. Burke provided a rethinking of the nature of rhetoric and communication through his notion of identification. For him, rhetoric and communication is centrally about how we identify with rather than persuade others. He introduced the notion of identification through many of his works, but especially in the *Rhetoric of Motives*. Here, he explains in an oft-cited passage:

> A is not identical with his colleague, B. But insofar as their interests are joined, A is *identified* with B. Or he may *identify himself* with B even when their interests are not joined, if he assumes that they are, or is persuaded to believe so. Here are ambiguities of substance. In being identified with B, A is "substantially one" with a person other than himself. Yet at the same time he remains unique, an individual locus of motives. Thus he is both joined and separate, at once a distinct substance and consubstantial with another.[33]

From a socio-psychological perspective, identity is something that is best understood in relation to other people—as connection. While we exist as separate entities, we communicate to fulfill a sense of longing for connection to others. Rhetoric, for Burke, becomes the act of consubstantiation—a bridge between identities—with another, which he sees in the cooperative level of meaning-making: "Rooted in an essential function of language itself, a function that is wholly realistic, and is continually born anew; the use of language as a symbolic means of inducing cooperation in beings that by nature respond to symbols."[34] In other words, identification with other people is at the heart of any communicative act.

Marie Hochmuth's reaction to identification sums up the approach: "The difference between the 'old' rhetoric and the 'new' rhetoric may be summed up in this manner: whereas the key term for the 'old' rhetoric was *persuasion* and its stress was upon deliberative design, the key term for the 'new' rhetoric is *identification* and this may include partially 'unconscious' factors in its ap-

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[29] Calleja and Schwager, "Rhizomatic Cyborgs," 8.
[30] de Souza e Silva, "From Cyber to Hybrid," 263.
[31] Warnick, "Looking to the Future."
[32] Calleja and Schwager, "Rhizomatic Cyborgs."
[33] Kenneth Burke, *A Rhetoric of Motives* (Berkeley, CA: University of California Press, 1950/1969), 20-21.
[34] Burke, *Rhetoric of Motives*, 43.

peal."[35] This shift recognized that when we communicate, we are not always attempting to persuade others. Instead, the purpose of rhetoric is more foundational to the psychological nature of humans, since humans constantly strive to connect with others. "Identification, at its simplest level, may be a deliberative device, or a means, as when a speaker identifies his [sic] interests with those of his audience. But *identification* can also be an 'end,' as 'when people earnestly yearn to identify themselves with some group or other.'"[36] This yearning, for Burke, is known as consubstantiation. "Since identification involves consubstantiality, the manner in which parties to identification perceive their own and the other's substance is of crucial importance."[37] Speaking not of the physical properties of an individual's makeup, Burke argued that substance was understood in geometric, familial, and directional terms, among others.[38] Put another way, our substance is comprised of developmental elements: where we live, how we were brought up, and our families. These resources are psychological and unconscious factors inherent to the human psyche. Recognizing our various substances, speakers can identify with audiences in a variety of ways, often unconsciously. Burke termed the act of two substances meeting through communicating as consubstantiality.

In developing Burkean rhetoric, others have attended to unpacking the psychological elements of his thought. Heavily invested in Freud, Burke saw rhetoric as beginning with the self and extending outward. Roy Ambrester sees the process of "acceptance and rejection of various symbols" as developing "the basis for growth as the self moves toward a unity of being."[39] The psychological self is always seeking unity with others, even while enduring constant states of transformation and maturation. Change, whether in physical or psychological terms, invites a new sense of motivation for the individual actor. As humans move through various scenes in life, motivations and identification follow suit, adapting with each change in mental and psychical scenery. Consequently, identity is not something concretely possessed by the individual; it is "the enactment of a series of dissociated and frequently contradictory roles defined by the groups with which one identifies."[40] Identity is therefore best understood external to our selves, as something made through language with others. What has changed from Burke's original discussion of rhetoric, however, are the massively networked qualities of contemporary existence. Fundamentally, identification has been altered by the pervasive use of digital technology.

One pertinent area of thought that has extended Burkean identification is organizational rhetoric. George Cheney and Phillip Tompkins engaged in Burkean analyses that recognize identification as it occurs in group or organizational settings.[41] As inherent to social and rhetorical behavior, Cheney locates "intentional and unintentional attempts by the organization to induce identification on the part of the employee members."[42] Elsewhere, Cheney explains that: "Simply

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[35] Marie Hochmuth, "Kenneth Burke and the 'New Rhetoric,'" *Quarterly Journal of Speech* 38 (1952): 136.
[36] Hochmuth, "Kenneth Burke," 136.
[37] Barry Brummett, "Presidential Substance: The Address of August 15, 1973," *Western Speech Communication* 39 (1975): 250-251.
[38] Kenneth Burke, *A Grammar of Motives* (Berkeley, CA: University of California Press, 1945/1969), 29-58.
[39] Roy Ambrester, "Identification Within: Kenneth Burke's View of the Unconscious," *Philosophy & Rhetoric* 7 (1974): 206.
[40] Diane Davis, "Identification: Burke and Freud on Who You Are," *Rhetoric Society Quarterly* 38 (2008): 127.
[41] George Cheney and Phillip K. Tompkins, "Coming to Terms with Organizational Identification and Commitment," *Central States Speech Journal* 38 (1987): 1-15; George Cheney, "On the Various and Changing Meanings of Organizational Membership: A Field Study of Organizational Identification," *Communication Monographs* 50 (1983): 342-362; George Cheney, "The Rhetoric of Identification and the Study of Organizational Communication," *Quarterly Journal of Speech* 69 (1983): 143-158.
[42] Cheney, "Rhetoric of Identification,"156.

put, an individual who is inclined to identify with an organization will be open to persuasive communication various sources within that organization."[43] This can include a number of organizational devices, ranging from processes of initiation into an organization, to the frequent use of "we" in meetings to identify employees with the organization. In these cases, the unconscious process of identification assists organizational authorities in maintaining tight organizational bonds between members and company.[44] Following up on the psychoanalytic elements inherent to Burkean thought assists in expanding identification into digital media contexts. For now, however, the process of group identification explicated by organizational scholars is useful for seeing how identification occurs in relation to others. While specific organizations are not under investigation here, the unconscious process of group identification occurs in subtle ways while online.

On the Substance of Internet Cookies: Digital Rhetorical Identification

In an era of search engines and social media, the process of identification must take into account the ways that our identities are digitally networked and how the programming behind those networks serves an identification function. Looking back to David Gunkel's arguments, the computer cannot be considered as a neutral device: "Instead of functioning as a virtually immaterial and transparent channel through which human agents exchange messages, the computer participates in and contaminates the process. It acts on the messages, significantly alters them, and delivers information that was not necessarily selected, composed, or even controlled by human participants."[45] Under investigation here is the code embedded in internet cookies as they are traded between server and user, and computed through proprietary algorithms. Adding to Gunkel's contention, I contend that the code and programming follows us even when we step away from the keyboard or put down our smartphones. Our identities—our substances, to use Burke's language—are comprised of our neurophysiological and computer programming, developed through our interactions with people and computers alike. Cookies, and their respective algorithmic implications, forge our neurotechnological identities. In what follows, I outline the consequences of internet cookies and their hidden impact on rhetoric.

Internet cookies are bits of data that are shared between users and website purveyors as they interact online. When a user visits a webpage, the site will often deposit a cookie onto the user's machine. This cookie records data regarding the user's habits on the website which are measured through algorithms built into websites and servers. Eleni Kosta and colleagues explain, "The search engines typically keep logs of users' search queries, along with a number of search parameters, matching the search terms with the IP address allocated to the user's computer, the date and time of the search, the web browser used and the cookie identifier, as well as the results of the search, the advertising that has been displayed with the outcome of a specific search and the

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[43] Cheney, "Changing Meanings of Organizational Communication," 347.

[44] Drawing upon Cheney's work, Josh Boyd applies identification and Burke's concept of the oxymoron to tobacco advertising. In this case, tobacco giant RJ Reynolds attempted to congregate its consumers through identification with a transcendent anti-government appeal. He concludes that RJ Reynolds flawed use of identification led to a failed campaign to identify with its target audience. See Josh Boyd, "Organizational Rhetoric Doomed to Fail: R. J. Reynolds and the Principle of the Oxymoron," *Western Journal of Communication* 68 (2004): 45-71. Additionally, Mark Wright also discussed Burkean identification and the influence of Freudian thinking upon it. In conducting a Burkean analysis with attention to Freud, organizational scholars can conduct a more nuanced account of how organizations utilize identification and introjection. See Mark H. Wright, "Burkean and Freudian Theories of Identification," *Communication Quarterly* 42 (1994): 301-310.

[45] Gunkel, "Beyond Mediation," 63.

user clicks."[46] These data are used to provide services, track behavior, advertise specific products, and assist users in finding desirable information on the site. "Based on the richness of the information they have about their users, the providers of search engines have the capability to draw up detailed profiles of the interests, thoughts and activities of their users"[47] While users can turn off cookies, the default setting for most browsers and websites is to require cookies. Google, YouTube, and Facebook all require cookies enabled for full functionality.[48] Users cannot create accounts to comment on YouTube videos or interact with friends on Facebook without them.

When user profiles are connected to search engines and social media, cookies provide feedback about user behavior that structures future interactions with the site. Google, for example, will use previous searches to assist future searches in order to provide information that is most pertinent to the individual. "Essentially, then, Google and other search engine companies can create a digital dossier of a user's search history and browsing habits."[49] Such dossiers are used for a number of reasons, including tailoring messages and online marketing. They are best understood through their algorithms—programs operating behind websites that interpret the data in cookies, among other things—that automate much of our experience with web. David Beer believes that more work needs to be done to understand the "power of the algorithm" and that "[i]t is likely that we will find that these algorithms are carving out new complex digital divides that emerge in unforeseen and often unnoticed ways in the lives of individual agents."[50] The use of cookies and algorithms by web search engines and other sites has been received with controversy. The privacy implications for using such software are troubling to critical theorists and policy analysts alike.[51] While these debates[52] are important, they are not of focus here. Instead, I focus on the implications of algorithms and cookies on knowledge and identification.

Digital rhetorical identification[53] entails a process of *technological unconscious consubstantiality*,[54] through which users are provided and believe in information and argument based upon

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[46] Eleni Kosta, Christos Kalloniatis, Lilian Mitrou, and Evangelia Kavakli. "The 'Panopticon' of Search Engines: The Response of the European Data Protection Framework," *Requirements Engineering* 16 (2011): 48.

[47] Kosta, Kalloniatis, Mitrou, and Kavakli, "The 'Panopticon' of Search Engines," 48.

[48] These websites are the most popular websites on the internet at the time of this writing according to alexa.com.

[49] Daniel Hillyard and Mark Gauen, "Issues Around the Protection or Revelation of Personal Information," *Knowledge, Technology, & Policy* 20 (2007): 122.

[50] David Beer, "Power Through the Algorithm? Participatory Web Cultures and the Technological Unconscious," *New Media & Society* 11 (2009): 999.

[51] For example, see Kosta, Kalloniatis, Mitrou, and Kavakli, "The 'Panopticon' of Search Engines"; Hillyard and Gauen, "Issues Around the Protection"; Daniel Palmer, "Pop-ups, Cookies, and Spam: Toward a Deeper Analysis of the Ethical Significance of Internet Marketing Practices," *Journal of Business Ethics* 58 (2005): 271-280.

[52] The debate over privacy is a vital one. "While privacy advocates argue that the collection of such information is a violation of one's privacy, the online industry contends that such information helps sites tailor information to site visitors and, thus, enhances the online experience." Traci Hong, Margaret L. McLaughlin, Larry Pryor, Christopher E. Beaudoin, and Paul Grabowicz, "Internet Privacy Practices of News Media and Implications for Online Journalism," *Journalism Studies* 6 (2005): 18. Kosta and her colleagues liken the state of digital surveillance via cookies as akin to Jeremy Bentham's Panopticon prison design: "This new online 'Panopticon' represents the situation when Internet users give out too much information about themselves, thus allowing others to 'view' them, not knowing however when they are being watched or what will happen with the information they gave away." Kosta, Kalloniatis, Mitrou, and Kavakli, "The 'Panopticon' of Search Engines," 49. Without question, additional theorizing about these issues is necessary, but not the focus of this essay.

[53] Including the word "digital" maintains some of the division between offline and online identity. While unfortunate, I believe this is necessary as a first step toward rethinking our theoretical assumptions toward a "media studies 2.0."

[54] The notion of the technological unconscious has already been developed by David Beer in the context of web 2.0. See Beer, "Power through the Algorithm," 985.

their digital substance. It is unconscious, insofar as it occurs in the background of our computers as we navigate the internet. If we buy McLuhan's notion of media as extensions of the body, the computer is akin to an extension of the human brain, especially in the ways it processes data and compiles memories. Hence, the unconscious process here occurs within the machine as an extension of who we are. The identification with others appears at the algorithmic level. Google or other sites that analyze cookie data find connections with other people or ideas that are like the user's identity. In short, users create digital substances that are concurrent with and affect psychological substances. Theorizing digital rhetorical identification means that rhetorical theory and practice recognizes the function of the machine in forming an ever-evolving sense of self. Moreover, digital rhetorical identification looks beyond the division between offline and online selves to underscore how the two should be understood as inseparable. While cookies rest silently on machines when not in use, their supporting algorithms operate on servers—almost as "dreams" while we sleep. In this sense, cookies and algorithms are more than just a structural component of digital media. They are an "always on" technology that follows users on smartphones, reacting to unread emails, examining never-ending social media newsfeeds, and constantly adapting new information in order to refine our digital dossiers. To explain this process, I display three concurrent paths to identification. First, I discuss the consequences of cookies upon our identity, following up on my own previous work[55] and by picking up on recent debates about changes to Google's terms of service. I also extend another key concept from Kenneth Burke, "Literature as equipment for living." Second, I discuss the consequences digital rhetorical identification as an organizing principle and how identities are organized into political tracts that affect our exposure to diverse arguments. Finally, I offer ramifications of this condition in regard to the public and deliberative practices.

Dipping a Hand into the Cookie Jar

In critiquing the function and structure of search engines, I have previously argued that cookies and algorithms disrupt the potentially rhizomatic form of the internet by creating tracts on which "the user will continue to progress through the Web. Much like the hierarchies of information with sponsorships resting on top, this knowledge tract keeps the user confined within a set of experiences and interactions."[56] In other words, those who may have considered the internet a revolutionary system that can drastically change human knowledge may not have considered the structure of the internet as guided by commercial interests. While the underlying structure of the internet may have been somewhat random, with intersecting points occurring frequently and almost chaotically, the predominant use of the Internet occurs via search engines or social media, which structures information for us. The average web user with cookies enabled receives information that is catered to their previous search habits and history. This structure is strengthened by corporate controlled algorithms, well outside the everyday user's grasp, that can only be tapped into by buying sponsorship of specific links which will appear at the top of searches. In other words, the structural components of web searching and cookies are defined by privately owned interests, but are used every day by millions of public users for information seeking and

[55] Aaron Hess, "Reconsidering the Rhizome: A Textual Analysis of Web Search Engines as Gatekeepers of the Internet," in *Web search: Multidisciplinary perspectives,* ed. Amanda Spink and Michael Zimmer, 35-50 (Hiedelberg, Germany: Springer-Verlag, 2008).
[56] Hess, "Reconsidering the Rhizome," 46.

other services. Siva Vaidhyanathan describes this process as a "cleaning" of the web to provide users with an experience that reinforces the very use of Google in the first place:

> Google can usually achieve this goal without stooping to raw censorship. The net effect is the same, however, because the protections we rely on, including "safe search," are turned on by default when we first access Google, and our habits (trust, inertia, impatience) keep us from clicking past the first page of search results. Google understands the fact that default settings can work just as well as coercive technologies. Overall, Google orders our behavior and orders the Web without raising concerns that it is overbearing. It's a brilliant trick.[57]

Google's "trick" is replicated by most, if not all, of the various popular search and social media technologies that serve as access points to the internet. Yet, Google offers an instructive example of how search technology has become ubiquitous.

Clay Shirky's notion of algorithmic authority,[58] echoed by David Beer's "power of the algorithm,"[59] underscores the ubiquity of Google. For Shirky, "consuming" Google's cookies leads to a type of blind deference to authority. He calls algorithmic authority as "the decision to regard as authoritative an unmanaged process of extracting value from diverse, untrustworthy sources, without any human standing beside the result."[60] Similarly, Beer contextualizes algorithmic tendencies into relational databases which are "used to sort, filter and discriminate in automated ways and without users' knowledge."[61] Such authority extends Siva Vaidhyanathan's claims about the subtle coercion created by Google through its technology.[62] Critical evaluations of the authority of information found on the Web via searching are rare at both the individual and social level. As a repository of information, Google has been treated by users as a "first stop for all kinds of information."[63] In experimental research, Google users display trust in Google's ordering of data and search results, often eschewing any critical evaluation of sources by believing that Google has done the evaluative work for them.[64] Attitudes toward the use of Google reveal that the use of search engines and their built-in algorithms have become commonplace locations for information about life, or "equipment for living."

In an essay in *The Philosophy of Literary Form,* Kenneth Burke offers a "sociological criticism" of literature, arguing that proverbs, stories, and the like should be treated as "equipment for living."[65] In this way, literature has utility in the social realm and can illuminate decisions and behaviors. When trying to solve a problem, individuals can turn to proverbs, fables, or other literature for insight. These literatures are instructive about how to live life and make decisions.

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[57] Siva Vaidhyanathan, *The Googlization of Everything (and Why We Should Worry)* (Berkeley, CA: University of California Press, 2011), 15.

[58] Clay Shirky, "A Speculative Post on the Idea of Algorithmic Authority," last modified November 15, 2009. Accessed June 7, 2012 from http://www.shirky.com/weblog/2009/11/a-speculative-post-on-the-idea-of-algorithmic-authority/

[59] Beer, "Power through the Algorithm."

[60] Shirky, "Algorithmic Authority."

[61] Beer, "Power through the Algorithm," 998.

[62] Vaidhyanathan, *Googlization of Everything.*

[63] Paul Jaeger and Gary Burnett, *Information Worlds: Social Context, Technology, and Information Behavior in the Age of the Internet* (New York: Routledge, 2010), 51-52.

[64] Bing Pan, Helene Hembrooke, Thorsten Joachims, Lori Lorigo, Geri Gay, and Laura Granka, "In Google we Trust: Users' Decisions on Rank, Position, and Relevance," *Journal of Computer Mediated Communication* 12 (2007): 801-823.

[65] Kenneth Burke, *The Philosophy of Literary Form,* (Berkeley, CA: University of California Press, 1941/1973), 304.

Similarly, Google offers a source of knowledge on its own. While not exactly providing the moralizing tales of proverbs and narratives *per se*, Google structures our everyday knowledge-seeking and memory.[66] The use of the word "Google" as a verb ("if you Google for…;" "Just Google it") highlights the shift in thinking about Google as a primary element of everyday life. It adds to our existing equipment for living not by telling us a story, but by organizing the bookshelf and offering strong suggestions about what we should read next, which will, in turn, affect future decisions.[67] In a sense, the computer and communication technologies such as cookies are more like "living equipment," machines that evolve and adapt with constant use. When combined with the algorithmic control of cookies, the massive reliance on Google for everyday seeking of information and living become even more prominent. Google's terms of service and privacy policies underscore this element.

Google spells out its personalization of search results and its engine in its terms of service and support pages. The company states that it "helps you find personal results that are relevant to you" and that "Google's search experience that blends personal results with universal results, and helps you connect with people you care about."[68] While individual users are able to turn off personal search results, Vaidhyanathan believes that most people do not and remain in the default settings that include data-tracking cookies.[69] Looking further, there have been substantial changes to Google's privacy policies and terms of service that fortify one's constructed substance online. In early 2012, Google announced that it was consolidating its information about users across platforms, meaning that information from using Google Search would be compiled with Picasa, YouTube, and any other Google services. While the information collected would largely be the same, the sharing across platforms meant that an individual user "dossier" would be a robust snapshot of multimedia use. Searching for health related information on Google Search could, in turn, affect the types of videos found on YouTube. Exchanging email through Gmail about buying an insurance policy could inform advertising and search results in Google Search, and so on. At its technological foundation, this process is facilitated by cookies, their corresponding algorithms, and the inherent structure of the search engine.

Burke's account of literature as equipment for living can be understood as a socially moralizing force. The narratives available to us to learn about behavior reflect the rightness and wrongness of our actions.[70] Extending this line of thinking to the internet, our behaviors are not only moralized by the stories we learn online, our attitudes and beliefs are strengthened by our very search behavior. Others have argued that film,[71] television,[72] and even fantasy baseball[73] operate as equipment for living. In considering Google or Facebook and the use of digital cookies as

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[66] Vaidhyanathan, *Googlization of Everything*.

[67] Such an extension of Burke's equipment for living into new media is not new. Allison C. Burr-Miller believes the application of Burke in this way "provides new metaphors through which we understand and navigate our (offline) lives." Allison C. Burr-Miller, "What's Your Fantasy? Fantasy Baseball as Equipment for Living," *Southern Communication Journal* 76 (2011): 459.

[68] "Search plus Your World: Personal results," Google, Inc. accessed May 14, 2012, http://support.google.com /websearch/bin/answer.py?hl=en&answer=1710607

[69] Vaidhyanathan, *Googlization of Everything*, 87-88.

[70] Walter R. Fisher, "Narration as Human Communication Paradigm: The Case of Public Moral Argument," *Communication Monographs* 51 (1984): 1-22

[71] Barry Brummett, "Electric Literature as Equipment for Living: Haunted House Films," *Critical Studies in Mass Communication* 2 (1985): 247–261.

[72] Daniel J. Lair, "Surviving the Corporate Jungle: *The Apprentice* as Equipment for Living in the Contemporary Work World," *Western Journal of Communication* 75 (2011): 75-94.

[73] Burr-Miller, "What's Your Fantasy?"

equipment for living, it is possible to extend this line of thought into larger political structures. Political information is bound up in our own digital identification process, meaning that we are reinforced and rewarded for believing in the things that we (likely) already believe. In other words, if a user believes in one side of a political argument, it is likely that digital cookies and their algorithms will continue to find information that is relevant to and supportive of that position. This is even stronger when applied to social networking sites, such as Facebook, where user interactions are especially affected by cookies and algorithms. Cookies, according to Facebook's support documents, "help us know who you are so we can show content that's most relevant to you" and are used by the social networking site to "enable certain features" and to "provide you with a more personalized experience."[74] Between Google, Facebook, and many other online services that utilize these technologies, the core of our digital selves are best understood through browser cookies. These selves, even when anonymized, are organized and linked, without users' knowledge of it even occurring.

By engaging the web via cookies, we create a core digital substance, developed through our search behaviors. For Burke, rhetorical identification occurs when individuals are consubstantial with each other. In the digital sense, this would seem that individuals should share common cookies, but identification online happens in much more subtle ways. Identification with others occurs before the first keystroke in a browser, rather than at the moment of interaction. The algorithms and programming, even when the user is not specifically identified or even online, predetermine the type of website that would be most fitting for each individual. The user is simultaneously active and passive in the identification process; active in searching for ideas and knowledge, but passive in the function of the algorithm that groups people together. Digital consubstantiality is an unconscious process, insofar as it is a neurotechnological process that occurs in the background of our cyborgian minds: the computer and networked server.

Organizing Identities: A New Sense of the Transcendent "We"

Recall that in organizational rhetoric, the transcendent "we" is an often unnoticed form of identification. George Cheney argues that the "[u]ses of the assumed 'we' and the corresponding 'they' (symbolizing outsiders) can be found in corporate discourse when the sharing of interests by the corporation and the employee seems taken for granted."[75] When organziations speak of "we," they often speak on behalf of all members in unison, regardless of individual voices. Similarly, the use of digital cookies in communication technology establishes a sense of identification and "we-ness" through search results and profile connections. The consubstatial "we" here, however, is not spoken; it is assumed by the machine on behalf of the user. Through cookies, individuals are lumped together because of previous online behavior and assumptions built by the algorithm. Facebook offers an illustrative case. Structurally, Facebook offers users to fill out their profiles with things they "like," including media programming, hobbies, people, or other activities. Using its programming algorithm, Facebook suggests things that the individual user would also probably like because of their previous "likes" or search terms. The site reports that it collects cookies for "understanding visitor habits and patterns."[76] Its algorithm, known as "edgerank," assists the site in ranking the information that is more relevant to the individual user.

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[74] "Cookies, Pixels, & Similar Technologies," Facebook, accessed April 17, 2014 http://www.facebook.com/help/cookies

[75] Cheney, "Rhetoric of Identification," 149.

[76] "Cookies, Pixels, & Similar Technologies."

Edgerank controls what appears in a user's news feed and is governed by the principles of affinity, weight, and time.[77] In other words, Facebook will rate a post of a friend by calculating the relative closeness to the user, how popular the post has become, and how old it is. Affinity, in this case, becomes akin to the transcendent "we." Connections between users are established and ranked before each user interacts with Facebook, meaning that for a user with 1,000 friends of diverse interests, Facebook will decide who will appear higher and more often, predetermining "we." Certainly, the user has input into this process, but the algorithms quietly operate in the background, without real knowledge of how each click will affect future results.

The predeterminance of cookies extends to Google as well. Since its persoanlization of searching, Google has extended its search algorithms to pull from an array of as many as 57 data points found in cookies and other locations, including physical location, browser type, and other information, in order to determine what kind of user is at the keyboard.[78] Internet activist Eli Pariser puts it thusly,

> With Google personalized for everyone, the query "stem cells" might produce diametrically opposed results for scientists who support stem cell research and activists who oppose it. "Proof of climate change" might turn up different results for an environmental activist and an oil company executive…More and more, your computer monitor is a kind of one-way mirror, reflecting your own interests while algorithmic observers watch what you click.[79]

Burke's notion of the transcendent "we" looked to how groupings of individuals were subsumed together into one speaking agent that carried more weight than the sum of its individual parts. The digital transcendent "we" carries a similar weight; users are believed to be more like other users who searched for particular lines of argument or thinking. The new sense of "we" occurs at unconscious levels, where the completed search yields results that confirm to pre-existing beliefs. While the speaking agent never says "we," the confirmation of belief for the user provides a sense of grouping identity. In other words, the act of digital consubstantiality occurs in ways known and unknown to the user, appearing actively in search terms and passively in the code. The consequence, however, looms large over the field of rhetoric and argumentation, especially in the public sphere.

Deliberating with Cookies

The impact of digital cookies and their algorithms is best understood on social and political levels. Linking digital technology to contemporary political problems is not necessarily new,[80] but the discussion can be invigorated by concepts familiar to rhetoric and by paying particular attention to cookies. Cass Sunstein's concept of the "daily me" offers a cautionary tale about the consequence of confirmation bias online.[81] Speaking about linking behavior on blogs, Sunstein warns that there is a "significant divide between politically identifiable communities" and that

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[77] Jason Kincaid, "EdgeRank: The Secret Sauce that Makes Facebook's News Feed Tick," *Tech Crunch* (2010, April 22) retrieved May 30, 2012 from http://techcrunch.com/2010/04/22/facebook-edgerank/

[78] Eli Pariser, *The Filter Bubble: What the Internet is Hiding from You* (New York: The Penguin Press, 2011).

[79] Pariser, *The Filter Bubble*, 3.

[80] Peter Dahlgren, "The Internet, Public Spheres, and Political Communication: Dispersion and Deliberation," *Political Communication* 22 (2005): 147-162.

[81] Cass Sunstein, *Republic.com 2.0*. (Princeton, NJ: Princeton University Press, 2007).

hypertext structures on blogs support polarized depictions in politics.[82] "Liberals, reading liberal blogs, will end up being more liberal; conservatives will become more conservative if they restrict themselves to conservative blogs."[83] For Sunstein, however, much of this concern is generated by user behavior through news/blog aggregators or RSS feeds, which are fed through conscious choices and decisions. Cookies, on the other hand, are formed through behaviors but operate unconsciously by users. "Google works for us because it seems to read our minds—and, in a way, it does. It guesses what you might want to see based on requests that you and others like you have already expressed."[84] Search terms on Google or the order of Facebook's "News Feed" are read as unbiased organizing strategies, not as something consciously constructed by users.

Sunstein's concern is echoed here. But, just as original theorizing by Kenneth Burke about unconscious motivations affecting rhetoric, my intention here is to accent the algorithmic concerns inherent to digital rhetoric. Rhetoric under Burke opened doors to unconscious reasoning that affects identification and persuasion. Persuasion and rhetoric online today has carried significant technological consequences, starting with the digital identification of the user through cookies. As I have argued above, the digital algorithms governing cookies are akin to our own unconscious, guiding us in ways that are often unknown. Surely, this does not mean that every interaction on the Internet produces a self-serving environment without argumentation or contestation. However, it is the case that technology creates what Eli Pariser calls a "filter bubble."[85] These invisible bubbles surround our every action online, but operate with the guise of objectivity and efficiency.

Extending this into the realm of rhetoric and public deliberation, users are molded into both belief systems and argumentation strategies. As foundational to our unconscious development, digital cookies create a form of "trained incapacity."[86] The more users engage in search engines—and recent Pew reports indicate that users are increasingly turning to digital sources for political information[87]—the more they include information that is considered relevant and exclude information deemed unimportant to the user. Consequently, the user is trained in their views and less likely to recognize other perspectives. As a primary source of information, therefore, the Internet informs argumentation practices and public deliberation in profound ways. Thomas Goodnight offered the personal, technical, and public spheres of argumentation, paired with concerns about the dominance of private or technical interests over the public.[88] In the case of online cookies, the three spheres have coalesced. Turning to the Internet for information means that users are always and already affected by technical decisions well outside of their control. The algorithms built into websites and cookies guide our discovery of information and argument. Moreover, online cookies present a uniquely personal sphere of argument, insofar as the cookies are unconsciously built from our own habits. Yet, while being both personal and tech-

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[82] Sunstein, *Republic.com 2.0*, 150.
[83] Sunstein, *Republic.com 2.0*, 145.
[84] Vaidhyanathan, *Googlization of Everything*, 52.
[85] Pariser, *The Filter Bubble.*
[86] Kenneth Burke, *Permanence and Change: An Anatomy of Purpose*, (Berkeley, CA: University of California Press, 1954), 48.
[87] Lee Raine, Aaron Smith, Kay L. Schlozman, Henry Brady and Sidney Verba, "Social Media and Political Engagement," *Pew Internet & American Life Project* (2012, October 19). Retrieved from http://pewinternet.org /Reports/2012/Political-engagement/Summary-of-Findings.aspx
[88] G. Thomas Goodnight, "The Personal, Technical, and Public Spheres of Argument: A Speculative Inquiry into the Art of Public Deliberation," in *Contemporary Rhetorical Theory: A Reader*, ed. John Louis Lucaites, Celeste Michelle Condit, and Sally Caudill, 251-264 (New York: Guilford Press, 1999).

nical, online argumentation carries the façade of a public sphere. A number of theorists have complicated the discussion of an online public sphere,[89] displaying concerns about the ability to deliberate online. In those cases, scholarship has turned to specific cases and examples of successful or unsuccessful online organizing. Before getting to organizing, however, the primary access point to information via web searching must be considered. Users of search engines perceive that the information found is unbiased and objective and that companies like Google serve the public good.[90] Underneath this façade exists the algorithmic operations of cookies that guide the types of information found in the first place.

This is not to say that specific arguments are guided by cookies; however, it is the case that the topics and general lines of argument to which we are exposed are driven by our search histories. In an effort to optimize search returns, cookies offer users information and arguments that are familiar and comfortable. As unconscious devices, algorithmic digital cookies positions users in polarizing groupings of knowledge. Akin to the tracts of knowledge I have discussed elsewhere,[91] these groupings foster inbreeding of argumentation *without the users' knowledge.* Whereas in Sunstein's "daily me," users were often conscious in their decisions to engage on one blog or another,[92] today's algorithms provide users the veneer of diverse knowledge sources and neutrality, while merely replicating what is already desired for users. This problem surfaces in the form of polarization by reaffirming the preexisting views held by individual users leading to increased political polarization as a consequence of digital technology by its limiting of diverse interactions.[93] When branched into issues of public concern, this problem is exacerbated by the closing down of stranger interactions.

Michael Warner believes that a public can be understood as "a relation among strangers."[94] Such a conception underscores how "strangerhood is the necessary premise of some of our most prized ways of being."[95] As a necessary component of democracy, stranger interactions inform public opinion through the clash of idea and argument. Melissa Deem reflects on Warner's conception, saying that he "places his faith in the transformation of the norms of stranger sociability within publics and counterpublics, transformations out of which he hopes that new forms of publicly accessible life might become available."[96] While pertinent to a discussion of online publics, the conception of stranger sociability is even more fundamentally complex when viewed in light of internet cookies. Arguably, the internet offers a vast array of opinions and interactions, giving strength to stranger sociability. In other words, every search online could conceptually be understood as an interaction with a stranger. Common beliefs in a rhizomatic web see user interaction as random interactions.[97] Yet, with internet cookies, searching online is more like looking into a

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[89] Lincoln Dahlberg, "Rethinking the Fragmentation of the Cyberpublic: From Consensus to Contestation," *New Media & Society* 9 (2007): 827; Dahlgren, "The Internet, Public Spheres," 147; Aaron Hess, "Resistance up in Smoke: Analyzing the Limitations of Deliberation on YouTube," *Critical Studies in Media Communication* 26 (2009): 411.

[90] Pan, Hembrooke, Joachims, Lorigo, Gay, and Granka, "In Google we Trust," 802; Pariser, *The Filter Bubble*; Vaidhyanathan, *Googlization of Everything.*

[91] Hess, "Reconsidering the Rhizome," 46.

[92] Sunstein, *Republic.com 2.0,* 4

[93] See Aaron Hess, "Democracy Through the Polarized Lens of the Camcorder: Argumentation and Vernacular Spectacle on YouTube in the 2008 Election," *Argumentation & Advocacy* 47 (2010): 118.

[94] Warner, "Publics and Counterpublics," 55.

[95] Warner, "Publics and Counterpublics," 57.

[96] Melissa Deem, "Stranger Sociability, Public Hope, and the Limits of Political Transformation," *Quarterly Journal of Speech* 88 (2002): 444.

[97] Hess, "Reconsidering the Rhizome," 36.

mirror than looking out the window. Algorithmically, user interactions reproduce knowledge and argument, thereby affecting the ability to develop new knowledge via interactions with strangers.

This problem is similar to the privatization of public space. Kohn argues that public spaces are vital for interactions between strangers and acquaintances, allowing for the discovery of new knowledge and perspective by empathy:

> Public space facilitates the mutual recognition of strangers. Strangers are not merely individuals who have not yet been acquainted with one another but rather people who are disturbing to one another because they bear markers of difference: race, age, poverty, or culture. Public space provides a context in which such people can become familiar, not intimate, with one another. This familiarity potential has two salutary effects. This shared world-in-common can help individuals sympathize with the suffering (and the joys) of others. More important, it can help us see ourselves through the eyes of others so that when we look to the "man within" to provide a moral compass we are not simply looking in the mirror.[98]

In parallel fashion, the structuring of the internet via cookies and algorithms insulates the user from markers of difference. As a consequence, the arguments, perspectives, and types of deliberation offered to the search engine user effectively hamper the ability to empathize with others and consider a variety of practices of invention. This problem is not limited to being online. Given that use of digital technology is widespread, argumentation practices are drastically affected in traditionally understood offline spaces as well. As I have said earlier, it is no longer possible to separate our online and offline selves, which means that digital cookies have a direct impact on how we engage in and evaluate public argument. While judgments have already been made about the demise of the deliberative public sphere,[99] the consequence of digital rhetorical identification is an implosion of any sense of public strangerness into polarized bubbles of perception.

Concluding Thoughts

In this essay, I have discussed the nature and "substance" of digital cookies and algorithms. Drawing from existing thinking from rhetoric and digital media studies, I have argued that Burkean concepts, such as consubstantiality and equipment for living, can illuminate the ways in which users are identified and organized. Grounding digital rhetoric in identification provides a way of thinking about technology that expands notions of the unconscious to account for how the pervasive use of digital technology affects digital literacy. This extension means that digital technology should be considered as fundamental part of contemporary rhetorical training and critical reflection. Previous scholarship has examined rhetorical concepts and how they stretch into the digital realm,[100] but these extensions merely see online technologies as a medium. Instead, my analysis features technology as a foundational part of rhetorical identity. To believe that humans can be separated from the machines discounts the actual use of convergent and loca-

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[98] Margaret Kohn, *Brave New Neighborhoods: The Privatization of Public Space* (New York: Routledge, 2004), 203.

[99] Michael Kevin DeLuca and Jennifer Peeples, "From Public Sphere to Public Screen: Democracy, Activism, and the 'Violence' of Seattle," *Critical Studies in Media Communication* 19 (2002): 128.

[100] See Warnick and Heineman, *Rhetoric Online*, 15.

tive technology in the everyday lives of millions.[101] The commonplace use of digital technology challenges rhetorical scholars to take stronger account of their consequences, as I have here. The concept of digital rhetorical identification accounts for the nature of such blurred offline and online identities in the contemporary digital era.

Future considerations of technology should account for the impact of digital code and software, such as cookies, on public deliberation and debate. Barbara Warnick asked critics to "look under the hood" of computer software and hardware to examine the underlying assumptions of the code itself.[102] Yet, too often in critical rhetorical analyses, rhetorical scholars assume that digital technology functions as a neutral medium or channel. This mistaken assumption dismisses the ontological and epistemological effects that technology has on our existence. Scholarship in digital rhetoric should examine more closely this fundamental change in our neurotechnological being. Digital technology is much more than prosthesis, as Marshall McLuhan would have it;[103] the computer has been fully integrated with human thought, desires, and needs. Future critical scholarship should look to the ways that such technology affects other elements of human existence, including the political economy behind major corporate interests such as Facebook and Google.

The discipline of rhetoric is well-equipped to address issues of argumentation and deliberation as they are affected by digital technologies. Barry Brummett offered rhetoric as a heuristic and moral force, able to address issues of public concern with critical reflection.[104] Future rhetorical scholarship should examine the newfound nature of digital literacy to offer students of rhetoric the ability to reflect upon their digital and analog bodies. Moreover, critical rhetoric illustrates the need for rhetorical scholars to take part in the public discussions regarding power, domination, and freedom. Public discussions of the impact of such technology on political processes can assist in alleviating the ongoing problem of polarization and corporate influence in public deliberation. Rhetorical theorizing about technology, dating back to Plato's questions about writing in the *Phaedrus*, can illuminate how such technologies fundamentally alter mean-making and speaking. Finally, users of these technologies should be mindful of how they structure thought and organize information. If we accept that digital technologies directly impact our exposure to varieties of knowledge, then we may desire to actively seek alternative perspectives on controversial issues. Rather than abandoning digital devices, users should be attentive to the ways that digital cookies and algorithms affect our ideas, our desires, and our selves.

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[101] For an example of rhetorical scholarship that looks at the consequences of the convergence of offline and online practices, see Aaron Hess and Art Herbig, "Recalling the Ghosts of 9/11: Convergent Memorializing at the Opening of the National 9/11 Memorial," *International Journal of Communication* 7 (2013): 2207-2230.
[102] Warnick, "Looking to the Future," 332.
[103] McLuhan, *Understanding Media.*
[104] Barry Brummett, "Rhetorical Theory as Heuristic and Moral: A Pedagogical Justification," *Communication Education* 33 (1984): 97.