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Bursting the Filter Bubble: Information Literacy and Questions of Valuation, Navigation, and Control in a Digital Landscape

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BURSTING THE FILTER BUBBLE: INFORMATION LITERACY AND
QUESTIONS OF VALUATION, NAVIGATION, AND CONTROL IN A
DIGITAL LANDSCAPE

by

KOMYSHA HASSAN

A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Writing and Rhetoric
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ABSTRACT

The evolution of social media platforms and other public forums in the digital realm has created an explosion of user-generated content and data as a component of the already content-saturated digital landscape. The distributed, horizontal nature of the internet as a platform makes it difficult to ascertain value and differentiate between texts of varying validity, bias, and purpose. In addition, the internet is not an inanimate interface. As Pariser (2011) argues, content aggregators, such as Google, actively filter, personalize, and therefore limit each individual's access to information, in both range and type. This has created a crisis of information valuation and control. Importantly, conventional curriculum does not furnish students with the information literacy tools necessary for them to navigate the digital landscape effectively. Information miners and developers, including news organizations, are falling victim to this fallacy as well. Lankshear and Knobel (2011) posit that empowering navigation and control in the digital landscape requires a new mindset. This research offers a context-driven approach that acknowledges this new mindset, promoting "rhetorical consciousness" (Murphy et al., 2003) within the network and providing a framework to recognize, challenge, and co-create gatekeeping roles and mechanism as they increasingly shift to the individual.

DEDICATION

For my professors and mentor, whose invaluable mentorship made this work possible

For my family, who have never wavered in their support, encouragement, and pride

For my friends, who could not be happier it is finally over

And especially, for the next generation of educators and rhetoricians

This is for you

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INTRODUCTION

“The media is really, the word, one of the greatest of all terms I’ve come up with, is ‘fake’”

-President Donald Trump, October 26, 2017 (Schaub)

History tells us that President Trump has not, in fact, invented the term “fake news,” which has been in some form of circulation since before the turn of the century (“The Real Story”); instead, he has helped the term gain prominence in the popular lexicon, giving rise to a much more serious and far-reaching debate on the ways we engage with information and how we value, measure, and navigate information in the digital age. More than creating new information realms, the digital shift, as Manuel Castells suggests, has created new landscapes - “network-based societies” - that challenge the dominance of “vertical” organizations such as states and corporations in the public domain (4). The rise of the “private domain” (Castells 4) reorganizes the boundaries of information interaction and valuation through the diffusion of its sources and the breakdown of its systematic qualities, real or perceived. Even as we begin to shed the traditional mediators of information - institutions, governments, organizations, etc. - a different kind of mediator emerges, one that is less explicit, more pervasive, and increasingly dominant: the “digital gatekeeper” (Segev 3). Digital gatekeepers, as Elad Segev describes them, are the information aggregators (search engines) that nearly all our information in the digital realm is filtered through. And, the power they possess in this digital age is staggering.

Eli Pariser’s groundbreaking book *The Filter Bubble* distills the momentousness of this shift in a moment in 2009 when Google decided to “personalize” its search results, customized to what the interface thinks we want (12). The customized search was just the tip of the digital

iceberg, starting a cascade of personalization that is the promise of the now and future internet. The “filter bubble,” as Pariser refers to it, is where we all live - a tailored world that influences our identity, shapes our views and priorities, and skews our collective reality. As our societies become more and more enveloped by such “bubbles” – spheres of individualized realities – the line between fake and real is blurred, and it becomes more and more difficult to ascertain the two. It is thus befitting that ‘fake news’ is today’s word du jour, a kind of euphemism for the information evaluation crisis-in-progress. That it emanates from, even defines, such high office as that of the President of the United States is all the more reason to parse out what defines the digital shift, and how to overcome its pitfalls.

These shifts are no doubt epic, and you would be scarcely blamed to think that they have never happened before - but they have. There have been filter bubbles in the past, though perhaps not on this scale. Kovach and Rosenstiel posit that there have been “eight epochal transformations in communication that, in their way, were no less profound and transformative than what we are experiencing now” (12). Mounting scholarship in the fields of information technology (see Bozdag; Bar-Ilan et al.; Eppler and Mengis), journalism studies (see Patterson; Stephens; Aspray and Hayes; Kovach and Rosenstiel), political science (see Fountain; Bimber; Dahlgren) and communication (see Walther; Postmes et al.; Blair et al.) have covered aspects of these transformations for their respective fields, identifying systemic breakdowns or recognizing possibilities for improvement. Rhetorical studies and the emergent field of digital humanities have equally weighed-in on this shift with a unique and informative perspective (see Hayles; Rickert; Warnick and Heineman). As Cathy Davidson notes, what we need now are new *ways* to conceptualize, and “interact and integrate in the world” (97) in order to traverse the digital landscape without losing ourselves in the process - a new rhetoric of information literacy.

Where the wealth of scholarship informs on the transformative nature, process, and attributes of the digital shift, it falls short on examining the extent to which the general public is ill-informed of its peril if left unchecked, and on defining means to overcome its challenges. What this research proposes to accomplish is examine the ways in which the public (in the United States) navigates information; how they value, measure, and interact with it, and how the digital realm may disrupt that. For example, do information consumers adapt to new information environments (such as digitally mediated landscapes)? Or, do they apply the same strategies across contexts? Once established, this research seeks to illuminate some avenues for adaptation to override the negative impacts of the ‘bubble.’ Three main questions emerge from the research, that this paper seeks to answer:

1. In what ways do digital scapes challenge information evaluation?
2. What, if any, mechanisms have the public developed to encounter information overload?
3. Can rhetorical strategies inform new ways of interacting with, and valuing information?

These questions provide a foundation from which to establish where there is conflict between information literacy in the digital realm, and traditional information literacies. Understanding this point will help in moving towards a specific area to focus efforts of awareness, empowerment and transformation.

This paper is divided into five chapters. The first chapter examines the history of communication transformations and rhetoric in public domains, including how mediums, interfaces, and forums changed public discourse. The second chapter evaluates the emergent impact of information overload on public interaction and knowledge access, including gaps in public knowledge. The third chapter looks at the new literacy of this domain and in what ways it challenges, aligns with, or complicates traditional ways of information awareness and navigation.

The fourth chapter provides a foundation for a new approach that can be applied systematically. The fifth chapter draws upon conclusions reached throughout this paper to offer possible solutions based on a rhetorical approach to information navigation and knowledge access.

Background Literature

That we live in a world of digital primacy needs little qualification. Every facet of our life if not mediated by digital technology, is influenced by it. When conversations arise that juxtapose old and new ways of being and doing, the debate is often over the deterioration of language (or not), the deterioration of socialness (or not), whether we can function in the world without our phones, computers, and gadgets, etc., or if “kids these days” even know what it means to have a conversation. Very little attention is paid to how we manage the oceans of texts and information that we have access to, and that animate these activities, or, more crucially, how these vast oceans are managed *for us*. Literacy scholars James Gee and Elizabeth Hayes argue that “the perils and possibilities of digital media are, in fact, species of the same perils and possibilities we find in the history of oral... and written language” (1). These words bring comfort, perhaps, in the knowing that whatever challenges that present themselves to us through new interfaces, are not entirely unlike those we have faced before. And the adaptations we ultimately must make are no different than adaptations we have had to make before, and undoubtedly will continue to make. However, without first knowing what confronts us in the ever-evolving digital world, how could we adapt? Information is not static or objective, it changes our perception in real ways, leading us to make determinations about ourselves and those around us. To provide a roadmap for these new information landscapes this research relies on a number of key scholarly texts to frame its ideas, moving forward.

A critical lens that will serve as a theme throughout this research is Eli Pariser's *The Filter Bubble*. Even as the term "filter bubble" begins emerging from the background into use in less specialized circles, the lack of attention paid to it is indicative of how little is known about it. Pariser defines the filter bubble as "a unique universe of information for each of us... which fundamentally alters the way we encounter ideas and information" (9). These bubbles are created by "a new generation of internet filters," used by Google among other content aggregators, that guess and compute thousands, perhaps millions, of points of data about you to define who you are and, thus, predict your upcoming moves (Pariser, 9). But, as Pariser argues, these filters do not simply predict your interests and needs, they *shape* them. In addition to concerns about privacy, the hyper-personalization of the internet, hailed as a revolution of convenience and integrative technology, forces an "information determinism" paradigm, where your past actions determine what you see and encounter on the internet, which in turn perpetuates the cycle (Pariser, 16).

Pariser highlights three main elements to the bubble that make it particularly dangerous: 1) isolation, 2) invisibility, and 3) lack of choice. The first element, isolation, seems antithetical to the very notion of the internet – a diverse, collaborative, "community" of ideas and information. The second element, invisibility, leads to the third, lack of choice, for if you cannot see something, you cannot make choices about it. These last two elements are unsettling on their own, but downright dangerous together. The implications of an invisible barrier between us and any information we seek (or may not know to seek), set by predetermined variables for which we have no control, are globally significant, impacting our very identity.

Providing further clarity, background, and a working knowledge of the technical, as well as political, social, and economic implications of the filter bubble is Elad Segev, whose

illuminating treatise on online information dissemination, *Google and the Digital Divide: The Bias of Online Knowledge*, adds clarity to the concept of filtration. Segev brings a globally-scaled projection to Pariser's filter bubble, showing the extent of its reach and power, beyond the individuality of the personal bubble to a globalized one. Segev refers to information aggregators as "gatekeepers," a term equally effective in expressing the influence of search engines and other mediums of information exchange on our access to information. Because the internet is a global phenomenon, and corporations such as Google or Facebook are also global enterprises, the bias of online knowledge is equally global. These gatekeepers essentially regulate the flow of information in a transnational context. Instead of the filter bubble, Segev invokes Harold Innis' conception of "monopoly of knowledge" to frame his argument (3). The "monopoly of knowledge" construct examines the role of gatekeepers in relation to information from the perspective of domains of power (7). This view provides for a broader perspective on the actors, and influencers in the information market, and how the public fits in.

While Pariser and Segev begin to peel back the shroud around information control in the current climate of digitization, a historical comparison is equally critical to contextualize the changes in the way we communicate and interact with information. Award-winning journalists Bill Kovach and Tom Rosenstiel offer an epochal framework to examine communication shifts that have been transformative to the way people relate to one another, to the institutions that serve them, and to the power structures that govern them. They name eight epochs, each marked by a different medium (cave drawings, orality, writing, mass printing, telegraph, radio, broadcast television, cable, and internet), giving rise to new means of information dissemination and access; each having an increasingly "democratizing influence" (12). Kovach and Rosenstiel posit that "As more people become more knowledgeable, they also become better able to question

their world and the behavior of the people and institutions that directed their lives” (13).

Animating each of these transformations is a “tension between fact and faith” (13) – between the domain of empirics and that of belief. This tension is important to take note of early on as it is influential to the way we interact with information, and how we evaluate *specific types* of information in contrast to others. Kovach and Rosenstiel’s framework is an excellent temporal navigation tool, and will serve as a handy organizing principle for the upcoming chapter.

While Kovach and Rosenstiel used mediums to mark transformations in society, Murphy et al. focus on modes of communication, and ways of thinking. Murphy et al. provide a rich overview of the rhetorical tradition that has been transformative to thought and society, particularly in Western society. They reiterate the Aristotelian view of the role of rhetoric in the development of society, namely “to help truth prevail in the world of human affairs” and “to help us see both sides of an issue,” among others (4). Murphy et al. advance the concept of “rhetorical consciousness” which they define as “an awareness of language as a strategic tool” (24) presenting the mode as also the medium, and examining the ways which one can employ and decode language effectively. Murphy et al.’s richness as a reference point for the understanding of the transformative power of rhetorical thinking is made all the more relevant through the addition of Thomas Rickert’s fascinating exposition of rhetoric in the modern, digitally mediated, epoch. Rickert’s theory of “ambient rhetoric” sees rhetorical boundaries as diffuse in a world defined by intertextuality and distributed authorship, yet rhetoric remains persistent as a guiding principal and an effective tool to navigate texts and access knowledge and information. Both texts, Murphy et al., and Rickert, provide a foundation from which this research can draw upon as it unpacks the ways in which we make sense of, and redistribute information.

If rhetorical thinking has transformed the way we use communication and manipulate language as Murphy et al. presents, and Rickert elaborates on, then digital mediums have made it more difficult to ascertain what rhetorical practices fit best by bending the boundaries between oral and written communication, producing a form that overlaps those mediums, intermixing them to form a new corollary. At least, that is what Fr. Walter Ong suggests in his seminal work *Orality and Literacy*, first published in 1982. Ong speaks richly of the oral background and foreground of both the historical and contemporary literate forms, suggesting that modern, digital technology is ushering a new era of “secondary orality,” or orality mediated by writing-based communication (134); tapping into the principles of “primary orality” (11) even as it inhabits a decisively literate (written) landscape. In the foreword for the 30th anniversary reprint of Ong’s work, John Hartley brilliantly captures the eminent voices Ong invokes in his multidisciplinary exposition, stating “At the micro level, the individual citizen need[s] mental software to engage in an increasingly textualised world; one where knowing relied on technologically transported information that was abstracted from its contextual roots, just as writing and print are abstracted from the situated immediacy of speech” (xxi). What Hartley is getting at is that navigating these new contexts of communication requires a new mentality – “software” – to cope with differences in the nature of media and its intersectionality.

While a great number of scholarship has explored digital literacy through its ostensibly written form, few have explored it through the lens of orality as Ong does. Using conventions of speech rather than literacy is a unique, but arguably effective approach at understanding digitally-mediated writing, with its immediacy and conversationality more akin to speech than writing. What this approach promises, for the purposes of this research, is a new way to imagine and teach the literate skills of the digital epoch, and wield them effectively and *intentionally*.

Ong argues that it is the American hyper-focus on the study of rhetoric as a literate art that has distanced it from its oral basis (74), but that the technological, and specifically digital, revolution has upended that fixation. The power and potential of this skill set was not lost on Ong or his contemporaries from whom he divined much inspiration (such as Philosopher Michael McLuhan, author of *The Global Village*). As the filter bubble might suggest, information is the greatest weapon and currency of this day and age. Rhetoric is not simply a skill “to prepare citizens for public life” (Hartley xx), but a necessity for the everyday individual; “To be successful citizens and consumers, to sustain an enterprising economy, and to know how to tell *our* entertaining and enlightening social media from *their* hostile and invasive spam, *everyone* must exercise the ‘soft power’ of knowledge” (Hartley xxi-xxii, emphasis in original).

Manuel Castells’ substantial work, *The Network Society*, provides a helpful overview for the topography of these new information landscapes, their advantages and pitfalls. Castells affirms Ong’s argument on the nature of media and communication, positing that the hypertext has challenged the historical subordination of visual and oral arts to written ones by “for the first time in history” integrating “the written, oral, and audio-visual modalities of human communication” (198). Castells uses the term ‘network society’ to describe the distribution of power, and recalibration of the locus of control, from “vertical bureaucracies” that concentrate power in a hierarchical structure, to “horizontal institutions” where power is diffuse and interdependent in a network (176). Although it may initially sound like a democratizing force, the recalibration of control is merely that, a recalibration, and while the shift affords more public control and less manipulation and power differentials, realizing those advantages and seizing the opportunity is only possible with the intentionality of an informed participant. Quoting Weber,

Castells emphasizes that “the logic of the network is more powerful than the powers of the network” (104).

The dissolution of traditional gatekeeping structures shifts responsibility onto the public, but not necessarily grants them the power that should be associated with that responsibility. Using an economic model of production and labor, Castells offers that “the network” increases individual responsibility “without necessarily altering the pattern of concentration of industrial power and technological innovation” (132). Building on the foundation created by Castells’ *Network Society*, Gustavo Cardoso, who has co-authored a number of titles with Castells, focuses in on the arena of communication and media in his book *The Media in the Network Society: Browsing, News, Filters and Citizenship*. Cardoso bolsters Castells’ argument in media terms stating, “Although the world today is inundated with information, the diffusion of knowledge (i.e. the capacity of manipulation and assimilation) is not accompanying the growth in information” (134). “One must have the necessary skills” says Cardoso, citing Eco, “so that one can act as an information filter, know how to distinguish and select, or the access to all the information available will be fruitless” (Eco qtd. in Cardoso 134). Information filtration has always taken place, whether through the vertical bureaucracies that Castells discusses, such as political or religious bodies, or through the horizontal corporate entities and aggregators that Pariser and Segev refer to, such as Google. The public, however, has been slow to recognize how much the onus of information filtration, identification, and evaluation has shifted to them (Cardoso 133-4), and therefore developed the mechanisms to cope with the changes, and wield this new potential effectively. Defining that shift, recognizing the actors involved, and identifying ways to harness these tools is the primary focus of this research.

In order to explore the teaching and learning implications of these new information landscapes, and particularly the application of a new perspective on rhetoric as a means to accessing its potential, this research relies on the groundbreaking work of Colin Lankshear and Michele Knobel in *New Literacies: Everyday Practices and Classroom Learning*, as well as James Gee and Elizabeth Hayes' *Language and Learning in the Digital Age*. Lankshear and Knobel's work offers a way of looking at the mental shift brought about by the global and networked nature of information in the post-digital world. Using the terms "Mindset 1" and "Mindset 2" (8), Lankshear and Knobel suggest that "The so-called 'information-revolution' itself is actually, and more importantly and accurately, a 'relationship revolution'" – between individuals, technologies, and information (77). In this new learning 'mindset,' expertise and authority is distributed, time and place are fluid and flexible, and modes and modalities are intermeshed and overlapping. The two mindsets are an extension of the concept of digital immigrants (mindset 1) and digital natives (mindset 2) first popularized by education professor Marc Prensky, which Lankshear and Knobel suggest are not entirely distinct, but draw on a common legacy of oral and literate development. The authors use the terms "outsiders" and "insiders" instead, drawing attention to the differences in acclimation between both. The authors suggest that school curriculums, despite increasingly embracing digital mediums and modes, are still dominated by digital 'outsiders' (109) whose teaching and learning philosophies are still interface-based, seeing the digital landscape as a tool, rather than an entirely new perspective.

Gee and Hayes concur with Lankshear and Knobel's conclusions, adding that schooling focuses too readily on teaching oversimplified "content literacy" (defined as information and facts) that is stripped of the context that allows it to be deciphered and evaluated properly. As opposed to facts and information which are readily available online, Gee and Hayes suggest that

students would be better served by schools that teach the methods for collection of such information and data, and the means for its selection, which they point out is not a readily accessible skill (67). To contrast, Gee and Hayes use the example of online gaming to simulate a learning community that better reflects the collective nature of expertise in the digital-dominant era, and the learning-by-doing model of knowledge acquisition, noting that an increased amount of learning occurs outside of school. They use the term “passionate affinity spaces” to refer to such informal environments where learning takes place based on a collective passion or “affinity” towards a certain topic or interest-area.

But these benefits are not without their perils. Echoing Pariser and Cardoso, Gee and Hayes warn that digital landscapes can act like echo chambers, reinforcing individual biases and fostering homogeneity as opposed to diversity. “It is easier... for people to communicate, consume, produce, and share with only other like-minded people. If you do not like one group’s passion fueled perspective on news, science, religion, or avocado carving... then join another group or start your own” (Gee and Hayes 139). Gee and Hayes point out that resting on one’s personal biases can be an attractive option in order to filter out the vast amounts of information encountered in the digital space, most of which needs to be “tuned out” (140). This observation is important as it emphasizes the need for a filter and the biases that are associated with developing one. It also stimulates thought about the public’s tolerance of the filter bubble. The perspectives on teaching and learning, and the spaces where they occur provided by Lankshear and Knobel, and Gee and Hayes may help in defining pathways to bursting the filter bubble and becoming better information consumers and producers, a goal this research hopes to accomplish. While hardly the only ones, these texts, overviewed above, will be instrumental throughout this research, providing support, challenge, and insight on the observations and arguments

represented herein. They are groundbreaking in their own areas of focus, and brought together can be of even greater impact.

CHAPTER 1: COMMUNICATION, RHETORIC, AND THE PUBLIC DOMAIN: A HISTORICAL OVERVIEW

We become what we behold. We shape our tools, and thereafter our tools shape us.

– John Culkin, *A Schoolman's Guide to Marshall McLuhan*

Over the course of history, humans have used new and innovative ways to create and expand their social groups. From the earliest tight-knit oral cultures, to the more complex and expansive city-states, to the modern, globalized world; each era, or epoch, has been marked by significant changes in the structure, size, and nature of the community, each mediated by language and animated by new forms of social networking. As the global social media platform, Facebook, hits over 2 billion monthly users this year (Constine), author Tom Standage reminds us that social media is hardly a digitally-spawned phenomenon but has been around for millennia (Hicks). Though “Cicero’s Twitter,” as Standage puts it, may not have the velocity of President Trump’s Twitter, it is nonetheless a product of the same forces, needs, and goals (Hicks). The real differences between the social media and content circulation methods of the past and today are the sheer volume, the types of sources, and means of accessibility. With the advent of writing and written language, content of all kinds – wisdom, information, stories and tales – could be preserved, and shared far and wide. And each new innovation thereafter increasingly distributed more and more access to the public as individually handcrafted manuscripts gave way to the printing press, and carefully prepared written media gave way to the mass media of radio and television, etc. Along with these evolutions, also evolved the means of monopolizing such content.

As with today's filter bubble, every new innovation in communication has always brought along with it a filter bubble of its own. Whether shaman, priests, rulers, clergy, producers, or corporations; some entity or individual has imposed protocols and regulations for accessing and/or disseminating content that has privileged some over others. And the friction between fact and faith, write Kovach and Rosenstiel, grew more pronounced because of it (13). Greater access to content and information meant more facility for average citizens to assess and evaluate the quality and veracity of that content themselves, not relying on the ethos of the source as the first and final measure of trust. This movement of course upsets the balance of power from the sources of the content, to the consumers of it – from the few to the many – which in turn triggers an effort to recapture that power, cycling through the process as new ways of communication and access grow and evolve. Today's network society, to use Castells' term, is arguably the most horizontal, and “democratized” of the past epochs, with average people – you and me – able to not only consume content but be the source of it and disseminate it directly, more than ever before. Some have tried hard tactics to limit public access – repressive regimes shutting down the internet, or severely limiting access except to certain, approved, websites are an example. However, more well-structured barriers have evolved too – the new filter bubble – ensuring the balance of power remains in the hands of the very few, rather than the masses.

What is critically different about *this* bubble is its latency and its seamlessness. It is so ubiquitous, yet virtually unacknowledged, few being aware of its pervasiveness. And it is only getting more and more pervasive, as the internet and its enabled devices become more than mere tools, but extensions of our identities and ourselves. At the same time, the tension between fact and faith swings in the other direction, the ethos of the source increasingly *the* measure of trust when individuals do not know how, or do not feel qualified to assess or evaluate the information

themselves. When President Trump refers to ‘fake news,’ he is gambling on the public’s trust in him as an individual, his ethos, to override their trust in, say, the news. The news – that is, journalism – as we will see a little later in the next chapters, is not a bastion of realness or veracity, as it were, against which to measure others, but it is rather a symbolic institution that supposes the evaluation of many in comparison to the statements of one. The pendulum is apt to swing back again, but to do so will require an awareness and recognition of the bubble, and both the means and willingness to burst it. This chapter will explore the historical transformations in communication and social media, and how such changes have impacted the way we relate to one another and the world in general. The structural changes that occurred as a result of these shifts will be noted, thinking also about how people and institutions responded to the changes and mastered the skills necessary to succeed in the new environment. This chapter’s organization scheme will be loosely based on Kovach and Rosenstiel’s epochs, collapsed into five rather than eight categories.

The First Epoch

Kovach and Rosenstiel’s first epochal shift in the history of communication is that of writing and, eventually, alphabetic systems. An epochal shift indeed, the shift from orality to writing fundamentally alters our way of thinking and behaving to the point of it changing the physical state of our cognition (Ong 30). It is worthy to dwell briefly on orality though, before moving on to the different eras of writing for the simple fact that many of its characteristics are emulated in today’s preferred modes of communication. Fr. Walter Ong’s research uncovers important parallels between orality, literacy and the way we think and communicate, especially relevant for the digital age. But even as Ong expounds on the essential orality of language and

communication – “Oral expression can exist and mostly has existed without any writing at all, writing never without orality” (8) – he notes the peculiar subordination of sound to text and speech to writing in academia, a phenomenon that extends beyond sound to other visual, and symbolic communication, the “visual-verbal divide” (Goggin 5). The peculiarity of this phenomenon stems from how actively sound is a part of thinking and interpreting language and symbols, even when communicating with the deaf through sign language, which Ong notes is a symbol system built on the conventions of speech, not writing (7). Writing, however, can do things that speech cannot, namely providing a canvas for analysis and “abstractly sequential, classificatory, explanatory examination of phenomena or of stated truths” (8). Whereas oral cultures and communities rely on remembrance, inherited memory, apprenticeship, imitation, and practice, studying is very much a function of writing and reading (Ong 8); the ability to gather and distill content and systematically observe its various elements, or deconstruct its argument.

Of the many characteristics of oral cultures that Ong outlines, a few stand out that are relevant to this research. These are:

- The qualities of orality as empathetic and participatory, as opposed to writing’s capacity for objectivity, distance, and abstraction from reality;
- Conservation vs. experimentation. Orality’s tendency towards conservatism – the collection of experiential accumulation – as opposed to a tendency toward experimentation, made possible through distribution of the cognitive load that writing makes possible – the pursuit of new frontiers;
- Conceiving of the world and its actors / events in stark terms; “Highly polarized, agonistic, oral world of good and evil, virtue and vice, villains and heroes” (Ong 44).

- Exterior vs. interior crises. A focus on exterior crises (a derivative of the above characteristic), such as conflict with others, battles of body or wit that manifest in the physical world as experiences, not abstractions. Writing allows interior conflicts, such as ones of the psyche, to command our attention;
- “Homeostasis” – the balancing of memories with the needs of the present time, eliminating that which is no longer relevant. “Words acquire their meanings only from their always insistent actual habitat” (46) which is to say, contextually relevant and never abstracted from their context. If the context that gave rise to a word or situation no longer exists, without finding new definition or referents, the word and/or case dies, no longer warranting retention.

The five characteristics, above, relate to habits of mind and thought processes, associated with the types of communication we primarily use, and through which we communicate with one another. The communities of oral culture were tight-knit and small, held together by the stories, accounts, proverbs, and epitaphs of a social group that must be in close contact to pass on such information, and teach its experiences. Ong stresses the importance of the individual in these oral cultures, the wise man or woman who, blessed with a good memory or exceptional storytelling and proverbial skills, could artfully collate, retain, and pass on such cultural memory (49). As oral cultures gave way to writing ones, however, a broader repertoire of information became accessible, with more complex, referential, and introspective qualities than those afforded to us through the oral medium. Communities too could grow bigger and become more and more complex, as information could be referenced rather than witnessed or heard from the source. The ability to retain information was not as prized a skill as the ability to deduce and analyze. The

individual wise man or woman became less essential a figure, giving way to more structured groupings.

The change from orality to literacy did not occur at the first spark of writing, however. Writing started off without the abstraction of alphabetic language, but rather the literalism of art and visual representation, another communicative medium suppressed by textual preference. Alphabetic writing systems took abstraction a step further by using symbolic references in the place of actual depictions. Picture languages, such as modern Chinese, retain some of those earlier qualities of writing. And even as oral cultures have largely vanished, examples of them are alive in the many illiterate, or low-literacy communities where the basic oral-based structure of community and communication is essential despite familiarity with those of the literate world (Ong 51). Anne Pym prefers to look at these communities in socio-economic terms, referring to “Those engaging modes of talk in which they are significantly committed to oral traditions, underpinned by oral consciousness... as being of oral tradition” (286). Those categorized as belonging to “oral tradition” include many in America’s working class, whose everyday work and interactions are less reliant on text than face-to-face communication and interpersonal relationships.

Ong carefully selects passages from the work of neuropsychologist Alexander Luria, whose book *Cognitive Development* contains a collection of compelling interviews with illiterate individuals who demonstrate firm employ of many of the characteristics of orality, noted above. They have few frames of reference for the type of abstracted questions presented to them by Luria, common to the scholastic vernacular. Ong notes that these questions used to test “logic” and “analytic reasoning,” among other “necessary skills,” have few or no parallels in reality; merely “school questions” that are a direct product of societies well established in print literacies

(Ong 55). Lack of literate knowledge is often confused with diminished intellect, and thought of as backward and/or crude and unrefined. History is rife with such examples from intellectuals like Thomas Astle who famously said that writing “distinguishes man... from uncivilized savages” (Ullman 4). These people are not cognitively challenged in some way; however, their oral experiences mean they did not develop the habits of mind that literate communication allows. Hence, they do not employ the tools that those familiar with written and print communication do to relate information, categorical organization, for example, or referential terminology and abstract thinking. Many of these skills, as Ong states, are not only secondary to writing, but require long experience in the print domain to master and internalize (59). What’s important about understanding this aspect, is how critical a lens it could provide for teaching and learning the literacies of the digital epoch, and navigating the content-laden landscape – the *new* secondary orality, or “Mindset 2” (Lankshear and Knobel).

So, what did information access and control look like in an oral-exclusive and oral-dominated world? Of course, there were the wise men and women, the shaman and storytellers, the “elders” and community members who maintained and propagated the cultural memory and taught it to the next generation. Medium theorist Joshua Meyrowitz says that “Oral cultures are ‘closed’ in two senses” (54), describing them as operating in immediate and present action with only limited ability to reflect on past events, and discouraging of individuality as individual thoughts, ideas, and arguments are only useful when contributive to the whole. But, Meyrowitz adds that oral societies are open too, “foster[ing] dimensions of openness and fluidity in terms of social and sensory experience” (54). He goes on to confirm that oral societies are more egalitarian, with less hierarchical structures and more shared, communal structures – in the words of Castells, more horizontal. Because of oral societies’ characteristics, detailed previously

as communal, cooperative, externally oriented in their conflict perspective, empathetic, and homeostatic, they do not take well to the exclusivity of status and class. In fact, exclusivity is defeatist to an oral society, which needs the collective strength of the group to ensure continuity and cultural survival. Monopolization of knowledge only ensures that knowledge dies, if it is ever successfully retained in the first place – there is little use for such behavior because survival requires redundancy, preservation, and collective memory.

The advent and evolution of writing led to humanity preserving their knowledge outside of themselves, and freeing the cognitive space for discovery, innovation, and importantly, exclusivity. Some of the earliest writing discovered is that of the Sumerians in ancient Mesopotamia. Sumerian cuneiform clued us in to what writing's work was, as first and foremost an accounting medium, used to record ledgers of economic exchange (Sanders). Writing's journey to a stable, recurring, script form dwelled long in the realm of visual representation, as pictographs. Even early scripts have their origins in these same visual representations, as Sanders suggests, pointing to the wavy lines of the 'm,' the first letter for 'water' in the ancient Semitic scripts (13). The types of scripts and materials used impacted how effectively the script system could grow and spread. Meyrowitz, drawing on Harold Innis' extensive work in *Empire and Communications*, refers to cultures as either "time-biased" or "space-biased" (52). Less mobile types of script and material, such as etchings in stone, are more durable but have a low capacity for transfer across space, and therefore, low reach. Whereas, lighter paper for example (in Meyrowitz's example, Papyrus), may have less durability but is very mobile, with a high capacity for transferability and reach. Writing made it possible for communities to expand and empires to form. Recording of property rights, and trade ledgers opened the door to settlement, domestication, and civilization.

During these formative times in the history of writing, the act itself was laborious and costly. Etching in stone or using a proper implement to distribute ink on a surface were not easily achievable tasks – “the whole body labors” (Vitalis qtd. in Ong 93). The role of scribes was significant in this early period, versed in the protocols and genre conventions associated with the types of texts they were responsible for producing and preserving (Dalix). Anne-Sophie Dalix remarks that a number of language adaptations emerged in ancient Mesopotamia according to the task, meaning scribes were most likely “bi- if not trilingual,” skilled in preserving texts of “administrative, economic, epistolary, legal, religious or mythological” type (197). Writing evolved into an art rather promptly, expanding beyond the realm of priests (Yu 1), to a small but growing number of scribes who received scribal education, described in early Mesopotamian records (Kramer 200). Although, as Alan Lenzi makes clear, scribes themselves were merely apprentices to those who dictated the texts (23), i.e. the producers of the knowledge; they were simply “cogs in the wheel” (Meyerowitz 56).

As writing evolved, its characteristics drifted farther away from those of orality. Writing offered objectivity and indifference, observation and introspection in the abstract, diffusion through the power of replication far from the source, and the ability (hence, the need) to categorize and accumulate the historical record, irrespective of context. Literacy (the skill of reading and writing) was highly exclusive, its process laborious and “unnatural” (Meyerowitz 55), requiring learning and schooling, read access. Access was the domain of the privileged, the learned, the wealthy, and the acclaimed. This was not universally the case, but why else would you learn a system of operation unless you had a context for its exercise? Writing set the highest standard for exclusivity, creating space for the rise of vertical institutions that provided a hierarchy of control and knowledge distribution. These vertical aggregators of societal

knowledge could be thought of as playing the roles of priests and elders in oral-based societies, only these are abstracted from the life-contexts of those who seek their guidance, and reinforce their own continuity no longer linked to that of their subjects. The Catholic Church, for example, was one such vertical institution that held incredible power in the Western world by virtue of Learned Latin, a “chirographically controlled language” (Ong 110), and through the literacy divide imposed via religious texts. It was this tension that spawned the Protestant reformation of the 16th century (Bainton), and similarly it was a tension of power and rights that laid the foundations of rhetoric as a formal practice in ancient Greece (Murphy et al.). Rhetoric, it should be noted, was an art of speech and oratory first and foremost made possible, as Ong notes, through writing (9). The conversational modality and debate format of ancient rhetorical *techné* was an oral performance that necessitated two sides fully availed to conduct the argument (including the topical knowledge, and/or subjective information) (Murphy et al. 201). Rhetoric was as much performance as it was argument; successful delivery was at least as significant as valid warrants, perhaps even more so. Between them, there was much interdependence. To understand the continuing prominence and current validity of rhetorical thought, it is important to dwell on the topic, if briefly.

As Kovach and Rosensteil suggest, humanity has always experienced a tension between fact and faith; a tension given life and possibility through writing. Rhetoric gave that tension form and the outline of a discipline. Murphy et al. make this tension more explicit, positing that Athens, following the Homeric era and after the proliferation of literacy, “had evolved from a *mythic* society created, ordered, and governed by gods into an oral *and* written culture characterized by its focus on *logos*, or the search for order in the universe through speech and rational argument” (132, emphasis in the original). More and more people began to take up the

art of rhetoric and recognize its employ in their daily routines. Orality was still at the forefront, but writing facilitated the abstraction of thought required for metacommentary, and the accumulation of cultural and social memory. The Roman rhetorician Quintillian was especially focused on this duality. He recognized the staying power of written texts and how it allowed readers to fully understand, analyze and interrogate the content; whereas in speech the meaning is given life through the performance of it and one cannot rectify misinterpretations by the audience, necessarily. In Book ten, Quintillian captures the power that each medium lends the other, “for our speech will never become forcible and energetic unless it acquires strength from great practice in writing; and the labor of writing, if left destitute of models from reading, passes away without effect, as having no director” (125). Here, Quintillian demonstrates the overlap between the two, the pathos – direct communication, emotion, and immediacy – of speech, and the ethos / logos – recording, accuracy, and lasting power – of writing. He attributes this choice to types of text, “Some speeches contribute more to our improvement when we hear them delivered, others when we peruse them” (128). In other words, it is not the mode that subordinates but rather the context. This thinking about oral and written communication is particularly relevant to the changing digital landscape. The communicative mediums of the internet mimic speech with their immediacy, flexibility of two-way exchange, and performative style. Yet, it is all conducted through writing, even as we incorporate more and more visual elements. The emergence of this ‘new literacy’ will be discussed further in Chapter 3.

The Second Epoch

From art and the development of writing, to its evolution into a discipline and science as rhetoric, and the revolutions of thought it brought forth, came yet another epochal

transformation: mass writing, or the development of the printing press. With minimal effort, the revolution of print can be linked to many of the great transformations of the modern era.

Elizabeth Eisenstein's seminal work on this topic chronicles some of these transformative events, including: the European Renaissance (322), the Protestant Transformation and the wider revolution in religious thought (401), broad European colonialism and the development of a body of "Western thought" propagated through it (429), the expansion of scientific thought and methodological, empirical inquiry, and the widespread of literacy. Cameron clarifies that the printing press's implication in so much of the change that took place in the Western world was coincident to other societal changes that made such large scale shifts possible. Many of the societal shifts Cameron notes are owed to the evolution of writing, particularly alphabetic writing, as well as the growth of rhetorical thought and art, becoming more influential, and prevalent. For example, Cameron mentions the drift from Latin exclusivity in the domains of faith, power, and teaching, to a more softened view and adoption of vernacular languages (at the time, early predecessors to French, Italian, and Spanish were considered vernacular tongues, see Ong 109), and the public interest in "classical thought" (Cameron 118), both developments that were incumbent on the access to rhetorical knowledge. What the printing press made possible, is mass access to knowledge and information that was previously inaccessible to the common person. Whereas scribal culture was mostly an attachment to the Church, or the ruler(s), the printing press was not particularly limited to those domains.

The conditions of the development of the printing press also made Gutenberg's as influential as it was later on. Ong takes care to note that the printing press was not an entirely new concept when Gutenberg invented his in Medieval Europe. China had a movable type press, but it had characters instead of an alphabet (Ong 116). Koreans and Turks had movable type too

and an alphabet but used whole words instead of individual letters (116). Gutenberg's press was unique in that it used an alphabetic script, and was cast with individual letters, as opposed to words. Meyrowitz points to those two reasons as the basis for the lack of development, or proliferation of print in Eastern societies. The high reliance on pictographic writing meant that writing systems were complex, with many hundreds of characters hindering their widespread accessibility and making printing an undertaking that was "not easily adaptable to the technology of repeatable type" (Meyrowitz 55). The advent of the printing press made consistency and accuracy in the reproduction of text possible thus creating a reason to seek it, though the earliest productions were not entirely identical (Eisenstein 493). While the printing press did not see immediate embrace, it was quick to proliferate. To offer an idea of the scale of its impact, Kovach and Rosensteel underscore that "Before the printing press, Oxford University owned 122 books, each equivalent in value to a small farm or vineyard. By 1501, fifty years after its invention, at least 10 million copies of an estimated 27,000 to 35,000 books had been printed in Europe" (15). The revolution of knowledge and public access to it had transformed Europe indelibly. The vertical institutions of the time could no longer monopolize knowledge in the same way through the vast literacy divide. Mass literacy became a possibility and it became paramount to self-governance, access to justice, and even divine salvation.

Ong goes beyond the surface to explore the impact of the printing press on our psyche, the way we interact with texts and language production, and even on the authorial process itself. Before the printing press, and long after the development of the alphabet and writing, written texts "remained always marginally oral," Ong writes, still decidedly "hearing-dominated" (117). Afterwards however, the development of movable type created a visual-dominated shift, emphasizing the organization of writing and interiorizing the process of reading and

comprehension. As sight took over hearing, actual written content became more complex, less adherent to forms that are conducive to memorization or auditory/oratorical comprehension, and more greatly subject to scanning, indexing, and visual organization. While the advent of writing, as discussed earlier, began creating a divide, printing exponentially increased the volume of text possible to be created, preserved, and archived. “The effects of the greater legibility of print are massive” Ong writes, “The greater legibility ultimately makes for rapid, silent reading. Such reading in turn makes for a different relationship between the reader and the authorial voice in the text and calls for different styles of writing” (120). Ong goes on to discuss the impact on the author, as print moved writing from a “producer-oriented” to a “consumer-oriented” activity, with its dramatic reduction in labor on the production side (author, scribe, typesetter, etc.) and, therefore, dramatic improvement in consumability for the reader. Taking note of these transitional changes in the process of writing, reading, and the proliferation of knowledge, is critical to understanding the similar shift we are undergoing in today’s web 2.0 era. It could be said that there is something of a reversal of this process. Language is being reorganized into simpler forms and easier constructions, accommodating the multimodal communication medium of the internet that values expedience and is not visually dominated in the case of writing.

The rise of public domains of knowledge, the organization of governance, and collective action, was also largely influenced by the print revolution. As Cameron notes, “Print made it possible for thousands and then millions of people to read the same text simultaneously, thereby playing a decisive role in the rise of the public sphere and, ultimately, mass public opinion” (79). Kovach and Rosenstiel credit the printing press with “the birth of journalism,” starting with “news books” and then newspapers soon after (16). Through the penetration and growth of print, more and more of the public had reason to become readers and writers, i.e. producers and

consumers of information and knowledge. At the same time, domains of power found the printing press to be a great means for the directing and forming of thought (Cameron 80). Through standardization and codification, rule could be much more easily centralized and uniformly applied. Harnessing this technological change presented challenges to both sides, as well as advantages. Early news accounts began to shed light on events in ways that were at odds, at times, with official narratives, creating a space for the development of counter-thought based on facts and events (Kovach and Rosenstiel 16).

As the volume of print increased, the capacity for censorship was seriously challenged (Cameron 83). It influenced the nature of public engagement with activities such as law-making and created conflict with conceptions of absolutism, sovereignty, and sources of guidance and wisdom. Within this chasm, and the fissures that access to knowledge and a more learned society created, the public emerged with a more dynamic role in state-building through the rise of deliberative bodies. Cameron notes the profound impact on law itself, especially as a source of logical, consistent frameworks for orderly society. This “legal revolution” he remarks, “reinforced the separation of powers” (82) adding: “A critical part of the new dynamism of the law was the fact that more people were organizing their lives according to written texts” (83). “Common opinion” as Kovach and Rosenstiel note, long disregarded and even pilloried, gained credence as the now ubiquitous “public opinion” (16) a product of the growth of journalism. This new collectivism inspired by print drove the need for change, not only among social relations, but in domains of power and how they related to their publics. Old dynamics of control were no longer adequate to face the changing landscape of thought.

The Third Epoch

While the printing press made possible an accumulation of knowledge, a flourishing of inquiry, and a revolution in public engagement in the domains of power, the next epochal transformation laid the foundation for its networked counterpart: telecommunications (the telegraph and then the telephone). Telecommunications was particularly influential on the proliferation of information. The shrinking of time and space that resulted from nearly instantaneous communication brought about by the telegraph, and later the telephone, meant that vast distances and great lengths of time had less impact on the sharing of information. The parameters of those mediums, and their limitations, dictated the conventions of communication and knowledge sharing conducted through them, an influence that is still evident to this day. The electronic telegraph was first marketed as a companion to rail; a speedier means of communication for a speedier way of travel and transport (Flichy 41). This was a departure from its mostly government controlled predecessor, the semaphore telegraph, on whose lines messages were encrypted and the public had little to no access. As Patrice Flichy offers, the electric telegraph marked a shift from state-controlled to “market-controlled” communications, as telegraph entrepreneurs appealed to industry rather than the government to provide funding and underwrite its creation (42-3). This development forced the state’s hand in numerous countries, most notable among them France, eventually leading to the abandonment of the state-owned and controlled network in favor of the industrial one.

Armand Mattellart, in *Networking the World*, suggests that the telegraph ushered in the first electronic network of communication, a revolutionizing force that set a precedent for cross border relations and “universality” that scarcely existed prior (7-8). As the public gained access to telegraphic communication, nations began adopting treaties and signing intergovernmental

agreements to ensure smooth communication between their respective nations, creating the beginnings of “global community” with networked interests (Mattellart 6). Commerce was once again transformed, as was news and reporting. Kovach and Rosenstiel note that the impact of the telegraph on the transmission of news was profound, “creat[ing] something that didn’t exist before – news as factual product independent of the observer writing it” (17). This interpretation of news and information emphasized independence, impartiality, and fact, while downplaying personalization, subjectivity, and emotion. These prevailing concepts still hold true on how we value and talk about news today. The telegraph led to the creation of the first news cooperatives – aptly named *wire* services. The Associated Press and Reuters were actually telegraph-cooperatives that reduced the cost of sending and receiving telegraphic messages by splitting it across its growing membership (Stephens 34). By 1870, as Mattellart reports, “the annual number of telegraph transmissions topped the thirty million mark. By the turn of the century, this figure had increased more than tenfold, and cross-border traffic accounted for one-fifth of these transactions” (8). This explosion in communication between members of the public, and across borders, increased transaction speeds, and with the advent of the telephone, changed the way we relate to one another. With distance less of an obstacle, the kinds of transmissions and communications changed. The monthly letter could be a weekly telegraph, or a daily phone call. And while the telegraph further emphasized the visual/textual imperative, the telephone began to resurrect the orality of communication, even at a distance.

The telephone was very much an extension of the telegraph, using a similar networked approach, and enhancing the speed and expansiveness of communication. Though it was initially slower to catch on than the telegraph (Flichy 87), the telephone was essential in revolutionizing the style of conversation, and its content. Whereas messages sent across the telegraph system

were generally billed by the word, telephonic communication was billed by the minute, a length of time where broader communication can occur in speech. Unlike the telegraph, the telephone was a more personalized medium of communication, largely due to the fact that it carried oral communication directly from speaker to speaker, delivering the voice, inflection, and emotion of the interlocutors. The telegraph on the other hand was short and terse in its messaging style, due to the nature of the medium; a major influence on the conventions of journalistic style, for example (Kovach and Rosenstiel 17). It also was kinder to one-way communication; a means to deliver information rather than create an exchange. Aronson identifies three domains of effect for the telephone: economic, informational, and social; pointing specifically to the “exchange” factor as a defining aspect of the telephone, which eventually popularized and impacted personal communication (153). In its early renditions, however, the telephone was very much characterized by its utility as a medium of contact, not unlike the telegraph, and the rhetorical appeals of logos and ethos prevailed. Later evolutions in telephone technology, particularly the touch-tone phone, were even more significant to communication, expanding reach, access, and ultimately reducing cost. For the purposes of this research, the telephone’s greatest impact, arguably, was its re-invitation into oral-centered communications, or, as Ong classifies it, a technology of “secondary orality.” The telegraph, on the other hand, can be implicated in the historical shift to networked communications, and its subsequent effects.

The Fourth Epoch

If the telegraph marked the ushering of the telecommunication age, the radio heralded the age of mass media. While telecommunication first broke the barriers of distance and borders, mass media opened the door to truly global communities, expanded the reach of news and

information, and provided an unprecedented link between individuals, their communities, and systems of governance. Journalism, politics, and the public domain would be transformed on a massive scale. Radio's rapid growth and ubiquity was a direct product of its mass accessibility and relative affordability. And the radio was not just for the transmittal of information. It was a portal for entertainment, even a platform for "national conversation" as captured by President Franklin Roosevelt's famed "fireside chats." In much the same way that President Donald Trump uses Twitter today to bypass "the mainstream media" and talk directly to Americans, President Roosevelt used the radio, "talk[ing] to Americans as if he were with them in their living rooms... bypass[ing] the press and [speaking] to people directly, explaining in reassuring and simple terms" (Kovach and Rosenstiel 18). Thus, the radio created a sense of intimacy with listeners on the part of the broadcaster, and many early broadcasts were particularly receptive to that, with broadcasters feeling a sense of privilege as the public "invited" them into their homes (Loviglio). Pathos and ethos reigned in the radio sphere. Radio created a media of "companionship" unlike other forms of communication that were more or less access points, where information or content of some type was retrieved such as newsprint or even telegraphic messages.

One of the oft cited stories of the radio era is that of George Orwell's *War of the Worlds*, a broadcast that sent thousands of Americans into the street in panic having mistaken a fictional radio broadcast story for fact. The moral of that story was that radio had the reach and power that could create a national movement, and the capacity to incite panic or, by extension, instill calm. These effects were magnified to national, and later, international scale. The impact of radio was powerful, creating a sense of community and a universality of news and information access, with thousands even millions of people receiving the same message at the same time, in stark contrast

to print media which varied by market and locale. And while radio did not have the two-way capacity of the telegraph or telephone, it did further lend to the emergence of “secondary orality” through its speaker/listener dynamic, bridging for many the literacy gap that hindered access to print sources of information. With radio, one need not be literate to listen, comprehend, and respond to the day’s events. It reinvigorated the storytelling model of communication, a markedly oral attribute, inviting a sense of dialog that was not achievable through print. It further exacerbated the tension between fact and faith, with more individuals “bearing witness” to history, yet also doing so with the inflected emotion of the newsman (Loviglio). It is easy to define radio communications by its appeal to emotion, and its emphasis on the personal aspect of the public, but its creation of a heretofore non-existent discourse community – in the academic definition of the term, with its common goals, common sources of information, and common discourse, within the public sphere is undeniable. That community, as Loviglio suggests, is one that sought the truth (“facts”) about their social, economic, and political reality, even when critics read such discourse as “administered conversation” (Habermas qtd. in Loviglio, 126).

Radio is deserving of particular attention because it has remained a powerful force, largely unchanged from the time of its inception. Each epoch thereafter, with its dramatic shifts in communication, has brought about the evolution of communication mediums in dramatic fashion, but radio has remained a constant, only topically affected by the changes of the times. Satellite and digital/online radio, the most drastic innovations, simply provide a different portal for the same basic style of broadcast and transmittal. The internet age, with its veritable cornucopia of communicative gadgetry has not rendered radio obsolete. If anything, in the ebb and flow of radio history, radio popularity and ubiquity has been on the rise in recent years, still boasting tens of millions of listeners daily and not because of a lack of alternatives. The cost

effectiveness and dynamism of radio is what has made it a stalwart, unrivaled in its ubiquity. According to a 2015 Pew Research report, 91% of Americans, ages 12 and up, listened to the radio. A more recent Nielsen report shows that the number of people listening to the radio weekly is greater than that of smartphone use (83%) or television (89%) (Nielsen), reaching millions more people than any comparable media. These numbers are validated across demographics, with minority radio consumption (as an audience segment) on the rise (Vogt), and millennials the largest demographic of listeners (Nielsen). Meanwhile, online radio is growing in number of subscribers, and satellite radio is equally gaining popularity (Nielsen). These trends only capture the recent American experience. Globally, radio's reach and power is unmatched by any other form of communication as radio has penetrated some of the most remote parts of the world and remains one of, if not *the* only means of information access (Hendy).

The Fifth Epoch

Across the previous epochs, the evolutions in communication occurred over relatively extended periods of time and presented stark new ways of documentation and exchange. Writing, with its new system of envisioning and communicating the world; the printing press, with its revolutionary ability to mass produce print, access audiences, and disseminate knowledge; the telegraph, which created a two-way communication link across vast distances in record time; followed by the telephone, which despite its proximity to the telegraph as an invention, took time to develop and was transformative in the realm of personal communication; and finally radio, which opened the door to mass communication on a global scale, reimagining the public sphere and inviting a renewed orality of rhetoric. The networked communication era that began with the telegraph, then was transformed by telephone and radio, extended networked communication rather than replaced it. An evolution of the same species, so to speak. The television is a product

of this evolution, and the next epochal transformation in the realm of communication and information access. Television emerged merely two decades after radio, and bore a resemblance to its predecessor, adding the powerful video component. As a visual medium, television created a new kind of media phenomenon – a combination of the power of radio and print – reinventing, yet again, the public’s relationship to their world. Television was particularly powerful in the medium of politics, and the public became more directly involved in the events of the times with the ability to hear and see them as they took place (Kovach and Rosenstiel). Changes in media and means of communication were beginning to evolve at a faster pace, and in a more interdependent fashion.

Television is another example of the media of companionship, a portal greater than being simply a medium. Just as people “listen to the radio” as an activity, “watching TV” became an activity itself generating its own norms and behavioral culture (Berger). And just as radio was a powerful cultural tool, television was even more so, both providing an unprecedented medium for propaganda (Berger). In this vein, the rhetorical power of television is significant. The speech acts captured on the screen harken back to the public oratory of classical rhetorical times, with the effect and drama of the presentation. Similar to how radio gave centrality to the figure of the broadcaster/narrator, television emphasized the broadcaster/presenter; unlike newspaper for example, where the author is often de-emphasized, or even books and other texts where content is often critical to affirming the author. The messenger is paramount in television, not just the message. This type of fixation gave rise to the “anchorman” role, as Kovach and Rosenstiel suggest, characterizing the news through their “personal” presentation to the viewers (19). In the early era of television, very few channels existed, hence little choice was available for the audience to navigate through and differentiate (Kovach and Rosenstiel 19). Audiences became

accustomed to such “parasocial” relationships, to use Rohn’s term, with broadcast personalities from the era of radio, even before television; the latter, arguably more robust.

These early influences on audience choice and preference proved powerful, as television audiences continue to seek out the early, basic broadcasters for news and current events (Kovach and Rosenstiel 19). Such audience dynamics are not limited to consumption behaviors as relates to television media but behaviors that are subsequent to it. For example, Raymond Williams’ assessment of the impact of television in the context of British culture points to behavioral “substitution,” or displacement, such as the desire to engage in embodied action (i.e. protests, music festivals, etc.) instead of voting (31). This is indicative of the wider cultural impact of television on perceptions of performative value, and the entertainment skew in the representation of events, as supported by numerous essays in Corner and Pels. It is important to note that television is referred to first and foremost as an entertainment medium, therefore its content is (to a large extent) designed for that purpose. The idea of substitution or action displacement, briefly touched on by Williams, offers a counterargument to the many scholarly voices critical of the impact of television on public behavior, particularly as relates to civic participation (or lack thereof). Perhaps, to continue with the argument, the public is responding asymmetrically to news and cultural commentary on television through more performative acts – rhetorical action that they interpret as having greater cultural value. Television’s value is further supported by Kovach and Rosenstiel’s findings on the impact of television broadcasts on public knowledge. They contend that, unlike the newspaper where readers focus-in on topics of interest and disregards others, television news segments provide pre-packaged (unmanipulable) programming that increased so-called “incidental news acquisition” – when people learn about things they may not be interested in” (Kovach and Rosenstiel 19).

Kovach and Rosenstiel mark a separate epoch for the shift to cable television, remarking the “changed... norms” of television and journalism brought about by it (22). Whereas, in this paper, *television* broadly encompasses both, as the focus of this chapter remains on communication mediums more broadly, and the ways we receive and process information. That should not mislead the reader, however, into underestimating the dramatic impact of cable TV and the birth of the 24-hour news cycle. Nor should it detract from the seismic shift that the now vast number of channels that became available because of cable created, and the resultant explosion of choice *and* competition. Cable news gave greater self-determination to the viewing public, allowing them choice not only in programming variety but sources, time, and even perceived affiliation or skew. Importantly, Kovach and Rosenstiel note that in a reciprocal exchange CNN (the first cable television news channel) provided local news stations access to some of its national news footage, a groundbreaking development for local stations which were on broadcast television and provided limited to no coverage of national issues (21-2). Now they could do so, and provide viewers without access to cable television national news and footage. This expanded the reach of television even more, with a significantly larger information base provided to the audience. It also created a new style of competition in the realm of journalism, as it did with entertainment and other genres. Though radio had always boasted many channels, the variety of choice within each genre was still relatively limited and tied to local broadcast reach (Loviglio).

With ever-expanding variety and choice, the burden of selection, evaluation, and identification of programming fell to the public more than ever. At the same time, the growth of an entertainment driven television field meant that the lines between fact and fiction had become, to some extent, blurred. Stylization, presentation, and even embellishment was deployed to

differentiate content and draw viewers (Hart), recalling the drama and sensationalism of tabloid journalism (Kovach and Rosenstiel). Unlike tabloid journalism, however, the changing expectations of the public with the growth and institutionalization of standards of practice and ethics meant that the process of differentiation was likely more challenging. The next epochal transformation would exponentially complicate this process.

The Final Epoch

Fast on the heels of television, the next, and final, epochal transformation in human communication was poised to take place: the internet. Networked communication and media were revolutionized by the World Wide Web, a name symbolic of its promised universality, global reach, and networked nature – a promise the internet has met and far exceeded. While radio and television took media and communication a step further, going beyond being access points for information to becoming medias of companionship, the internet went many more steps further as an all-encompassing, stand-alone entity. It took the media of companionship and created instead a mode of being, a networked, seemingly omniscient extension of ourselves. Even before the internet became an ever-present force in our daily lives, it began dramatically changing the landscape of communication, access, and power, as a force for the technological sprawl of science and research or the global expansion of commerce and industry (Castells 2010). The “digital age” which spawned the internet, came about rather rapidly, kicking off in the 1970s, as Castells (2010) contends, when “new information technologies diffuse[d] widely, accelerating their synergistic development and converging into a new paradigm” (39). Hilbert and Lopez offer 1990 as the “turning point from analog to digital supremacy” (3). Thus the “information age,” ushered by the internet, upended the industrial one before it and created a new paradigm of information based societies (Castells 2010, 82). What is particularly defining

about the internet is its interactivity. Newsprint, television, and radio are passive mediums of communication, but the internet is interactive. And the internet's interactivity is not akin to the telegraph or telephone, arguably interactive means of communication. Those mediums created a *two-way* modality of communication, whereas the internet is a portal for *mass* interactivity. It is drawn, written, read, mass distributed, talked and listened to, watched, and mass broadcast all at the same time; essentially every epoch of the history of human communication rolled into one. Whereas previous modes of communication and media comprised parts of the human experience, the internet was *itself* the experience.

As the internet started to take hold, the web began usurping more and more of the roles played by other devices, and even those played by us. Simple messaging was one of the earliest, defining roles of the internet, and as internet-enabled devices improved, the telephone has been transfigured through it. Radio and television, while still significant in society, are increasingly compartmentalized into narrow roles by it. Though realized later in its evolution, the internet as a social networker is another example of its usurpation of the role of connectivity with other people in a physical space. All of these developments and social changes were occurring at a dizzying pace. Hilbert and Lopez examined the growth of information manipulation (sending/receiving/storing) over the time period from 1986 to 2007, documenting astounding increases. The authors document the largest leaps in storage capacity (58% annually), followed by two-way communication (28%), and information transmission, referred to as one-way "broadcasting" (6%) a distant third (Hilbert and Lopez 2). To provide some perspective, Hilbert and Lopez indicate that between 1993 and 2000 "the introduction of broadband Internet effectively multiplied the world's telecommunication capacity by a factor of 29" (3). Computation power, on the other hand, grew annually at a rate of about 40% until 1993 when the

annual rate jumped rapidly, peaking at 88% in 1998, and dropping afterwards to a still highly significant rate of 60% annually (Hilbert and Lopez 4).

This data highlights the incomprehensible quantity of content being stored and shared in the digital realm, its continued and exponential growth, and the internet's extraordinary capacity to mediate a different form of society because of it. What it may obscure, however, is the equally extraordinary task that has been accorded its users – us – to evaluate the content accessed and/or created through the internet, and the hyper-awareness needed to effectively navigate it. The impact on information access, sharing, and production, are staggering. In the realm of news, Kovach and Rosenstiel document a paradigm-shift in American news consumption habits as a result of the internet, playing havoc with established norms of early morning and evening news, redistributing news consumption over the day, in a constant stream of information acquisition (22). Of course, the on-demand availability and access of the internet initiated this shift, which subsequently meant that the public was increasingly “selecting” the news they consumed. Kovach and Rosenstiel confirm this contention, debunking early predictions that audiences would “scatter” across the digital scape, accessing information from the hundreds of sources that the web made available (22). Instead, consumption concentrated, with the largest ten traditional newspapers absorbing nearly a third of the audience for online newspaper content. And the pendulum began swinging back on “incidental news acquisition,” the type of secondary information that television made possible, as the morass of information and choice created by the internet began funneling users into selective consumption spaces. With the mass of information, the necessity for indexing, collating, and *filtering* it becomes necessary, and within that space filter bubbles begin to rise and expand.

CHAPTER 2: INFORMATION VS. CONTENT: MEDIA AND JOURNALISM IN THE AGE OF DISTRIBUTED AUTHORSHIP

“The ideal subject of totalitarian rule is not the convinced Nazi or the dedicated communist, but people for whom the distinction between fact and fiction, true and false, no longer exists”

- Hannah Arendt, *The Origins of Totalitarianism*

In the previous chapter, we explored the changing landscape of communication, and the various ways in which the public accessed and interacted with information. Each transformation in communication provided the public with new avenues of contact and verification, opening spaces for questioning and for wider access to knowledge. Over time, the average citizen has increasingly become an active part of the process; a consumer, messenger, viewer, and most recently creator of knowledge within society. In much the same way that we think of the internet as transformative in our lives, so have all the previous innovations in communication technology for their respective times; perhaps, none as starkly visible as the internet, however, given the dizzying pace of innovation in the last three decades. As writing laid the foundations for broader communities of shared values and interests across time and space, people began taking an interest in the now curatable thoughts and insights of others and the very structure of the world they existed within. With a capacity to both understand their surroundings and to possibly influence their condition, the public’s need for information grew, creating a new value space. Therefore, journalism developed as a critical organ of that space, with newsprint dominating the business of disseminating information to the public across the arc of it. “The newspaper” renowned journalist Walter Lipmann said, “in all literalness is the bible of democracy” (qtd. in Patterson, 9). The advent of audio and audio/visual communication technologies disrupted that dominance, eventually

overtaking it. The ability to listen or watch the news extended access significantly, especially into rural and minority communities. These delivery mechanisms allowed listeners and viewers to be affected by information in ways that were previously not possible. Its delivery was no longer the reader's voice acting upon the information with the filter of his or her own interests, but rather the voice, inflection, and body language of the newsman or anchor playing a significant role in the rhetorical impact of the message. These communication mediums varied the impact and involvement of the public with the information that animated their public condition and response. As the proliferation of information increased, so too did the responsibility carried by those that transmitted it, and ultimately the public that received and acted upon it.

Referred to variously as the "fourth estate" and the "fourth pillar of democracy," journalism's status as a watchdog for the government and the foundation for an informed public looms large in the American psyche. The freedom of the press is enshrined in the First Amendment to the U.S. Constitution, a freedom vigorously defended whenever contested before the courts. Writing the Supreme Court's opinion in *Associated Press v. United States*, Justice Hugo Black brilliantly captured the purpose, significance, and conflicting interest of the press, stating: "... in addition to being a commercial enterprise, it has a relation to the public interest unlike that of any other enterprise pursued for profit. A free press is indispensable to the workings of our democratic society. The business of the press... is the promotion of truth regarding public matters by furnishing the basis for an understanding of them" (*Associated Press v. United States*). Justice Black's statement captured the essence of what the press should, and is said to represent in the United States, while acknowledging the balancing act of being a business enterprise. That last component, the commerciality of the media and the press, has remained a consistent source of

tension, especially in more recent decades with growing competition and increased corporate control (Pickard). I will come back to that in a later part of the chapter.

However, the framing of the press as a beacon of independence or a bulwark for democracy has not always been consistent. In its earliest conceptions, journalism was concerned with documenting information and propagating an informed sense of what was going on around us – something the public had no way of achieving at the time (Stephens). The polarizing politics of America’s Civil War and the North-South divide challenged reporters’ impartiality to the events and actors, especially in an era of increased information circulation (Stephens 8). Therefore, many of the newspapers and reports that dominated circulation in the United States at the turn of the century were unabashedly partisan, sensationalistic, and littered with inconsistencies, embellishment, and outright invention (Patterson). As competition grew, newspapers turned to such tactics to grab readers’ attention, and veracity was all but abandoned. “Traditional” journalism gave way to “yellow” journalism (Kovach and Rosenstiel 38). Journalism’s dual mandate of informing the public and operating a profitable enterprise has meant that “yellow journalism” was the brash, overdramatized expression of a problem endemic to the field, not a single-era phenomenon as some scholars of the field seem to suggest (See Anderson et al.; Stephens). This derailment of journalistic work was an unfortunate pitfall of a press that existed not simply to report, but to inform, engage, and, if necessary, agitate; a role that journalists and authors Patterson, and Stephens agree is necessary. Newspapers acted as platforms, drawing the public’s attention to causes for concern, often challenging authority in the process. Information was the currency of the repressed and the undermined, to bring attention to their plight or to possibly redress their grievances. Such journalism is impassioned rather than purely impartial, a virtue in the service of the public but an easily corruptible one in the service of an individual. That

is the dilemma that journalism has so often faced, as technology influenced the reach and power of the press.

Despite such low points in its history, the connection between journalism and an informed public, even the existence of a public sphere, is incontrovertible. By extension, the power that the media yields in shaping public opinion, generating discourse, lending import or burying events is unmatched. Newspapers in the early 19th century were, as journalism professor Mitchell Stephens writes, a pulpit for a “relatively new phenomenon: the public discussion of issues in print” (4). Stephens notes these changes in journalism, quoting Karl Bucher, “Newspapers changed from mere institutions for the publication of news into bearers and leaders of public opinion” (4). The keyword *bearers*, indicating both the duty to inform and the distinction from the source. Hence, journalism’s goal is greater than the basic collation of facts. The “promotion” of truth, as Justice Black stated, could only be achieved through “furnishing the basis for an understanding of them” (*Associated Press v. United States*), a context of being that allows the public to decide the value of events and happenstance, and the extent to which they can exert influence on it. With a backdrop of the life cycle of journalism in mind, this chapter will address three important aspects of journalistic evolution: 1) the professionalism of journalism and the laws and regulations that deal with journalistic conduct and dissemination of information; 2) the flattening of the journalistic bureaucracy and the rise of citizen journalism; and, 3) the new media of journalism and the impact of the filter bubble on access, the news cycle, and the process of verification.

The original “Gatekeepers:” Professionalism and regulation in journalism

Journalism professor David White, in his 1950 case study, *The ‘Gate Keeper,’* was the first to use the term in reference to journalists. His one-of-a-kind case study of the editorial

processes of newsroom editors showed the enormous power they exerted over what was deemed newsworthy, and therefore reached or did not reach the public's attention. White observed that the editor accepted a mere one-tenth of the total reports received from the three large wire services in a single day (385). Over 12,000 inches (as a measure of column space in the paper) came into this one wire room – a testament to the sheer volume of news and information to be processed; and this was in 1950. These decisions that editors in every news agency, whether print, cable, or online, make daily are what define journalism's gatekeeping role. Value-judgements on space, interest, and importance, are all measures that influence what becomes news. This notion of gatekeeping is important to keep in mind as we assess professionalism and the standards of conduct that govern journalistic activities.

Knowing the powerful decisions made by editors, newsrooms, and reporters one would hope that those in-charge of these decisions are well-qualified to make them. Nevertheless, journalism's position as a profession has always been ambiguous. Groshek and Tandoc assert that journalism's "claim to professionalization is at best shaky" (202), a contention echoed by Banning and later Pickard. Stephen Banning, who published an extensive overview of journalism as a profession, has suggested that the field's practitioners have long gravitated towards, and congregated around, professional themes and guiding principles nonetheless. Professions are undoubtedly important to the identity of those practitioners, engendering a sense of distinction, of higher purpose, community and camaraderie, and of merit upon those who belong to them. This can have a profound effect on an individual, creating a sense of pride in belonging, and impacting their sense of personal responsibility/investment towards the work. Banning's analysis of one example, the Missouri Press Association, found a strong sense of professional distinction among the members, despite the lack of formal training. Eventually, the push towards

professionalism in the field became much more pronounced in the early 20th century, with the development of formal training programs in colleges and universities, and the proliferation of professional associations that defined themselves as such (Banning). These professional associations, such as the Society for Professional Journalists (SPJ), founded in 1909, began developing codes of ethics and professional standards (SPJ.org). The three basic journalistic tenets that have become symbolic to the field; seeking truth, minimizing harm, and acting independently, were not enshrined until 1923 when the American Society of Newspaper Editors (ASNE) published *Code of Ethics or Canons of Journalism*. In that publication, six ethical standards were declared: 1) responsibility, 2) freedom of the press, 3) independence, 4) sincerity, truthfulness, and accuracy (which fall under one standard), 5) impartiality, 6) fair play, and a seventh, unnumbered standard, “decency” (ASNE). Within each of these is a repeated commitment to “public welfare,” lack of bias, and honesty (ASNE). Varied versions of this code have since been adopted by news agencies and journalists across the field.

Banning suggests that the rise of a sense of professionalism within the field was partly due to a recoiling from the sensationalism that marked the end of the 19th-century, and an increased capacity to both access and verify information (155). What has made the “professional” label troublesome for some, however, is well explained by Patterson: “Journalism is not grounded in a systematic body of substantive knowledge that would protect its practitioners’ autonomy and inform their judgement” (66). To that end, Patterson expounds that journalists are most often in the position of being the less-informed party in a conversation, where the newsmakers are the “experts” (66-7). This imbalance makes it difficult for journalists to contest questionable assertions, or recognize the need for further investigation and verification when there is one. This fact is less a critique of the field than a recognition of its limitations.

And, although this has been the case for most of the history of journalism, it becomes increasingly troublesome in an era of information saturation and 24-hour news cycles where it is easier for uncontested assertions to meld into the common narrative of the topic, as less and less time is dedicated for the work of analysis and verification, on both ends. It is this sense of professional expertise that Groshek and Tandoc draw from to explain the longstanding resistance of journalism to audience input, mainly on account of the concern that such a reciprocal relationship between journalist and audience compromises the basic principles of the field – an ethical seeking of the truth, rather than a need to meet market pressures of “consumer satisfaction” (202). Of course, cable news and the explosion of channels and news sources has seriously compromised any claim to the significance of such divide, while the internet has (nearly) altogether upended it. Nonetheless, this tension remains important to keep in mind, since the conception of the public as misinformed or under-qualified to be legitimized as little more than spectators in the news-making process, means that the public has come to their current position as creators and aggregators of news and information less prepared for its rigors and less cognizant of their capacity to be more discerning in the process. Still, however, the field of journalism is nostalgic towards its role as seeker of truth, an institution for which accuracy and honesty is the objective – the prestige of the fourth-estate as gatekeeper of democracy – even as market pressures drive economic pragmatism over principled idealism.

None of the criticisms of the media, nor the conflicts of identity and responsibility within it, detract from the power it exerts over public opinion and how much impact does the media, in an institutional sense, and the larger process of information gathering and dissemination, have on the public sphere. The invaluable nature of information exchange and knowledge access to democracy is hardly exaggerable. The question is how much responsibility have we ascribed the

media, and to what extent are they availed to carry it. The fact that the American news media is largely a self-regulated field, despite their powerful position, is not lost on most observers. Pickard finds it peculiar in comparison to other advanced democracies, noting the American media's "dominance by commercial interests and unusually weak...public service obligations and regulation" (2). The 1940s, as Pickard's exhaustive archival research shows, marked a critical juncture in the history of the news media in the United States, setting the tone for the institution going forward. Historically, America was beginning to emerge from World War II and broadcast media was proliferating. The debate regarding the role of news media was significant amongst policymakers, interest groups, and other institutions and individuals seeking to empower the media's role as a gatekeeper for democracy while mitigating its nature as a profit-making business (Pickard 3). The consensus was that a free press did not necessarily mean an unchecked press, and that the corrupting force of commercialism posed too great of a threat to the media without necessary safeguards.

It was partly due to this policy conversation that the Associated Press's monopolistic ambitions would raise the ire of the Supreme Court who ruled against it, as Justice Black penned the opinion of the Court reaffirming the media's role as "indispensable to the workings of a democratic society" (*Associated Press v. United States*). And, it was a direct result of these very public conversations on the role of the media that a slew of regulations, policy, and commissions set ground rules to institutionalize and, in their absence, establish rights and responsibilities for the media in relation to the public. As Pickard notes, "Had this trajectory not been averted, much of the American media system might look very different today" (4). Here, Pickard is referring to the market overtaking of the media. But Pickard eventually concludes that the reforms and guidelines that emerged were a significantly restrained version of what had originally been

intended. Ultimately, the media's accountability to the public was largely self-regulated, and the government's power to uphold any such accountability was significantly limited. Of particular interest were the findings of the Hutchins Commission on Freedom of the Press, and the Fairness Doctrine, requiring the media to give equal time to opposing views (Pickard 4). The Hutchins Commission was one of the first scientific analyses and research conducted of the press, driven by a number of policy-centered reformist ideas (Pickard 173). By the time the Hutchins Commission released its final report, however, the policy-based changes had given way to a conclusion that the media could "self-regulate" by adhering to specific principles laid out in the report (Pickard 177). The report fell short of recommending a legislative mandate that could give force to such principles.

Unlike the Hutchins Commission report, the Fairness Doctrine was an actual regulatory mandate by the Federal Communications Commission (FCC). Pickard clarifies that it was in and of itself a watered-down version of the original intended regulation that would have given the FCC programming control (73); instead, The Fairness Doctrine created a minimum standard of "fairness and equality" in programming that included both sides of a debate. Under the auspices of limiting government "control" of the press, however, the Fairness Doctrine was rescinded by the FCC in 1987, a move that Patterson notes opened the floodgates of partisan talk shows and radio programming (11). "Within a few years," Patterson states, "The highest rated program, *The Rush Limbaugh Show*, had a weekly audience of twenty million listeners" (11). Though the Fairness Doctrine was not directly applicable to cable news, its revocation allowed the emergence of a highly partisan, sometimes sensational, form of broadcast media both on radio and television. This type of media, previously shunned by journalism's establishment as unbecoming of an institution that proclaims a commitment to accuracy and fairness, was beating

out the competition (Patterson 11). As Patterson explains, the rise of Fox News' talk-show programming beat out every other cable competitor, leading other cable networks to do the same (11). Personalized, partisan infotainment eventually became an industry norm in the post-cable news era. This very "corruption" of the journalistic mandate, in the words of Jamieson and Cappella, was the concern of media commercialization that led to a push towards reform in the 1940s.

To a great extent, the crisis of the news media then, is not much different than the one that exists now. President Franklin Roosevelt's "Fireside Chats" were his way of circumventing the largely conservative print media that was staunchly opposed, at times, to President Roosevelt's policies (Pickard 128). Though President Roosevelt did not use the term "fake news," Pickard found that his Department of Justice pursued investigations of the print media for that very reason (136). A "crisis" of legitimacy was afoot; print media was facing a significant challenge from the emergent broadcast media of radio, and eventually television. The public, and interest groups and organizations, were voicing their concerns about the future of journalism, just as we are confronting similar questions with the advent of the internet today. The legacy of the media reformist debates of the 1940s, and again now, has largely skirted the topic of robust public broadcasting. As Hallin and Mancini find, the weakness of public broadcasting in the United States is highly anomalous in comparison to other democracies (44). While detractors of a strong public broadcasting entity voice concern over "state-control" of the media, Hallin and Mancini show that commercial media is no less immune to political pressures, and public broadcasters such as the BBC (in the United Kingdom) have at times shown greater autonomy than their commercial counterparts in the United States (236, note).

Distributed Authorship and the New Journalism

Whatever standards, reforms, and changes were eventually adopted, or not, by the American press throughout the early and mid-20th century, the advent of the internet forced an entirely new media paradigm. Whereas the media has consistently tried to demark a boundary between itself and its audience (Groshek and Tandoc), the audience are progressively *becoming* the media. This reality hardly precludes the need for standards, ethics, and governing principles, indeed it creates greater necessity for it, but it has redrawn the lines for how such fundamentals can and should be adopted. As Lewis contends, distributed authorship is not only a threat to the business model of news organizations, but the very nature of journalism as a profession, “If professions are defined by a certain degree of control over an information domain” (837). Much of the discontent expressed by journalism scholars over the state of journalism and the public’s relationship to information is rooted in a distrust of the public to observe, report, and verify information (see Kovach and Rosenstiel; Patterson; Franklin). While not necessarily unfounded, the reality of the “network society,” in Castells’ terms, simply means that journalism’s gatekeeping role has been subsumed by the network, not unlike other vertical institutions that have, over the course of history, given way to more horizontal means of communication and control. As such, journalism’s control over the domain of news is questionable. Castells describes it as “a process of convergence that gives birth to a new media reality,” a “growing interpenetration between traditional mass media and the Internet-based communication networks” (1978). This reality complicates the media’s gatekeeping role, shifting that responsibility to a new and different kind of gatekeeper, one that has no stated obligations (if fickle) to public service, accuracy, or fairness: content aggregators such as Google.

Over the past two decades, the internet's centrality as a platform for news has grown steadily. In the early 2000s, Yahoo! News, the news section of the popular search engine Yahoo!, dominated internet traffic for news consumption, while Google News came fourth (Pew Online 2009). Though Yahoo developed its own "newsroom," both it and Google drove news consumption primarily through aggregation, connecting users to sources. By 2014, half of all Americans reported that they were getting their news from search engines and news aggregators, with a considerable portion of them indicating that they trusted those results, especially those from search engines (American Press Institute). Television still held a considerable lead (at the time) on the internet as a primary source for news; however, those who expressed that the internet was not their primary source of news still accessed news online "throughout the day" (Pew Online 2015), indicating that the information "loop" was being closed by the internet even when starting elsewhere. Weeks and Southwell's examination of the confluence of news coverage and online search behavior also supports this conclusion. More recently, the emergent constellation of social media platforms began catching up to other forms of content aggregation and sourcing, in some cases going far beyond the reach of other, dedicated portals. Chief among those is the social media behemoth Facebook.

In a brief moment in history, Facebook went from relative obscurity as a single demographic medium to absolute domination across interest sectors. This type of expansion is very much a hallmark of the internet age. By the August 2015 issue of *Fortune* magazine, Facebook had already overtaken Google as a driver of news traffic (Ingram). Now, a 2017 Pew Journalism and Media study found that a full two-thirds of Americans are getting their news via social media, with even higher percentages among younger Americans and minorities, two demographics that are on the rise (Shearer and Gottfried). Facebook continues its expansion,

leading in the mobile messaging realm with its high-profile acquisition of Whatsapp (Covert), and closing in on video sharing platforms such as Youtube (Dreier). Google may have trailed behind some other websites who made news a larger focus of their business, but as a search engine and content aggregator Google is second to none. In 2017, estimates showed Google accounting for nearly 40% of *all* internet traffic (Cuthbertson). Despite serious challenges to its myriad services by Facebook, Google is not fully in direct competition with the social media company. Together, the two companies are estimated to control a tremendous 70% of web traffic (Cuthbertson), displaying dominance in slightly different internet traffic streams. When people seek something they most often start or end-up on one of these two websites. As vast and diverse as the internet is, the reality is that most of our perusing of it is filtered through an extremely limited number of sources and websites.

The allure of social media, according to Hermida et al., is its sharing functionality and its hyper-integration of other web functionalities. In a way, your social circle on Facebook affords a similar experience to face-to-face social circles, but with the trappings of the network. Whereas, in the past one would passively consume news or information, now individuals can interact with that information, share it with others, act on it, and [perhaps most notably] opine about it; all in real time. This multidimensionality of the network, particularly social networks, presents an *experience* and not simply a transaction. The experience of the network changes the dynamics of how individuals relate to the content they encounter within it. Kovach and Rosenstiel describe this relationship, as far as news is concerned, as “lean forward,” where the audience actively selects and seeks news that interests them (172). The “traditional” means through which the public used to consume news was single-sourced, often complete (a full newscast, a whole newspaper, etc.) and, to an extent, communal (Kovach and Rosenstiel 171). In such a form,

incidental news consumption, discussed in Chapter 3, has a high likelihood of occurring. The digital landscape significantly disrupts this organization and form of news consumption. News websites, and the aggregators that link to them, are user-driven in form and function. Individuals jump around from story to story or website to website, driven by things that catch their attention. The data on the popularity of search engines as news sources or linkers supports this contention. This also sheds some light on the role of social media in news circulation; individuals seek the news that interests them and spread it among their friends who in turn do the same. Expertise and gatekeeping are diffuse, they are not discounted or ignored, but they also arise from the collective and are not defined by the ethos of a specific source.

These changes in the public's consumption behavior are not simply a product of the new tools that the public has access too, they are also a product of how those tools have shaped the business model of news organizations. The economics of quality journalism are unsustainable in the digital landscape. The investigative piece of journalism in the *New York Times* for instance, which took months to compile and cost thousands of dollars, is not easily distinguishable from the "damming scoop" of a private blogger who took a few hours putting it together, costing next to nothing. The revenue streams that news organizations depend on in order to fund their journalistic activities are disrupted by widespread public access to information, and the low cost for receiving it. As Stephens offers, "Given what is now available online, trying to sell news is like trying to sell food in a town that happens to be served by all the world's supermarkets" (67). Stephens points out that the advantage of access, speed, or network domination are no longer with news organizations or journalists because individuals can "witness," publish, and disseminate information with the same speed and efficiency as those experienced entities, perhaps even more so (67-8). The availability of first-hand accounts also complicates the skill

and expertise advantage of journalists. Live feeds of press conferences and statements and the ubiquity of cell phones with recording and capturing capability allow the public to directly witness events rather than wait for the interpretation of a journalist or “source.” This reality has reduced the value of the intermediary’s role since the expertise, or rather the ethos, of the witness to relay the information accurately seems unnecessary (Patterson). And though this is a false assumption on its face, being that the average individual does not have the specialized knowledge that allows them to identify the most salient aspects of an event (Stephens 86), there is validity to it when the event is broadcast on the network and it is analyzed by the amorphous “community,” with its innumerable experts and/or expert sleuths.

Thus, the fundamentals that have long defined lines for the expertise of journalists have blurred or altogether disappeared, and the media has reacted to this change in the commercial balancing act of journalism rather badly. As both Patterson and Stephens concur, journalism has experienced a decline in quality, limiting the reach and effectiveness of its investigative divisions and opening up their pages to more sensational and less verified headlines, sources, and contributors (Stephens 69; Patterson 24). Venerable news organizations and 24-hour cable networks alike have fallen into the same trap, favoring the salacious and shocking to the informative and critical (Patterson 26). Many major news organizations have pulled the plug on their foreign bureaus, limited the reach of their correspondents abroad, and switched to “roving digital reporters” to fill them in (Hanrahan). For the news consumer – the public – the value that news organizations and journalists used to bring to the content of the news is no more than what they can verify and retrieve themselves (Stephens 66). For the news producer – journalists and news organizations – this presents a dilemma as well; what is worthy and critical is not necessarily also catchy and clickable, so the hard, costly, and time-consuming work of

identifying and bringing to the forefront events and actions that warrant the public's attention is reduced significantly or altogether abandoned as not worth the time or effort. Hence, we see failures in bringing to the public's attention important events, such as one Patterson discusses on the media's oversight of many announcements and warnings before the occurrence of the events of September 11th, 2001 as the media was consumed by a salacious story on the disappearance of a Congressional intern with whom the Congressman had an extramarital affair (25-6). Or, the fact that coverage of the war in Afghanistan, where the United States still invests an enormous amount of treasure (and less so lives) annually, hardly warrants a headline (Hanrahan).

With less journalists on the ground in places that are hard to reach, the scope of information has narrowed, and official narratives of reality are being circulated without challenge. As a result of these failures, the economic pressures that journalism is suffering from, and the forces of the network, the public has more reasons to engage in journalistic activities themselves, initiating the search for, sourcing of, and engagement with the news. Sharing activities on social media allow the public to be the primary aggregator of information, giving them unprecedented agency over what becomes circulated. This is at once liberating and worrisome. As Cardoso argues, "intermediaries restricted our intellectual freedom but also guaranteed that the community had access to the essential... Abundance of information is not in itself a guarantee of the social usefulness of that information" (134). Perhaps the "guarantee" of what is "essential" is an exaggeration of what the media have been capable of, nonetheless there was a bar of expectations, and a readily identifiable source that could be held to account. Cardoso is arguing that individuals within the network are responsible for developing their own filters, as the responsibility for verification shifts away from institutions and towards the public.

It is here that the content aggregators discussed earlier, and each individual as content aggregator, become the focus of attention.

If indeed the structures of verification have given way to a networked system where the public is gatekeeper, the public must be sufficiently informed to exercise that responsibility. The filter bubble, however, would suggest otherwise. Content aggregators do not simply organize and distribute information, they tailor, personalize, and select information based on algorithms that determine user preferences. Eli Pariser came to this realization when he discovered that his Google search results were not the same as a friend's (12). As it turns out, most of our Google searches are not the same. Google, like other search engines, show users results that they believe are most relevant to that particular user. They develop relevance based on thousands of points of data gleaned from user clicks, profiles, and mined from our internet activities, whether private or public. In this process of filtration, the interface has power over what we find most relevant – what we see first – and how we perceive that information. Eventually, as a more comprehensive profile is developed, individuals become surrounded by content that affirms their interests, “amplifies” their point of view, and bounces opinions, ideas, and news around in an echo chamber (Pariser 21). Rather than provoke thought, personalization helps reproduce the thoughts we already have, limiting our exposure to knowledge and the reach of our imagination. Pariser suggests that “In the filter bubble, there's less room for the chance encounters that bring insight and learning” warning, “If personalization becomes too acute, it could prevent us from coming into contact with the mind-blowing, preconception-shattering experiences and ideas that change how we think about the world and ourselves” (15). As our devices become increasingly integrated, the power and effect of personalization can only increase.

Google is hardly alone, though it might be the first and most impactful. Facebook's race to personalization might prove to be even more invasive than Google's, with access to your network of friends and a platform built for social (read personal) interaction and communication, it has an unprecedented view into our personal lives. Even though, Pariser suggests that Facebook's filter bubble might be a better model (39), capturing your public face (things you would like to share) rather than things you simply click on but might not like others to know about). Though, it still creates a false reality since individual behaviors, even points of view in certain contexts, tell only a partial story about what our preferences really are. More importantly, preferences are not the basis for a healthy public sphere; we certainly would not like to hear the dark and painful stories of death and destruction in Syria, nor are we necessarily interested in seemingly boring Congressional hearings, but these events shape our world; our awareness of them and the ability to engage with these topics meaningfully is necessary for us to become (or continue to be) effective citizens. Arguably, the internet provides just such platform with a pulpit for suppressed voices, global reach and amplification, and a public that is enabled to make choices about what matters, themselves. Kovach and Rosenstiel argue that audiences do not simply look for information that is biased to their point of view but seek news on a range of topics, sometimes with conflicting views (172). These findings indicate that the public is open-minded when it comes to sourcing information. The effects of the filter bubble get in the way of that, however. It becomes increasingly troubling when considering that most information seeking activity occurs through search engines and, to a growing extent, social media platforms.

If people are driving news consumption through their own search behaviors, they are doing it without full control over the information they encounter, or even what they choose to follow or spend time on. Drawing on the field of psychology, Anderson suggests that we already

undertake such filtration in our daily lives, pushing away those who disagree with us, focusing on sources that reinforce our ideas, and shunning diversity of thought and behavior. The internet is simply isolating the worst of our behaviors, imitating the process, intensifying it, and making its inherent bias much less transparent. It isolates and imitates because the algorithms and programs that run the digital landscape take behaviors out of context and look for connections and repetitions. Caliskan et al.'s study, for example, found that internet algorithms reinforce common stereotypes and biases. Segev argues similarly that the bias of online knowledge is a global phenomenon, given the global reach of technology companies. If drawing on the wisdom of the collective is an important hallmark of the network society, with more and more people in our social circles circulating the same ideas and concepts it may create a false sense of value attribution to erroneous ideas. Once accepted as fact, these erroneous ideas are hard to dispel (Munson et al.).

The implications of the filter bubble are not limited to individuals. Of the most concerning aspects is what Pariser refers to as a “filtered world” (153). The mining and sifting of data about our behaviors is not just the purview of content aggregators and websites trying to optimize their results to our interests, thereby increasing the likelihood we will click on targeted advertisement. It is also the work of data crunchers in any number of sectors who are hoping to reach customers, or constituents, as the case may be, more effectively. In Pariser's example, data mining companies provide political organizations and interest groups with voter data to help those organizations target certain groups, tailor ads and campaigns for others, and ignore another segment altogether (153). The result of that is a public whose fleeting civic behaviors dictate whether or not they will be included in issue campaigns, and what issues will they hear about or

whether they will hear about the campaign in the first place. This is not only dangerous but, as Pariser argues, a “threat to public life itself” (153).

In response to Pariser’s dire warnings about the hyper-personalization of the internet, Google indicated that personalization is merely a switch that users can control, turning on or off the functionality. While it is true that search rank personalization in Google can be controlled, the algorithms that drive advertisement or compile news articles are not similarly controlled (Bozdag). And even in the case of search results, optimization tools that give precedence to certain sources over others are still active, also impacting user response (Bar-Ilan et al.). More importantly, it appears that users of Google, Facebook and other social media and search engines are not aware that their search behaviors and other social behaviors are being tracked to personalize their web experience, rendering any “control” they might have ineffectual (Bozdag and Timmermans; Rader and Gray). Seven years on from the publishing of Pariser’s book, personalization has not been tempered but rather has exploded, going from questionable marketing tool to a “science” (Zelinski). Every new internet innovation or product roll-out from a major tech company features “tailored” experience as the main attraction. Personalization in the world of marketing may help consumers avoid unwanted ads, but personalization in the world of news keeps citizens from being informed.

The Everyday Journalist: Exercising the “Tradecraft of Verification”

What one can unequivocally conclude from the preceding findings is that public awareness of how the systems of information dissemination and control work is imperative. Similarly, as the responsibility for information filtration and gatekeeping shifts to the public, they also must be well-learned in the most valuable and useful strategies of verification and

valuation. The fact that humanity is inevitably attracted to the sensational, hyperbolic, and reaffirming, does not preclude their aspiration to the informative, meaningful, and challenging. Systemic shortcomings may have obscured those aspirations, but proactive knowledge-seeking, and rhetorical awareness can challenge this subordination of the needed to the desired.

Borrowing from Hamelink, Cardoso argues that “citizenship can only be complete when one possesses the literacy for the use of the new technologies, which in itself implies access to the cultural and educational domain and, consequently, exercise of the freedom of choice.” This is what Kovach and Rosenstiel argue can be achieved through learning of “the tradecraft of verification” – the “skills of the new citizenship that technology now demands” (31). What the authors argue for is an empirical mindset that approaches information with questioning, delving beyond the initial perception offered. They present six questions to be asked of any piece of news or information encountered (32):

1. What kind of content am I encountering?
2. Is the information complete; and if not, what is missing?
3. Who or what are the sources, and why should I believe them?
4. What evidence is presented, and how was it tested or vetted?
5. What might be an alternative explanation or understanding?
6. Am I learning what I need to?

Though I disagree with how Kovach and Rosenstiel have applied this heuristic – still driven by an institutional perception of the news, its sources, and thus what defines the hallmarks of quality or lack thereof – the utility of these questions as a systematic means towards valuation and identification is significant.

As a rhetorical tool, these questions demand an awareness of the constituents of the rhetorical situation – of audience, rhetor, exigence, and constraints – and how agents and agency are affected and distributed. By acknowledging the complexity of any one piece of information, we are becoming aware of what it takes to be truly informed and, incidentally, reconstruct new lines of demarcation for a standard of information. Patterson adds to this conception the necessity of a diffusion of knowledge, subject knowledge more specifically, but in its absence a means to arrive at knowledge about a topic. This is the context that is often missing when we confront information about topics we are unfamiliar with, a problem that Patterson points out journalists are guilty of more often than they should be (77). The internet on the other hand is an excellent platform to source expertise, if one knows what to look for. Expertise itself must also be verified and valued rhetorically. Sources that would have passed muster as “expert” and “reliable” just a few short years ago, are being called into question by the networked process of public inquiry today. Law enforcement sources, for example, have come under scrutiny when the victim is a minority and the perpetrator in uniform. The breakdown of institutional frameworks of verification and control has led to greater public awareness of the faults of the system, creating a skeptical relationship with expertise.

The danger of that is falling victim to emotional appeals, foregoing logic and the case-by-case assessments that every situation requires. This is the tension between fact and faith that Kovach and Rosenstiel invoked at the outset of their argument. It is particularly salient when speaking of the internet whose format of interaction mimics that of oral exchange, leading participants into debates marked more by passion than reason, and leaving little permanent information to evaluate thereafter. Questioning throughout the process makes for a more robust conclusion. If all this seems exhausting, perhaps we can take comfort in knowing that we use

similar techniques already in other realms of our everyday life. It is simply because of the expectation of pre-existing verification that we abdicate this role in the verification of information, particularly when it comes to news. It should come as a relief then that journalism is less a science than a way of thinking, and we need only concern ourselves with recognizing its values and affordances rather than reproducing its form. Becoming better ‘everyday journalists,’ as Hayek might suggest, is “not by the acquisition of more knowledge, but by the utilization of knowledge which is and remains widely dispersed among individuals” (qtd. in Hermida 297). Once again, the collective knowledge and intelligence that the internet makes available is precisely availed for this type of application, what I refer to as “informed navigation.” Perhaps a recognition of our role in the aggregation of information will encourage an embracing of that distinction, cultivating the need to qualify this newfound identity with the values and metrics that are associated with it. This is the underlying sociology of professionalism, as Bartol argues, that creates the sense of belonging that pushes individuals to strive to a certain benchmark of standards. The dispersion of the network complicates this notion slightly because of its borderless nature, but it does not altogether decimate it. This brings us to the argument that the internet produces a new way of interacting, knowing, verifying, valuing, and navigating. This process is not limited to journalism, although it is very critical to the business of developing a civic life and the maintenance of democracy. In the next chapter, this new literacy will be explored.

CHAPTER 3: A NEW KIND OF LITERACY

Nonhuman elements and forces are always in play as part of human doing, making, and saying. The accomplishments of rhetorical practice are entwined with (re)organizations of the world.

– Thomas Rickert, *Ambient Rhetoric*

A large part of understanding the crisis of news and, therefore public awareness, as explored in the previous chapter and that this research has evaluated thus far, is grounded in the recognition of a shift in the relationship of the public to their contexts of being. Whether those contexts are public (civic or social in nature) or private, the shift has reorganized our interactions with one another, ourselves, and the broader community of humanity to which we are now connected. In Chapter 1, we looked at the progression of the public’s engagement with the machinations of their everyday life, and how, as technology improved and humanity became more and more interconnected, the barriers between the public and how their world works have eroded. We noted there as well the changes in cognition brought about by new methods of communication; how writing fundamentally altered the very construction of our cognition by displacing the singularity of memory as means for organizing our lives and communities; or how the printing press and mass publication that ensued opened an unprecedented gateway to knowledge and community creation beyond the confines of proximity. These changes, and the others mentioned previously, have all been transformative in their time, with their doubters and detractors, calling into question the efficacy of such technologies, damning their ills and longing for an idealistic “past.”

To be sure, today's communication revolution – the digital landscape – is no different in those aspects. It also has brought about a change in our cognitive function just as writing did to our oral-wired brains. Equally, it has its many detractors, railing against the erosion of language or the cacophony of the banal. But the digital landscape is different than everything that came before it too. It is a complex of all these past media and communication, interwoven – an abstracted, networked, global reproduction of our simplest selves. It is this confluence that sets the digital landscape apart from its predecessors. And though the power of business and politics still figure highly in the interworkings of the network, the power of the average person/citizen to take part in, manipulate, and drive the network is unprecedented. Castells offers a conceptualization of the dynamics of this new communication realm, as “mass self-communication,” noting that it is “*self-generated in content, self-directed in emission, and self-selected in reception* by many who communicate with many” (1978, emphasis in the original). These three elements that Castells proposes define the realm of self-communication that is the network, begin to highlight the new literacy of the digital landscape. It is truly an engine of self-determination, sometimes real and sometimes imagined. In this chapter, the research focuses on defining this new literacy, what of its characteristics are similar or different than previous ones, and how we already are learned in many aspects of it, if subconsciously.

This research is not only interested in defining this new literacy, however – many able researchers have made extraordinary contributions in that realm – rather it is interested in making its parameters known so that the constituents of the digital landscape can exercise their full utility within it. A brief note must be made about terminology. Throughout this chapter I use the term “digital landscape” instead of internet, which has come to mean everything and nothing in particular. The digital landscape alludes to what the network is, bleeding into the physical and

cognitive realm, and not what the internet, in its most plain definition is, a communication network with special properties.

Defining the literacy: Ambience everywhere

To understand the new, we must have a frame of reference for it, a point of departure from the old. We know the basics of what the internet offers, que email, Facebook, Google, etc. These may be defining entities for the age of the internet, but when we think of them we think of ways of communication and of locating information. The internet is both of those things for sure, but as the digital landscape it is also exponentially more. A constellation of web-enabled devices, applications, and services, transform the mundane and create a different structure for society. From the comparatively simple – the fridge letting you know whether you are low on milk or not – to the complex – trading in your own virtual currency worth billions of “real” dollars. Some of this may seem like an excess of gadgetry, but their existence impacts our way of thinking. The digital landscape bends the conceptions of time and space, agents and actors, senders and receivers. It offers an interplay between the global and the local, challenging the individual definitions of each. Such is the ambience of the network. Ambience is a term that is well suited for the digital landscape. It conjures a fluidity, flexibility, and diffusion that are very much all definitional terms for that landscape. Ambience is also expressive of the dispersion of information, expertise, and knowledge across a community of actors, rather than traditional notions of information, knowledge, and expert structures that provide a very vertical conception of the world, rather than the horizontal one of the network. These structures are entrenched and slow to evolve, in contrast to the networks’ *ambience*, networked and constantly changing. Here we explore three different avenues of ambience: ambient rhetoric (Rickert), ambient journalism (Hermida), and ambient pedagogy (Ravenscroft).

Ambient Rhetoric

Ambient rhetoric is a broad yet specific conception of classical rhetoric in the digital age. It challenges our traditionalist assumptions about time and place – roughly *chora* and *kairos* – and about the redistribution of agency as an interplay between man and machine. Rickert offers an “ecological” model, invoking Derrida, Edbauer, and Ulmer, who have themselves used the term to express an animate presence to rhetoric. For some clarity on the definition of ambience itself, Rickert offers that “ambience puts place, language and body into coadaptive, vital, and buoyant interaction” (107). Rickert is careful to extrapolate new meaning for space, and time, in the rhetorical sense, positing “ambience can never be understood simply as presence. Place is not simply an immediate environment; it includes the background by means of which things show up as what they are” (55). Throughout his drawing out of the meaning of Plato’s version of *chora*, Rickert argues that *chora* is to invention as Aristotle’s definition is to rhetoric; “the question of the available means of *creation*” (258, emphasis added). Though Rickert spends considerable time analyzing the emergence of the concept of *chora*, he is simply setting up his argument on the misconception of place and of invention, a critical envisioning in terms of the network. The digital landscape decontextualizes as it draws information from its original frameworks, decoupling, and unbundling, an act that seems to disrupt our ability to make meaning. What Rickert’s interpretation of ambience presents however, is that such decontextualization presupposes that the new contexts where information has been repurposed is one which it does not belong, a notion he challenges with the idea of place and time as an “evolving event[s]” (112).

Castells too is concerned with this reimagination of time and space in the network society. His conceptions of “spatial flows” and “timeless time” offer new insight into the

manipulation of those fundamentals by the sheer interconnectivity of the network. Castells is more grounded in the effects of the network on physical spaces and time measurements. He examines the impact of network “flows,” for example, on the existence of physical networks of individuals, as in the metropolis (1983). His argument is that the spatial relationships of the network do not simply exist in the abstract but are manifest in society, transforming the very nature of our communities. Of time, Castells discusses the phenomenon of always being ‘on,’ plugged into the network at all times, a state of “perennial simultaneity” (1987). Thus, time is not delimited by boundaries of work, entertainment, or social function. As a result, real actions and behaviors are also intermeshing, without clear demarcations of when one ends and another begins. While not directly conceptualizing ambience, what Castells is alluding to is a similar construction of “flow,” where the boundaries are porous dependent on the added value that some contribution might provide. Something we categorize as entertainment may well serve the purpose of education and knowledge creation, or that which we define as valuable and informative may equally be leisurely and passive. What Castells adds to the notion of ambience is real application to the abstraction of Rickert, signaling too that these transformations of thought are not only manifest in the network as an amorphous thing.

In a rhetorical sense, the notion of “dispersed subjectivity” (Rickert 76) that ambience invokes is a commentary on how decontextualization is really recontextualization, and that audience is not a passive consumer to information, or unwilling party to it, but an active participant and co-constructor of meaning (92). Thus the “completeness” of knowledge or information is co-constructed, not incidentally but intentionally. And these co-constructors are not limited to ourselves, but also to the interfaces and algorithms that manipulate flows of information through the network. Here too Rickert suggests that rhetorical awareness forms that

necessary connection that allows us to take up agency in the digital landscape: “Rhetoric’s work is distributed and ecological... Nonhuman elements and forces are always in play as part of human doing, making, and saying. The accomplishments of rhetorical practice are entwined with (re)organizations of the world” (221). The rhetorical “awareness” of the network – the interfaces and digital gateways where the internet experience is filtered through – uncovers the significance of what otherwise appears as a means to an end. When we think of rhetorical design, in the context of the web, we often are thinking of how content is distributed on a virtual whitespace – the “what you see” of the internet. Hardly do we think of the background to that visual production, the thousands of lines of code that made the interface possible, and therefore the governing structures to these algorithms and machines. It is this that Rickert offers we must think of as no less rhetorical, and rhetorically-bound. And it is becoming easier to do so. As the network’s component parts increasingly resemble ourselves, seeing them as actors in a web of “ambient intelligence” (Pariser 191) is not a leap so far. Our ‘smart’ machines and technological interfaces overlap with our own cognition and intermesh with it, as Pariser suggests is happening at an exponential pace (193), allowing us to go beyond the limitations of our own rhetorical frameworks – a kind of ‘ambience of self.’ From an algorithmic perspective, Pariser is skeptical of our ability to reign in the network once it has broken the bounds of our own understanding, suggesting that Google’s search code has become so massive and complex that even its programmers and engineers, at the time of his writing, “don’t really know what works or why it works, they just look at the result” (Pariser 202). While the argument that greater complexity creates more ambiguity of purpose and process in the network, a different approach to this dilemma may be found in the rhetorical. Applying the conception of ambient rhetoric to the network might give new insights into the ‘intention’ of the machine, allowing for its navigation

and application with purpose and cognizance. Again, invoking an awareness of the actors involved in bringing any piece of rhetoric into being.

Ambient Journalism

The concept of ambient journalism, proposed by Hermida, is a good metaphor for what forms much of the backbone of information and knowledge dispersion in the digital landscape: crowd-sourcing. Instead of crowd-sourcing, however, Hermida chooses Malone et al.'s term "collective intelligence" (297) to refer to the network of knowledge that is created by the collective of mass communities of interest joining together. Being that the majority of journalistic content is defined as reportage and quotations from sources, Hermida argues that Twitter – the platform that is the subject of his research – serves a similar purpose, disseminating information from a variety of sources and meshing together accounts, official or not, that contribute to our understanding of any given action or situation (300). Hermida refers to media platforms, such as Twitter, as "awareness systems" that go beyond simply reproducing journalistic practices, to *producing* awareness and knowledge (302). In fact, ambient journalism, Hermida argues, is a means of challenging the "classical paradigm" of journalism, offering "more complex ways of understanding and reporting on the subtleties of public communication" (301). Ambience in this case is that of the diffusion of information, the collective nature of analysis and reflection on it and the knowledge that is produced from these mutual activities. What is also produced in this process is ambient awareness, a subtle web of knowledge that not every participant may tap into or be informed by, but that exists readily to be accessed for that purpose.

Such ambient awareness is another manifestation of the shift from institutional sources of knowledge creation and information dissemination to networked, communal ones, from

“individualistic, ‘top-down’ mono-media journalism to team-based, ‘participatory’ multimedia journalism” (300). Hermida brings forth yet another important conception to the understanding of the new literacy of the digital landscape, “content-oriented communication” versus “connectedness-oriented communication,” where value is derived not from each piece of information, but “rather by the combined effect of the communication” (303). This conception challenges traditional notions of value-derivation, shifting focus from the fact-checking of a single source, to the degree of corroboration and the wisdom of the collective in detecting any miscues. Hermida reflects on this new horizontality of journalism, “Services like Twitter are a challenge to a news culture based on individual expert systems and group think over team work and knowledge-sharing” (299). The effectiveness of “collective intelligence,” at least in this context, is well-established. Examples abound of dubious artifacts that emerged on the internet and were quickly – and collectively – tracked down, identified, and debunked (See Lankshear and Knobel 159 for one example). What is particularly noteworthy about this process is direct expertise in the machinations of the network are largely not institutionally-bound or derived. Hobbyists and enthusiasts are the network experts, overwhelmingly, while specialists are their systematic counterparts, not necessarily defined by greater expertise (Grundmann). This is definitional for the background work of online communities – the coding and development – but it can also refer to the outward work of journalism – the fact-checking and examination. The online enthusiasts that are often derided in contexts of learning are the ones most availed to analyze the validity of information, identify frauds and unscrupulous information, and track down their sources.

What is particularly thought-provoking about Hermida’s argument is the concept of “awareness systems” which he draws from the fields of computer science and human-machine

interaction. Awareness systems are “intended to help people construct and maintain awareness of each other’s activities, context or status, even when the participants are not co-located (Markopoulos qtd. in Hermida 301). Hermida adds to that Chalmers’ definition of awareness systems, which falls in line with Rickert’s “always evolving” notion of time and space: “the ongoing interpretation of representations i.e. of human activity and of artifacts” (Chalmers 389, qtd. in Hermida 300). Recalling Castells’ “perennial simultaneity,” Hermida posits that “asynchronous, lightweight and always-on communication systems such as Twitter are enabling citizens to maintain a mental model of news and events around them” (301). This argument is undoubtedly contestable, but its premise is largely proven. For those with ready access to the network, it has become an extension of themselves, their lives and activities mediated and often driven by it. That Americans’ news consumption has shifted so significantly to the network, whether as shared or originally produced, gives support to Hermida’s deduction. Rather than Kovach and Rosenstiel’s “incidental news acquisition,” the network offers an active, if absentminded, interaction with information. The concept of ether, in its scientific definition, perhaps best captures this phenomenon. Physics’ ether, an electromagnetic cloud capable of passing through all substances forming the background of space, mimics the ethereal qualities of the network, forming a hanging cloud of knowledge that passes through us, not necessarily recognized but at some level recorded. This may very well be true; but is action that lacks intention and knowledge that is not applied, truly guiding? Hermida’s pursuit of the possibilities of improving “individuals’ quality of life” through the network takes a turn to the personalization of ambience, shifting once again the power to the machine in the human-machine relationship (302). Of course, this research argues that uber-personalization through the autonomous programming of our algorithmically determined interests is highly fallacious. Hermida’s

personalization argument comes from the assumption that “today's technology is too complex, dominated by an individual's struggle to command the technology to do what they want” (303). However, rather than discounting an individual’s capacity to navigate and control the network, I argue that empowering their rhetorical awareness gives individuals agency in this process. Tapping into the ether is a matter of intentional engagement.

Hermida suggests that “one of the future directions for journalism may be to develop approaches and systems that help the public negotiate and regulate this flow of awareness information, facilitating the collection and transmission of news” (304). Particularly interesting here is the idea of a shift of expertise. Ambient journalism offers a platform where information is disseminated, shared, and interacted with, at a topical level. Such engagements create awareness, but without application it is only a superficial exposure. More traditional experts, institutions, and organizations can beneficially engage with the network by offering a layer of synthesis and analysis and re-imbuing it in the ether. Using Bardoel and Deuze’s framework, Hermida argues that ambient media creates a new role for the journalist – someone “who serves as a node in a complex environment between technology and society, between news and analysis, between annotation and selection, between orientation and investigation” (Bardoel and Deuze 101, quoted in Hermida 305). Awareness systems, such as that of ambient journalism, can “engender information interactions” (305) that cultivate collective knowledge and encourage the public to take part in more in-depth investigative activities. Using this conception, the promise of ambient journalism is that it may create a more generative relationship between every node in the network. But ambient journalism is also more than that. The awareness systems that comprise ambient journalism point to a wellspring of knowledge and information that with rhetorical consciousness can add value and lend power.

Ambient Pedagogy

Ravenscroft provides us another notion of ambience, this time “ambient pedagogy;” yet another recalibration based on the evolving human-machine relationship. Already, throughout this research, I have explored learning through the network, but ambient pedagogy presents its reciprocal – teaching through the network too. Thus far, knowledge creation has been an indirect result of knowledge interaction. Not necessarily a teaching action, but an accidental or intentional interaction with information, leading to further analysis, leading to further awareness and a net gain of knowledge. How Ravenscroft sees ambient pedagogy is as an enhancement of “traditional” pedagogical practices, using “social software” and social systems to create learning communities, much like the public already engages with in other aspects of the digital landscape (2). Through his research, however, he invokes ambient pedagogy as an expression of “contemporary forms of meaning making that are often open, personalized, and continuous, and predicated on the social construction of knowledge” (Ravenscroft 2). The author frames the dramatic impact of the digital landscape on the teaching-learning continuum as creating a “need for conceptualizations of learning that follow a more social and participative epistemology” (Ravenscroft 2). Ambient pedagogy suggests that teaching is networked as well, and participants in the network can re-purpose leisurely or entertainment activities for education through a process of intentional recognition. Once again, the boundlessness that Rickert offers in *Ambient Rhetoric*, and Castells’ elaboration on “flows,” can give us insight into how to create such knowledge-seeking intention. Instead of teachers dismissing activities, such as video games, as distractions they can help students transfer their acquired skills to other contexts. Recognizing existing expertise in students is already a good predictor of positive response (Ravenscroft) and, therefore, a higher likelihood for receptivity.

The renewed interest in vernacular literacies (See Roozen) in the field of literacy studies is a good starting point for the conversation on ambient pedagogy in an institutional framework. As scholarship continues to reinforce awareness of knowledge networks that are unbound from traditional institutional frameworks, pedagogical practices can evolve responsively to assimilate student engagement with the digital landscape into a teaching and learning process.

Ravenscroft's "learning dialog" is not limited to the teacher-learner relationship, instead it is actively aware of the interface's role – the network – as another rhetor in that dialog "Where the Web can provide the tools and environments that can catalyse, scaffold and amplify learning processes that are fundamentally human, within what could be called 'hyper-interaction design' within new pedagogical frameworks" (Ravenscroft 5). Beyond augmenting or "reconfiguring" (Ravenscroft 5) teaching processes, I argue that ambient pedagogy is also a conception of 'self-teaching' styled after Castells' "self-communication" framework. Acknowledging the self-teaching practices ambient pedagogy signifies, is yet another entry point for its enhancement, encouraging an upwelling of quality.

New literacy spaces

The concept of ambience suggests that spaces are still an important construct, but spatial boundaries are fluid and flexible rather than permanent and rigid. Within those boundaries, the composition of spaces is another definitional aspect for the new literacy of the digital landscape. Are those spaces any different than the ones we are familiar with already? Is there a shift in the language that mediates those spaces? Gee and Hayes provide answers to these questions. Their exploration of new media literacies opens the conversation on the aspects of ambient intelligence, expertise, and pedagogy discussed above. Gee and Hayes posit that the digital

landscape has made possible the emergence and convergence of a new learning system, one that competes with the existing academic structure of knowledge-acquisition, a system they term “passionate affinity-based learning” taking place in and through “passionate affinity spaces” (93). While passionate affinity-based learning was not born in the digital realm, Gee and Hayes argue that passionate affinity spaces have largely been realized through the power of the network, and as such have taken on a life of their own in that space (93-5). The authors define affinity-based learning as a self-organized group of individuals that come together “to learn something connected to a shared endeavor, interest, or passion” where the group “have an affinity (attraction) [to it] first and foremost and then to others because of their shared affinity” (Gee and Hayes 94). This coming together creates spaces within which such interactions occur and knowledge is circulated within the group.

Gee and Hayes’s concept of passionate affinity space is similar to the typical conceptions of discourse community and its definitional characteristics as offered by Swales, which may give some a familiar point of entry to this concept. However, affinity spaces differ significantly in a number of ways, chief among them their primary attractive force (shared passion and interest), their fluidity of roles and interactivity levels, and the transience of membership. This final point, the transience of membership, is particularly important to highlight; as the space becomes an expert-space its transient membership increases, with more individuals outside of the space entering to seek information, becoming actively-involved or not (Gee and Hayes 96-99). Though Gee and Hayes are keen to establish that such spaces, and the affinity-based learning within them, pre-date the digital landscape, they also highlight the exponential power that the digital landscape has lent them (103), evolving them into a different conception than that which predated it. For example, affinity spaces within the network provide a readily-accessible sourcing of

knowledge, expertise, and supportive evidence, networking with other affinity spaces and outsiders, and, most importantly of all, a heretofore non-existent global reach and derivation. These characteristics of network-based affinity spaces, it would seem, increase the quality of information circulating within them and require a certain level of expertise from some of their participants/members. Some examples that Gee and Hayes provide are gaming communities, pet health forums, and fan fiction sites (123-25; 157). These ‘spaces’ produce a large body of expertise and knowledge around their topics of passion/affinity, develop the discourse around it among enthusiasts and experts, and even influence the large, institutional counterparts of their interest-target (such as gaming companies, television studios, and authors, among others) (Gee and Hayes).

So, what do these affinity spaces tell us about the new literacy of the network? Gee and Hayes provide seven definitional attributes:

1. Their association is independent of outside credentialing and recognition; expertise is achieved within the space and by and through participation.
2. A passion towards the given interest is an integral part of the foundation of the space. Though others within it may not have the same passion, their shared affinity dictates a respect to those who are highly passionate.
3. All can be producers, and not just consumers of knowledge and expertise, and there are standards: “there can be and usually are standards – high ones – about what counts as good production and people who produce must accept (or seek to negotiate) and meet those standards” (Gee and Hayes 105).
4. Leadership and mentorship is flexible.

5. Knowledge is distributed. The space also has a means to store information so that it can be accessed and circulated by members at any time, and expanded upon, improved, or contested.
6. It is not constrained. New membership is always welcome and individuals choose how they progress (or not) within the space.
7. There is no terminal level. Regardless of self-determined and group-recognized expertise, members “believe there is always something new to learn, more to discover, and higher standards to achieve” (106).

Some of these attributes, as defined by Gee and Hayes, may provide a false impression of perfect symbiosis. Undoubtedly, passionate affinity is not reserved for interests that are collectively good or beneficial, and there is always the likelihood that some of these spaces are, or become, toxic to entrants who challenge the group’s underlying concepts or fundamentals. But these pitfalls and concerns are not significantly different than similar ones in society at large. The important difference here is the access and reach of these spaces, and therefore their potential for amplification, good and bad.

Network-based knowledge networks democratize the process of information acquisition, by circulating expertise and providing points of entry regardless of skill-level. As Shirky argues, taking part in such networks habituates participants in “expert habits of mind,” not unlike professional associations do. Gee and Hayes point out that “a good deal of scientific discovery occurred through something akin to a passionate affinity space” where “amateurs” came together, as possible, and pooled their knowledge to make discoveries and enhance the body of knowledge (107). And what about expertise and mastery in its networked conception? If our knowledge production is a network driven and derived process, then these hobbyists and

enthusiasts – amateurs in an institutional sense – are the rightful experts that are most needed. The relationship between knowledge development, interaction, interests, and paced learning active through this space, is important to understanding the new literacy of the digital landscape. The ubiquity of the network and access to it has given greater visibility and power to such spaces, and similar social networks of shared information, mainstreaming (to an extent) the non-traditional knowledge-acquisition practices made possible by spaces and networks. Hence, there is greater comfort among individuals to seek and become part of such networks, ultimately complicating traditional relationships with authority and expertise. These “democratizing” shifts are not all roses, however.

When considering the impact of the filter bubble, for example, one must question *what* kind of information is being circulated? Also, the question of how much new information is being produced, versus old information being recycled is an important one. In the journalistic context, for example, there is a significant distortion between the amount of new information / news / event coverage, being produced, and that which is simply circulated, recycled, and repackaged instead. What is most concerning about this, as Hanrahan argues, is that less attention is being paid on sourcing of information – news specifically – which reduces the overall amount of knowledge in the network. Of course, it could be argued, and in fact is by Hermida as well as Patterson, that the network grants unprecedented access to citizen journalists and first-hand witnesses, thus the lack of sourcing by vertical institutions has a much more mitigated effect on information access. This may be true in the American context; however, the global transfer of information can be significantly impacted by such lack of original sourcing on a systematic level as aggregators overwhelmingly source from large, institutional frameworks (Segev). Nonetheless, as the new literacy of the network is better defined, and scholarly

evaluated, the likelihood of recognizing the value that unofficial networks add, and where lines of demarcation can be placed, will produce a more robust system across the board.

CHAPTER 4: BEYOND DIGITAL CLASSROOMS: TEACHING INFORMATION NAVIGATION FOR THE 21ST CENTURY STUDENT

If we teach today's students as we taught yesterday's, we rob them of tomorrow.

– John Dewey, *Democracy and Education*

There is little doubt that the digital landscape, defined by constant (and often rapid) change will continue to present challenges to our conceptions of organization, relationships, learning, and many other domains. By now it seems readily apparent that this digital landscape forces new paradigms of communication, knowledge, and even power. By decentralizing the structured mechanisms of these domains, recontextualizing their content, and redrawing their boundaries, the digital landscape disrupts the expected flow of information and the role of agents and actors in its space. Though Castells first argued that the world was edging towards a “network society,” where institutions and their networks would be significantly transformed if not altogether dismantled, over two decades ago, the recognition and change from these institutions has been slow in coming, if indeed it has come at all. One of these domains that has been recalcitrant to transformation is that of education. Though curriculums have changed significantly over time, the changes have largely pertained to content rather than the mindset and design behind the curriculum. However, Lankshear and Knobel argue that there indeed is a shift in mindset, brought about by the network, that profoundly impacts how individuals relate to information, the process of knowledge acquisition, and the teaching and learning continuum. Along similar lines, Gee and Hayes argue that language itself is transformed by the digital landscape, synthesizing both its oral and written forms to produce a more comprehensive mechanism of delivery and communication, and that education systems remain slow to recognize

these forms as no longer discrete. They also critique the neglect of vernacular literacies – socially-based literacies of the home rather than of school – that are becoming more and more sophisticated and essential to students’ lives. Gurak extends Lankshear and Knobel’s argument emphasizing the centrality of a rhetorical conception of new literacy education that is not centered on use but rather on “how to critique it, participate in it, and take control of it” (180).

The apparent divide between the needs and requirements of the digital landscape and the current education afforded students is increasingly apparent, for both teachers and students. A number of surveys assessing student preparedness for college and the workforce show that students are not confident about their readiness. A 2014 survey revealed that nearly half of high school graduates felt unready or underprepared for college, work, or both (Kirst). A 2015 report that evaluated college graduates’ knowledge application skills found over 70% felt lacking in that skill (Dwyer). The same report looked at employer views on the preparedness of college graduates with nearly half finding students “not at all prepared,” contrary to the students’ own perceptions (Dwyer). The report attributes much of the divide to low efficacy in critical thinking and a need to enhance “computer-based competency to accompany the soft skills of effective communication and interaction” (Dwyer). Among high-school students the preparedness gap is even larger. Despite higher rates of graduation, a 2016 survey found that only 8% of them were ready for college (Bromberg and Theokas). Though a majority of these readiness related surveys analyze a composite of subject-matter skills, the clear shortcomings that they reveal is indicative of how students are utilizing their – historically unprecedented – access to information and knowledge. With such significant disparities between expectations and competency, it is clear that schools are not giving students the tools to benefit from and operationalize knowledge in general, even if the institution falls short on a curricular level. This is in part due to an

institutional conception of technology as a tool to facilitate traditional forms of learning, rather than acknowledging its transcendent nature as an interface through which new realities are created and enacted. “Adding devices is not the same as integrating technology” Milanesi argues, “The main reason why technology creates a challenge is that schools are focused on standardization, not customization” (Milanesi). This is the argument that Lankshear and Knobel further. This chapter will overview the “mindsets” framework offered by Lankshear and Knobel as a means to reinterpret education in the digital landscape. It will then present an argument for a rhetorically driven educational platform.

A new ‘mindset’ approach

Lankshear and Knobel’s concept of mindsets derives from an evolution of literacy and a “fracturing of space” (31). The authors conceptualize ‘new’ literacies as being a composite of what they term “technical stuff” and “ethos stuff” (27); the first being wholly an expression of the digital and technical aspects of the network, and the other an expression of the mechanisms and “flows” (Castells) of that network “emphasiz[ing] relations of collaboration, participation, dispersion, and distributed expertise” (Lankshear and Knobel 27). In relation to systems of education and literacy, the authors argue that “We are presently at a point in the historical-cultural development of literacy where we don’t really know how to deal educationally with these literacies” (30). On the spatial spectrum, Lankshear and Knobel offer a definition for this purported fracture: “The idea of space having been fractured refers to the emergence of *cyberspace* as a distinctively new space that co-exists with physical space” (31, emphasis in the original). They note that cyber space cannot be “dismissed” by our understanding of physical space because it “has been integral to their [young people who have come of age in the post-digital world] experience of ‘spatiality’” (31-2). The spatial argument is one that carries over

well from the previous chapter's discussion on rhetorical ambience as challenging the boundaries of space, Castells' argument about the network's disruption of traditional spatial relations, or Gee and Hayes' explication of the role of space as scenes of activity and community. On this foundation, Lankshear and Knobel move forward with the concept of two divergent 'mindsets,' a primarily pre- and post-industrialist construction.

The first mindset, "Mindset 1," sees the digital landscape as an added layer of tools on a familiar foundation where "the contemporary world is essentially the way it has been throughout the modern-industrial period;" whereas, the second mindset, "Mindset 2," sees the digital landscape as transformative, changing the world "in some fairly fundamental ways" (34). The difference lies in application; "people imagining and exploring how using new technologies can become part of making the world (more) different from how it presently is (second mindset), rather than using new technologies to do familiar things in more 'technologized' ways (first mindset)" (Lankshear and Knobel 34). This post-industrialist approach to understanding the role of technology, and thus the nature of the digital landscape, is perhaps captured by a recent World Economic Forum report describing the "Fourth Industrial Revolution" as a period "characterized by a fusion of technologies that is blurring the lines between physical, digital, and biological spheres" (World Economic Forum 24). Borrowing from the "digital native/digital immigrant" scholarship, Lankshear and Knobel term those who possess the first or second mindsets as "outsiders / newcomers" and "insiders" to the digital landscape, respectively. Though hardly exhaustive, Lankshear and Knobel offer a helpful heuristic to represent the divide between mindsets (Figure 1).

TABLE 1.1. Some dimensions of variation between the mindsets

Mindset 1	Mindset 2
<p>The world basically operates on physical/material and industrial principles and logics. The world is “centered” and hierarchical.</p> <ul style="list-style-type: none"> • Value is a function of scarcity • Production is based on an “industrial” model <ul style="list-style-type: none"> • Products are material artifacts and commodities • Production is based on infrastructure and production units and centers (e.g., a firm or company) • Tools are mainly production tools • The individual person is the unit of production, competence, intelligence • Expertise and authority are “located” in individuals and institutions • Space is enclosed and purpose specific • Social relations of “bookspace” prevail; a stable “textual order” 	<p>The world increasingly operates on non-material (e.g., cyberspatial) and post-industrial principles and logics. The world is “decentered” and “flat.”</p> <ul style="list-style-type: none"> • Value is a function of dispersion • A “post-industrial” view of production <ul style="list-style-type: none"> • Products as enabling services • A focus on leverage and non-finite participation • Tools are increasingly tools of mediation and relationship technologies • The focus is increasingly on “collectives” as the unit of production, competence, intelligence • Expertise and authority are distributed and collective; hybrid experts • Space is open, continuous and fluid • Social relations of emerging “digital media space” are increasingly visible; texts in change

Figure 1 Lankshear and Knobel (105)

Once again, space is invoked as an invaluable construct as mindset 1 often approaches the digital space in the same ways it does the physical one. On cyber security for example, Barlow offers that outsiders to the digital landscape approach security “in ways that parallel physical world behavior: road blocks, fences, restraints, and so on” (Barlow qtd. in Lankshear and Knobel 38). Instead, Barlow advocates for “people taking responsibility for their choices and deciding what ‘noise’ they want to filter out” (qtd. in Lankshear and Knobel 39). Such a statement seems easy to say and much harder to do, but it opens up the conversation to what about the new mindset – mindset 2 – can be applied and/or adopted for a more effective (and successful) educational experience. Critically, Lankshear and Knobel are not hopeless to the prospects of newcomers integrating into the digital landscape either, however, there is a necessary threshold of awareness and acknowledgement associated with doing so. In part, it has to do with shedding assumptions about the expertise of “insiders” and accepting more relaxed

relationships of authority and expertise. In addition to new conceptions of space, the authors offer “new paradigms of value” (40). Value, in the digital landscape, is not as it is in the physical, economic one – a function of scarcity – in fact, it is quite the opposite. In the most basic sense, the network’s primary function is the free, fast, and far-reaching dispersal of information. Hence “With information, ‘it’s dispersion that has the value, and it’s not a commodity, it’s a relationship and as any relationship, the more that is going back and forth the higher the value of the relationship’” (Barlow qtd. in Lankshear and Knobel 40). Barlow posits that applying mindset 1 views of scarcity in the digital landscape reduce the effectiveness of the medium and prompt alternative seeking behaviors (Lankshear and Knobel 40-1).

What this last argument presents are two problematic forces: one that suppresses the power of the network, and the other which diverts and deflects attention and interest as a result of it. In an educational context, these forces can be highly disruptive to the learning process. First, it limits students’ ability to interact with/in the network meaningfully and with awareness and intention, as the tools that they are being given do not apply and/or are not readily transferrable to digital contexts. Moreover, students who articulate this difference, or who otherwise are not challenged in an applicable way given their new life contexts, find it difficult to maintain interest in the work of school and are diverted to other venues of information seeking and valuing, yet unprepared for the complexity of the network and its implicit influences. Which brings us to another paradigm of mindset 1 consternation: “Textual ‘orders’” (Lankshear and Knobel 52). In the process of breaking down the paths of divergence between mindset 1 and 2 conceptions, Lankshear and Knobel bring forth the concept of “textual order” and “the dominance of the book as the text paradigm” of the print age, with its specific generic conventions and the organizing patterns it supported (52). Specifically, “The book mediated social relations of control and

power, as between author and readers, authorial voice as the voice of expert and authority, teacher/expert and student/learner, priest/minister and congregation, etc.” (Lankshear and Knobel 52). By contrast, in the digital landscape no such paradigm exists (52), rather a participatory, relational space emerges where “Text types are subject to wholesale experimentation, hybridization, and rule breaking” (Lankshear and Knobel 52). This breakdown of the book-centered norms of textual production and genre-creation is still very hard to accept for many in the realm of education, as evidenced by scholarly griping about the ruin of language, the collapse of rules and norms, and the more dangerous rejection of informal or unfamiliar genres of creative work and textual production (for examples See Canagarajah; Thurlow; Levine et al.).

One aspect that has made the transition to mindset 2 conceptions particularly difficult for the educational institution is the predominance of newcomers/outsideers to the digital landscape in the educational field. Teachers, professors, curriculum designers, and policymakers are overwhelmingly the product of the industrialist world, and not surprisingly given the average age of individuals in any of these domains. These digital newcomers also exert lasting influence on the institution since they are taxed with preparing the next generation, imbuing them with their own conceptions of order and chaos based on a previous model of society and context. These mindset divisions are manifest in other aspects of education too, such as professional associations that still overwhelmingly field surveys that measure the “digital divide” through physical access, rather than a true literacy of the network (Gorski), or acquiring the necessary gadgetry to qualify as a “digital classroom.” The consequences of these limitations of mindset has been a school experience for students that is “technologized” rather than integrative to technology, simply shifting the same activities to new interfaces (Lankshear and Knobel 55). Multitasking, another skill that digital insiders are highly adept at, is not rewarded in the school

context but punished and restricted, for its hard to see value in student activities that take their attention away from the one-way channel of learner/teacher communication (Lankshear and Knobel 57). This, as Lankshear and Knobel note, is very different than how multitasking is viewed outside of school, a highly coveted skill in many domains (57).

Whether or not the educational system can become more mindful of the mindset 2 approach and, therefore, more indulgent of the participatory, social, and self-generated/self-driven learning mechanisms of the digital landscape, remains to be seen. However, undoubtedly the scholarship on this topic has grown over the past decade, with increasing attention being paid to students’ vernacular literacies and social learning practices, with the prevalence of Facebook and other media. The corporate world has already recognized these changes, whether in skill-based needs, or in network literacy and digital awareness. A comparison between the skills needed of students entering the work force in 2015, versus expectations for 2020 is reflective of the shift that is already has been recognized and is being enacted in a corporate sense (Figure 2). Where policy and the public institution of education has fallen short, the digital landscape has created a new web of knowledge-acquisition pathways that mimic their institutional counterparts in many ways. These pathways are gaining more recognition, even as the institution of education remains relatively obstinate towards the integration of individual, social educational pathways.

2020 Skills	2015 Skills
Complex problem solving	Complex problem solving
Critical thinking	Coordinating with others
Creativity	People management
People management	Critical thinking
Coordinating with others	Negotiation
Emotional intelligence	Quality control
Judgment and decision-making	Service orientation
Service orientation	Judgment and decision-making
Negotiation	Active listening

Figure 2 Milanese

Promoting ‘rhetorical consciousness’

If this research acknowledges an institutional failure in enriching student academic experiences as a function of divergent mindsets, it is prudent to think of how student experiences within the network might be enhanced so that they are defter at navigating it with intention and control. Though removed in some measure from the conversation on digital landscapes and contexts, Murphy et al. provide one such construction: “rhetorical consciousness”. To understand rhetorical consciousness better it is useful to frame it in the contexts within which it emerged, in early Athenian sophistic tradition. Murphy et al. diagram the significance of rhetoric and oratory in Athenian culture under the reign of Pericles, the Athenian general credited with transforming Athens into a pure democracy around 479 B.C. (Murphy et al. 10). In this new conception of Athenian state, citizens were recognized as playing an important role in forming and maintaining the state and, by extension, Pericles’ power. Whatever motivations drove Pericles’ intention in establishing Athenian democracy it created a need for public awareness and rhetorical skill, “Athenian citizens soon realized that their very future often depended on their ability to speak persuasively” (Murphy et al. 17). But rhetorical skill was not viewed only as a necessity, it was also a coveted and powerful tool, duly recognized as such in public spaces and spectacles where orators came to debate communal concerns in hopes of persuading audiences by their arguments, considering also tensions and counterpoints – the antithesis (Murphy et al. 17-18). “This consciousness of antithesis” write Murphy et al., “...is a significant prelude to the establishment of a rhetorical consciousness among the Greeks. In addition, with the transference of power from the Kings to councils and juries, it became a traditional part of Athenian society to argue and debate an issue since kingly omniscience had now become an anachronism” (18).

The shift in Athenian society that Murphy et al. discuss is not much different from the shift to individual responsibility brought about by the horizontality of the network and the gatekeeping role played by each citizen discussed in chapter 3. Restructuring the vertical centers of power in ancient Greece led to the rise of public engagement in the discourses of power, and new roles for citizens as representatives of their community's concerns – gatekeepers of their time. Similarly, the temporal disintegration of vertical centers of knowledge and power over time led to the transfer of responsibility more and more to the public. The rise of the digital landscape then gave the public unprecedented agency to enact, share, and passionately pursue matters of interest and concern, similar to the ways in which spaces were used to perform orations in the Athenian model. And just as Athenians took up the social and political concerns of their day on stages of debate, so too does the modern navigator of the digital landscape, using social media platforms for example to enact social change and bring about political shifts. These correlations are not by accident. Most individuals, when granted responsibility, are inclined to take it up seriously, and especially when they recognize some personal or communal value in it (Gee and Hayes 49). However, in light of the filter bubble and its impact on our access to information, how we exercise this responsibility and indeed recognize it to start with is a matter of contention. That is why the practice of rhetorical consciousness is critical.

Rhetorical consciousness is a very intentional recognition and awareness of the powers in contest within any space of being. Whether through the bounded categories of rhetor, exigence, audience, and (more recently) constraints, or through the fluid relational spaces of ambient rhetorical actors and agents, including the interface itself, consciousness belies recognition which makes possible intention and choice. Choice of course is a false option when you are not aware that there is one in the first place. As Gaonkar contends, rhetorical consciousness often arises as

a response to crisis, retreating to the background once more when the challenge of the crisis is no more (210). It could be said similarly of Athenians' proclivity towards rhetoric that it was a function of the many crises they faced, between war and the prospect of it, rather than simply an assumption of the civic responsibilities they were now accorded. However, the digital landscape complicates this notion with its interface of constant interaction, access to the broad repository of human knowledge, and the ability to tap into the multiplicity of conditions that exist outside our immediate spaces of physical existence. Also, today's democracy, and the democratic structure that the digital landscape comprises, in theory at least, is one that is far more self-driven and self-generated than that of Athens. In other words, the network affords, even if its limits have yet to be tested, the possibility for infinitely greater public control. Humanity's track record of equality, empathy, and equal opportunity is not a stellar one, however. A deliberate, and conscious process of valuation and navigation in the digital landscape may help us avoid reproducing the same inequities, only on an exponential scale.

CHAPTER 5: CONCLUSION

Throughout human history, communication has played a formative role in the structuring and restructuring of the landscapes of our lives: the formation of personal and public relationships; the rise of communities and political entities, such as nation-states; the organization of our thoughts, accounts, and artifacts; the recording and propagation of knowledge; and the evolution of the conceptions of society, among many others. Equally, humanity has also sought ways to analyze, quantify, and discipline the process of communication and its art, rhetoric being one of the more powerful analytic, quantitative, and disciplining means. As demonstrated in chapter 2, the skills and tools – technologies – of these communicative mediums have had a profound impact on our physical and cognitive realities, created new landscapes of thought and community, and influenced the ways in which we interrelate. Communication is a broad term that can express many things and, especially now, can refer to many expanses of interlocution, but at its root communication is the dyadic relationship between reception and transmission, at the heart of which is something to be received or transmitted. It is that ‘something’ being received or transmitted that has given rise to this conversation, and our process of receipt and transmittal and the powers at play in that position that are the subject of interest in this research.

The internet and everything else it enables and subordinates – the digital landscape – is inherently a communicative body or space. It facilitates communication, and more often *is the subject of* communication, as receiver or transmitter. We talk through our interfaces to be sure, but we also “talk” *to* them perhaps more so than we do each other – querying, conversing, messaging, and conducting the facilitative work of our daily realities. The digital landscape may not be sentient, but it is never too far removed from ourselves to be unaware; people after all

write code, design algorithms, create filters, and trade in information. Of course, that is also not taking into account machine-learning built into network systems and their autonomous decision-making processes. In chapter 3, I interrogated the new literacy of this landscape; what about it is alike and different from literacies we have learned in the past, and what about its influence on our cognitive and physical reality. Here, literacy is defined as Welch defines it “...not only the ability to read and write but an activity of the mind...capable of recognizing and engaging substantive issues along with the ways that minds, sensibilities, and emotions are constructed by and within communities whose members communicate through specific technologies” (qtd. in Gurak 9). Welch, and Gurak, argue that literacy, as conceptualized, is consciousness, an awareness that enables more than access (knowing how to use a tool). It is “...how we know what we know and a recognition of the historical, ideological and technological forces that inevitably operate in all human beings” (Welch qtd. in Gurak 9). Engaging and indulging such a literacy of the digital landscape is surely a means to participate in and constitute this landscape more deftly. Perhaps more importantly, it can be a means to navigate its hazards and the inevitable misappropriation of its incredible potential.

Towards that end, chapter 4 presents arguments for new approaches to teaching and learning within the context of the digital landscape, beginning with the acknowledgement of the landscape as presenting a departure from traditional interpretations of communicative technologies – facilitators and tools – to the landscape itself constituting a broader realm of communicative activities and spaces. This departure is defined using a metaphor of mindsets; “mindset 1” reflecting the traditional, physically-bound approach, and “mindset 2” reflecting the networked, ambient one (Lankshear and Knobel). These arguments recognize the power and presence of self-generated and self-driven and selected content (Castells), as well as the social-

styled “affinity spaces” (Gee and Hayes) within which much generative, knowledge-building activities take place. An extension to that is a rethinking of our mechanisms for evaluation and value-building, especially in the realms of education and academia which largely still seek to assimilate the digital landscape to familiar constraints and typologies. The implications of applying this networked approach – a new mindset – to the field of education is significant. Though the network is a decentralized (and decentralizing) force, drawing on the existing infrastructures of knowledge and power will only catalyze a more aware and engaged society.

New ways of valuation

The first steps in evaluating the need for a new value system is identifying new phenomenon, and determining the lack of effectiveness / obsolescence of previous systems of valuation for those phenomena. The explosion of choice is one of these new network phenomena. In the digital landscape, everything is driven – or appears to be – by user choice. The design of the interface is one that is self-navigated; individuals choose the sites they navigate too, click on (choose again) the pages they want to visit, select certain pieces of information that seem relevant or interesting to them and actively filter out everything that they have thus far *chosen* not to engage with. Thus, individuals in the network are actively involved in making choices about how they navigate the landscape and consume, share, or engage with information. Essentially, the network is an explosion of choices – good and bad, positive and negative – that are constantly making demands of users’ attention. As Fagerjord argues, even the rhetorical aspects of the interface are self-generated: “Before the computer, the *mode of distribution, mode of acquisition, mode of restrictions, and mode of signification* were usually given by technological constraints or conventions of the medium... in a computer medium, few

of these aspects of rhetoric are given. Instead they are ranges of choices to the author” (Fagerjord, emphasis in the original). Another network phenomenon is information saturation. As early as 2011, tens of millions of tweets [messages sent on Twitter], Facebook posts, and blog entries were being made daily and more than 200 billion emails sent (Pariser 11). Google’s former CEO Eric Schmidt proclaimed that “all human communication from the dawn of time to 2003 [would] take up about 5 billion gigabytes of storage space. Now we’re creating that much data every two *days*” (qtd. in Pariser 11, emphasis in the original). That was then, now the rate has reached 25 billion gigabytes of information, *daily* (Loechner, emphasis added), and it is growing. It is not only data that is being created. For some perspective on the sheer volume of textual production, Clive Thompson estimates the amount of writing produced online as the equivalent of 36 million books daily, by contrast “The entire Library of Congress... holds about 35 million books” (256). Here, the public’s engagement with language and writing seems larger than at any previous time in history, increasingly navigating a typographically dominated space as producers of information in addition to being consumers of it.

Largely predicated on the previous two, yet another network phenomenon is the regular engagement with highly-specialized language and disciplinary expertise by disciplinary outsiders – non-experts. Thanks to the network’s enabling of ready access to expert knowledge (in more traditional forms such as books, journals, professional or trade publications, etc.) and the circulation of experiential expertise developed through affinity spaces (and still largely infused with expert knowledge), the public regularly encounters and chooses to engage with highly-specialized knowledge across a range of domains. To do so effectively, one must possess some basic understanding of the disciplinary concepts that underlie whatever specialized topic they are engaging with, and a vocabulary to interrogate it successfully. The diffusion of expertise in the

network makes it rather easy to learn more about any particular area of interest, whether through direct questioning and engagement within affinity spaces, or through self-motivated learning processes, such as video tutorials, instructional materials, and scholarship. All of these knowledge-seeking behaviors necessitate network-based skillsets, such as search expertise, effective web-surfing techniques, and constant filtration and selection.

Outside the application of education, the mindsets framework presents a useful construct to evaluate the validity of existing value systems in light of these phenomena. Recognizing the digital landscape as more than a stepwise change in the communicative space, Lankshear and Knobel sum up the contrasts between new and old valuation systems nicely, here:

[the privileging of] participation over publishing, distributed expertise over centralized expertise, collective intelligence over individuated authorship, dispersion over scarcity, sharing over ownership, experimentation over normalization, innovation and evolution over stability and fixity, creative-innovative rule breaking over generic purity and policing, Phase 2 automation over Phase 1 automation, relationship over information broadcast, and so on... (60)

These contrasts clearly represent new measuring sticks that those who belong to this new mindset use to determine value. From an institutional perspective, a new value system means disrupting old assumptions about the knowledge that students bring with them to the classroom, for example, or the informal networks that citizens create towards a more effective mechanism of regulation and governance. Instead of dismissing, excluding, and deflecting, a more effective approach might be acknowledging, re-directing, and co-constructing – a learning transfer approach that cultivates the most useful aspects of prior knowledge and creates spaces of collaboration rather than competition and/or suppression.

Bursting the filter bubble: The new gatekeepers

As was demonstrated earlier, the volume of information and data that comprises the network is unfathomably large, and its growth is no less exponential in size and velocity. This reality has in fact given rise to a brand-new field: big data. According to IBM analyst Ralph Jacobson, for a corporate client there are four dimensions to big data: volume, velocity, variety, and veracity. “Enterprises are awash with ever-growing data of all types, easily amassing terabytes – even petabytes – of information” (Jacobson). Big data is now being studied in the fields of business and economics to maximize the use and potential of all of this information. Einav and Levin argue that “Even twenty or thirty years ago, data on economic activity was relatively scarce. In just a short period of time, this has changed dramatically. One reason is the growth of the internet. Practically everything on the internet is recorded” (12). The behemoths of the digital landscape, content aggregators such as Google and social media sites like Facebook – increasingly a content aggregator itself – collect points of data from this massive volume to personalize our information feeds, from search query responses, to the news stories we encounter, to the types of products and services marketed to us. There is a reciprocal relationship between these two aspects. These points of data build complex profiles that measure and predict the products we like, information we are interested in, and even the kinds of friendships we seek. By offering this tailored bubble of information and behaviors, the same interests are further reinforced, and it validates our assumptions about these choices. Thus, what is generated is a constant loop of similarity, an echo chamber of ideas and a standardized rather than diversified experience of community. This is the filter bubble. It makes it easy to index and organize the digital landscape, but it significantly complicates the value and quality aspects of it, and it dangerously threatens the diversity of ideas.

Of course, filtration has its benefits and necessities. This research has just acknowledged how vast the network is, and the ocean of information that comprises it. To be sure, without some informational control, the sheer volume of it would make it an impossible space to wade through. We explicitly use filters every day as we navigate the digital landscape; from spam filters on our email, to advertising filters on web pages and blogs, to security and privacy filters that regulate access of individuals to our pages and personal profiles, there is no shortage of filtration that takes place. But implicit filters create similarly implicit screens that in-turn create a kind of network-generated “determinism” (Segev) about who we are, and therefore what we *should* and *can* see. The implicit nature of these filters reduces the efficacy of user control and limits the knowledge we encounter, therefore the knowledge we can seek. The danger of the filter bubble is that it exists in the periphery of our understanding, yet it dominates our mechanisms of understanding. To an extent this is acknowledged, even if implicitly. The conversation on fake news is a great demonstrator of this awareness. The public is concerned about the diet of information they are consuming and are aware that not all of it is accurate. They are unsure how to quantify what is fake news and what is not. They seek that awareness from their spaces of expertise and knowledge networks, but the filter bubble helps reinforce that whatever conceptions they possess seem valid; what they have deduced to be fake news, therefore, must be.

To be sure, the public’s interest in personalizing their experience of the world is not to be discounted. It is not by accident that personalization is one of the fastest growing market development sectors today (Wallace). People would rather not be challenged by opposing ideas, perturbed by unsettling news and world events, or called upon to invest (whether time, money, or energy) in a cause. Desires, however, are lousy predictors for useful or beneficial behavior. A

review of basic cognitive psychology demonstrates how our interests and desires are an evolving development based on what we encounter in the world. And because we can only encounter so much, our interests are also highly limited, needing of challenge to open new avenues of thought and engagement. Thus, profiling our interests and allowing them to drive our circles of knowledge access is highly problematic, to say the least.

Acknowledging it is the first step to bursting the filter bubble, but there are other, proactive behaviors that help us continue to poke at the bubble as it forms around us. Here we invoke each individual's role as gatekeeper. We already make choices, constantly, as we navigate the digital landscape, filtering in and out information. The challenge thus becomes to make smarter choices, and more informed and intentional ones. We already have expert networks that we tap into, sharing information with and seeking guidance from. Here, we can make those more central to our decision-making, and knowledge-seeking processes. We are already content and knowledge producers; therefore, we realize the value of valid, useful information that animates this process. Here, I argue that we can redirect to apply this positive filtration mechanism to validate and evaluate content, information, even question given narratives. A rhetorical approach is what all these shifts imply. By approaching information from a rhetorical perspective, we can recognize and acknowledge the various interests exerting power on the information and how those shape what it looks like. Rhetorical consciousness is an important construct here, as is ambient rhetoric. Rhetorical ambience creates a space for agency to the interface, another dimension of rhetorical influence on the message that is highly salient in the digital landscape. Similarly, possessing rhetorical consciousness challenges the constriction of the filter bubble by recognizing the value of the antithesis, as it also brings awareness to the

interplay of human and digital filters. Figure 3 offers a helpful heuristic demonstrating these dimensions of self-derived gatekeeping.

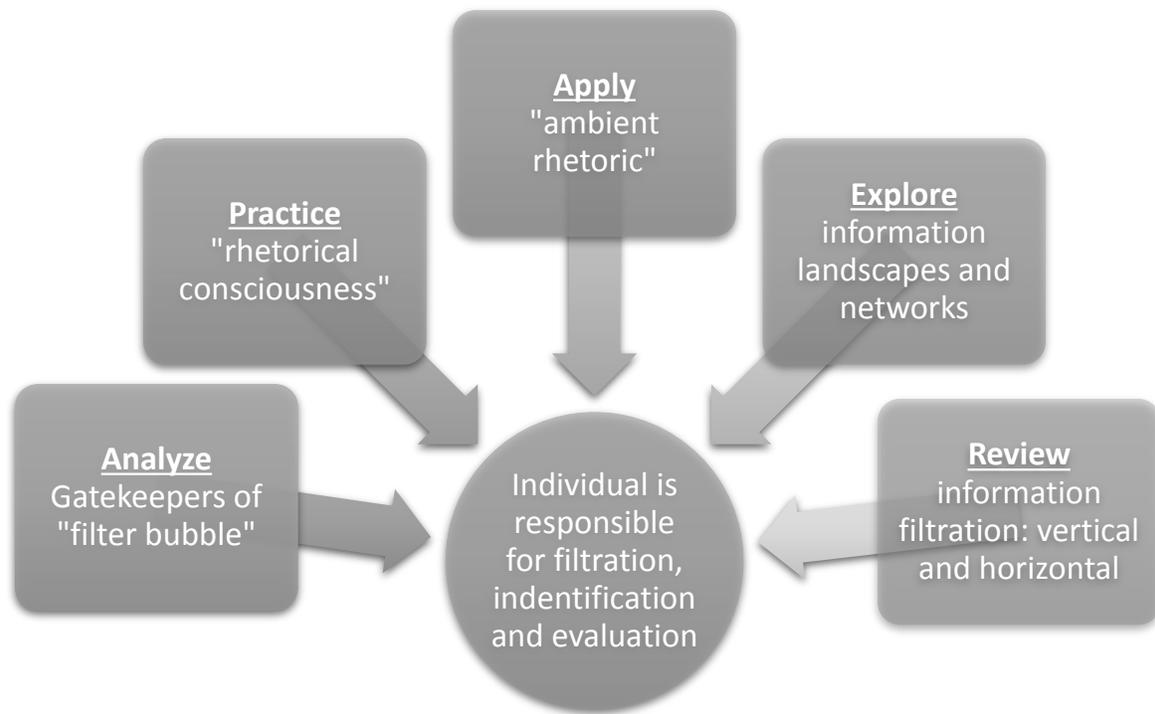


Figure 3

Towards a more effective e-citizen

If it seems as though the digital landscape and all that it represents and encompasses is a little overwhelming you would not be wrong. Its exponential growth and size is hard even for industry analysts to fully capture (Loechner). What is also true, however, is that we have begun adapting to this new landscape and developing the skills and mindset to navigate it. Just as writing rewired our cognition from its primary oral foundation (Ong), so is the digital landscape rewiring our cognition once more. If writing stored memory creating space for analysis and perspective, the internet stores memory *and* analysis and perspective, creating space for metanalysis, simultaneity, and multitasking. It is a third literacy of the communicative realm, but one that brings together both past communicative literacies – oral and typographic – into one

convergent form. This is the orality of the network, a landscape that echoes much of the earlier markers of the primary oral realm such as empathy, participation, experiential memory, categorization, and even homeostasis, through a typographically-dominated interface. There has never been a better time in history to use the tools and skills we already possess to improve public knowledge and understanding.

But, even as insiders of the digital landscape evolve and adapt the mechanisms of this new literacy, the institutions that are meant to maximize the public's potential in deploying it – the educational system, journalism – suppress and hinder it instead. These are institutions that are largely dominated by “outsiders” and “newcomers” to this digital landscape (Lankshear and Knobel). By devaluing the literacies that students bring with them; by disregarding the participatory and relational mechanisms of the digital landscape; by not recognizing the agency of the interface, these institutions disadvantage many that rely on them to reach their academic, civic, and social potentials as informed and engaged members of society. The result is that a large percentage of the public, having been schooled in the traditional systemic values of the pre-networked age, participate and actively engage in the digital landscape but without full awareness of how it exerts an influence on them, even as they exert their influence on it. Hence, the emergence of the filter bubble – an interface level bubble – and many self-imposed bubbles from individual filters predicated on the larger one.

That brings us to another dilemma, that of the new gatekeepers – the content aggregators and social media sites, among others – that are usurping the roles of those vertical institutions. Even as we shed our previous institutional and governmental overlords, it seems that we are simply gaining new, corporate ones, with arguably less oversight and a much less civic purpose driving them. Indeed, the pursuit of power and profit are ever-present forces that will always be

at play, everyone seeking ways to amass more of it. The digital landscape, however, does seem to subsume such entities into its powerful engine of diffusion, perhaps simply because the relationship between benefit and exclusion is less stark and necessary, given that value is no longer as strongly correlated with scarcity in this realm. This is a concept worthy of further research and investigation, as undoubtedly traditionalist economic views are being upended by the new economy of information. For now, though, I will suffice to say that being better e-citizens can be achieved through an operative awareness and intentionality in the digital landscape. By awareness of our own gatekeeping responsibilities; by analyzing the gatekeepers of the filter bubble; by practicing rhetorical consciousness; by applying the conception of ambient rhetoric; by exploring information landscapes and networks, we can fully participate and co-construct the digital landscape, allowing it to reflect positively on our physical spaces and realities as well.

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