MEMETIC RHETORICAL THEORY IN TECHNICAL COMMUNICATION:

RE-CONSTRUCTING ETHOS IN THE POST-FACT ERA

by

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This dissertation interrogates existing interpretations of ethos by analyzing the spread of misinformation through online communities. In particular, this dissertation argues that the rhetorical concept of ethos should draw on the idea of agency as it has been taken up in technical communication scholarship to account for the myriad cultural and technological factors that contribute to the construction of credibility in online spaces. As a way of integrating the concepts of ethos and agency, the author introduces Memetic Rhetorical Theory (MRT), which is an evolutionary model for understanding how elements of rhetorical action co-evolve to create communities with shared rhetorical principles that work together to determine the success or failure of newly-introduced information.

This dissertation begins with a characterization of what some have called the "post-fact" era as demonstrative of the need for new understandings of how ethos develops in various communities. Next, it discusses Memetic Rhetorical Theory in detail, including its history in the field of memetics and its application to modern rhetorical study. The case study chapters conduct memetic rhetorical analyses of the Whole30 community Facebook page and the spread of #fakeprotests following the 2016 presidential election, demonstrating that the interface features of the social media sites that house these movements work symbiotically with the cultural content of the movements themselves to determine the kinds of information that are considered credible within the community. The dissertation concludes with the argument that MRT and memetic rhetorical analysis can help technical communicators to intervene more productively in the spread of misinformation online by offering a more comprehensive understanding of the formation of ethos in these spaces and allowing technical communicators to draw responsibly on those constructions of ethos when introducing new or corrective information.

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Introduction

In recent years, concern regarding the spread of inaccurate or misrepresented information through digital communities has gained traction in the public imagination. In many ways, this concern simply builds on previously existing understandings of the unreliability of internet sources. Cautions about the reliability of information found on the internet were common for myself and other students by the time we reached middle school in the early 2000s, and personal guides for navigating the pitfalls of fake news and false data have begun to spread quickly on social media (Kiely & Robertson, 2016 among others. Also see Figure 1 as an example of the easily-accessible format that such resources often use). The question remains, however, if so much information is readily available to help readers distinguish between reputable sources and misinformation, why do false stories and made-up facts continue to spread like wildfire? With a world of information at our fingertips and the available means to sort through it reliably, why can no one seem to agree about what is true and what is not within digital communities?

Figure 1: Example of an online resource to help identify fake news

Internet technologies are progressive in their role of decentralizing discursive authority by shifting the barriers to knowledge production and distribution, and they also provide a useful way of documenting the spread of misinformation that is not always available in other media. However, the spread of misinformation is neither new nor unique to the internet; as a phenomenon, this process has been around since the advent of the rumor, and even now misinformation is not confined to online spaces, but instead moves among communities that exist both on and offline, often simultaneously. As such, while this dissertation will focus primarily on digital communities and the spread of (mis)information online, this focus should be understood as one facet of a larger discussion that would include intersections of all communities: digital, traditional, and hybrid.

Within this context, I interrogate how and why (mis)information is able to spread so quickly through online communities, as well as the reason why interventions in that process are so often unsuccessful. This project points to the need for critical awareness of the ways that the technologies that we use to communicate on a mass-scale shape, and are shaped by, the ideologies and rhetorical practices that define our communities both large and small.

The spread of misinformation causes confusion, disputes, and often physical harm both to proponents of the information as it is presented and to those who seek to debunk digital myths. In this context, the term "spread" does not refer to people receiving information that they then recognize as false, but rather to the commitment of entire digital communities to ideas that are based on faulty scientific practice, miscommunications, or outright lies. In many cases, as Chapter 4 of this dissertation in particular shows, these commitments end up defining the communities that embrace them while also becoming integral to the rhetorics of those communities. Examples of this phenomenon, from the anti-vaxxer movement to "fad" diets to conspiracy groups and fake news, permeate modern discourse and cause significant concern for journalists, academics, and responsible citizens of all kinds. If and when misinformation is debunked, often by sources that fit traditional models and instructional definitions of credibility, the debunking seems to have little to no effect on the digital communities who have embraced this misinformation. In fact, very often the debunking is disregarded as poor or inadequate research, or even a deliberate attempt at misinformation itself. In other words, these communities often understand the work that debunks or disrupts ideas that they have already embraced as "fake news."

The interesting thing about this phenomenon is that once a community has developed a commitment to a particular piece of information, or the expectation that a certain kind of information exists, the source of that information seems to become irrelevant, as does the credibility of anyone who challenges it. This phenomenon—explored through the brief example below and further in subsequent chapters of this dissertation—calls into question exactly how accurate our existing understandings of what constitutes credibility might be, and therefore how effective our current attempts to intervene in the spread of misinformation are. If attempts to disrupt or intervene in the spread of misinformation are based in traditional understandings of credibility, but those understandings are no longer meaningful for digital communities, then these attempts at disruption or intervention are ultimately doomed to fail. In the discussion that follows, I call for an understanding of credibility (of ethos) that is contextually situated in both the technological and ideological structures that make communities sustainable and that recognizes the interconnected and evolutionary nature of these structures. This is not necessarily a re-defining of ethos but rather an interrogation of how the qualities that various communities recognize as ethotic come to be.

Project Overview

In rhetorical and popular discourse alike, there is a prevailing history of characterizing credibility as the purview of an individual or an institution—as a quality invested in a specific and identifiable set of standard characteristics. These characterizations, while often nuanced and culturally situated, contribute to an understanding of credibility, of authorial ethos, as contextually static and uniquely humanistic. Think, for example, of the ways in which research writers are taught (often by us as rhetoricians, technical communicators, and all varieties of writing instructors) to evaluate sources: look for the author and their credentials (qualities of the individual authorial voice), look for the website or source domain (qualities of the institution claiming ownership of the information), and confirm disputed information with additional credible sources (chosen using the same criteria).

In this dissertation, I interrogate the ways in which rhetoricians and technical communication scholars[1] have characterized the factors that determine the credibility of information by discussing the concepts of ethos and agency as they have been taken up in rhetoric, technical communication, and contributing fields. This literature review also explores the relationship between the concepts of ethos and agency and how they contribute to the success of rhetorical action. Further, I develop a theoretical framework and methodology, Memetic Rhetorical Theory, which brings these concepts into conversation with one another as a way of understanding how existing characterizations of ethos might fall short of offering productive understandings of credibility as it manifests in digital communities. I explore this theoretical framework and methodology through two cases that capture different facets of the adaptive

[1] While I would consider all technical communication scholars to also be rhetoricians, I recognize that this characterization is not universally accepted and that there are some technical communication scholars who would distance themselves from rhetorical studies. Likewise, there are rhetoricians who do not consider themselves technical communication scholars.

characterization of ethos in digital communities and conclude with a discussion of what that adaptive characterization of ethos means for attempts to intervene in the spread of misinformation.

This chapter functions as the introduction and a way of orienting rhetoric and technical communication scholars to the project and to Memetic Rhetorical Theory. As such, it characterizes the need for a comprehensive analytical framework to better understand how networks of actors work to create new definitions of credibility in digital communities. This chapter also lays the foundation for the argument that this more comprehensive understanding creates opportunities for interventions that allow for more successful communication across communities, since it facilitates more productive understandings of how each community distinguishes between fact and fiction.

The second half of Chapter 1 discusses the existing theories in rhetoric and technical and professional communication specifically relating to the concepts of *ethos* and *agency* and then discusses intersections between these terms, drawing on previous work by techno- and cyber-feminists. Following this literature review, I argue that further examination of community-based ethos and rhetorical agency as interconnected concepts is necessary to understand the spread of (mis)information online. This understanding functions as the first step toward productive intervention in and social engagement with the “post-fact” era. Chapter 1 closes with a specific articulation of intervention as the purview of technical communicators as well as an outline of the remaining chapters of this dissertation.

The Post-Fact Phenomenon

To understand this "post-fact" movement contextually, it is first necessary to interrogate our[2] modern understandings of what, exactly, *facts* are and how they fit discursively with our understanding of the world. As an illustrative example, consider the circumstances surrounding the advent of popular usage of the term "alternative facts" in political discourse in the United States. The 2016 United States Presidential Election was historic for many reasons: it featured the first female presidential candidate to represent a major party in the United States as well as the only victorious candidate in a presidential election to have no record of public or military service. According to some, the aftermath of the election was also record-setting in its own way. Donald Trump had run a highly visible and unusually controversial campaign, resulting in both enthusiastic support from his base as well as vehement opposition from others. By the end of the campaign, it seemed that very few people in the United States were neutral about Trump.

Perhaps it was these high-running emotions that led Trump himself to predict that his inauguration would have "an unbelievable, perhaps record-setting turnout" (Nuklos, 2017). This claim, though made publicly by the then-president-elect in an interview with *The New York Times*, could easily have been dismissed as typical braggart behavior; however, it was not. The question of crowd numbers quickly became a point of contention between the administration and many media sources when the numbers were, reportedly, not record-breaking. This debate culminated in a statement made by White House Press Secretary Sean Spicer during a press conference on January 21, 2017, on the day of the inaugural ceremony. At this conference, Spicer claimed pointedly that the crowd "was the largest audience ever to witness an inauguration—period—both in person and around the globe" (Cillizza, 2017). Spicer's claim

[2] When I say "our" here, I am referring to myself among members of the population of the United States of America. I lack the experience or sufficient research support to make any internationally-based claims.

was contradicted by the majority of mainstream news outlets, who identified the crowd size as significant, but notably smaller than the first inaugurations of both Barack Obama and Ronald Reagan.

This debate, while puerile and ultimately insignificant in terms of major issues facing the United States in 2017, became the exigence for a term that would play a significant role in defining concerns about American culture in the modern era. Spicer came under fire almost immediately by fact-checkers and media outlets who challenged him for publicly sharing figures that ran counter to official reports by the Washington Metropolitan Area Transit Authority, among other sources. Coming out in defense of Spicer, administration spokesperson Kellyanne Conway clarified that Spicer had, in fact, not lied. He had simply offered “alternative facts” that presented information counter to the narrative of the mainstream media.

Media, Bias, and The Cultural Expectation of Alternative Facts

Conway’s re-framing of Spicer’s representation of the crowd size through the use of the term “alternative facts” fit well with the already murky definitions of truth and fact—as well as bias—in popular media. Bias and subjectivity are long-established characteristics of human communication, particularly as framed by comparative and cultural rhetoricians (Baca & Villanueva, 2008; King, Gubele, & Anderson, 2015; Mao, 2013; Powell, 2004, 2008). As used by these scholars, and as commonly accepted by rhetoricians more broadly, bias and subjectivity are characteristics of world views and communicative actions based on experience. They are natural and even formative, though subject to critique and reflection.

When used in discourse regarding journalism and popular media, however, the term “bias” takes on a very different connotation. In their book *Guardians of Power: The Myth of the Liberal Media*, Edwards and Cromwell (2006) argued that while journalism in the mainstream media is built on codes of ethics that emphasize impartiality, media outlets are owned by a select set of corporations. Further, Edwards and Cromwell claimed, public recognition of the biases inherent in corporately-owned media outlets creates the perception that “the mainstream media” are intentionally dishonest. In other words, the public is well aware that journalists, by training and tradition, are meant to offer facts rather than opinions; they should convey events, not ascribe value judgements to them. This is the distinction between understanding objectivity as a state of being rather than as a writing style, the former being impossible, the latter highly prized in many fields of discourse. Unfortunately, this distinction is easily muddled or ignored, particularly when audiences have deep personal and emotional investments in the discourse, as we often do in politics.

The American public has historically been highly critical of failures in objectivity as a writing style when used by journalists (Edwards & Cromwell, 2006; McChesney, 2008; Cramer & Eisenhart, 2014). However, the introduction of the concept of alternative facts emphasized a new facet to this concern for objectivity; namely, the American public began to demonstrate increased awareness that the act of reporting events is, in itself, a value judgement because those facts have persuasive power. If President-Elect Trump says that his inauguration boasted the most populous crowd in history, then any media report to the contrary becomes not a description of an event (*objective*, according to Cramer & Eisenhart) but a judgement placed upon a person, and so a matter of opinion. Anyone seeking to report on events, then, is in a very difficult position; there is now a very prominent public understanding that, while facts may be objective, they are not value-neutral. The debate surrounding the size of the inaugural crowd demonstrates this tension well.

Many mainstream media sources expressed frustration that simply showing an image of the crowd failed to provide a definitive determination of its size, thereby resolving the disagreement (Frostenson, 2017; Hunt, 2017; Robertson & Farley, 2017). However, the idea that the crowd size was larger than reported is heavily rooted in distrust of the media and the idea that the media manipulate information, including altering photographs, to fit a pre-established agenda. Long-established—and now ideologically validated—allegations of bias contribute to this distrust. These allegations of bias, coupled with easy access to other images that appear to show a larger crowd, allow the images that depict the smaller crowd to be easily dismissed within these certain communities. Spicer himself even claimed that one oft-referenced image in which the crowd looks smaller than that of past inaugurations was framed with the specific intention of minimizing the crowd size. He said, "Photographs of the inaugural proceedings were intentionally framed in a way, in one particular Tweet, to minimize the enormous support that had gathered on the National Mall" (Qiu, 2017). This accusation and others like it demonstrate a belief that some reporters are not above manipulating photographs, either physically in the way the shot is set up or digitally through ex post facto alterations, to influence public perceptions. Thus, we have at least two conflicting sets of facts that seem to be supported by evidence that various communities deem credible based on their communal experiences and established value systems. It is difficult, if not impossible, to convince either group to question the facts they have embraced specifically because the standards for credibility that help convey those facts are not consistent across communities (in this case, the communities tend to define themselves by political party affiliation).

If Not Facts, Then What? A Literature Review Surrounding Ethos and Agency

The *Oxford English Dictionary* defines “post-fact” as “relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion or personal belief” (2017). There are significant discrepancies in the application of this term, although common themes associate it with hot-button political discourse and the common practice of relying on digital media sources for information. Alexios Mantzarlis, for example, notes that media sources are most likely to reference a “post-fact era” or “post-fact society” when they catch politicians in a lie (2016). He also notes, however, that it is absurd to argue that attempts to lie to the public are indicative of a drastic change in society—people in general, and politicians in particular, have lied all throughout history. We are simply more likely to notice inconsistencies now because such a wealth of information is widely and instantaneously available online (Mantzarlis, 2016).

When I use the term “post-fact,” then, I am not referring to the existence of more false information, but rather to the tendency prominent in modern discourse to dismiss credible information, particularly when it challenges existing/dominant understandings of an issue within a certain context or community. This tendency is, of course, problematic for any society that relies on civic discourse, but it raises a particularly interesting question for rhetoricians, who have historically interrogated modes of persuasion, including loci of ethos, and systems of logical reasoning. When it seems large portions of the population are no longer willing to listen to established reason, or that we are unable to determine whom to believe regarding matters of observable fact, a deeper interrogation into these modes of persuasion and the technical apparatuses that support and disrupt them becomes necessary.

The following literature review explores how other scholars have interpreted the rhetorical appeal of ethos and argues that, while these interpretations have served their purpose well in rhetorical discourse, they have thus far not engaged sufficiently with the related concept of agency as it has been taken up by technical communicators and digital rhetoricians. Rhetoric is broadly conceived as the study of persuasion and the post-fact issue is, at its core, a question of how and why so many people are easily persuaded by information that is demonstrably false. Our traditional understandings of ethos, or the origins of credibility, are insufficient for understanding why large groups of people think and behave the way that they do because, in our modern digital information age, credibility is created not only by personal interactions and cultural institutions, but also by myriad other factors that affect how, when, and why information is passed among communicants, whether it is believable or not.

This discussion of ethos builds on rhetorical definitions of the term that have evolved from its introduction in the classical era. Aristotle characterized ethos as the appearance or performance of credibility in accordance with certain standards of character. Herrick (2001) points out that these standards of character (competence, good intentions, and empathy) were determined through "careful study of what Athenians consider to be the qualities of a trustworthy individual." In other words, the rhetor who portrays ethos during his oration draws on an established identity of a credible persona and attempts to mimic that persona in his delivery. Plato, conversely, argued that the goodness inherent in a person, rather than performed by a person as a strategy, was what allowed that person to possess ethos. Regardless of these significant differences, these ancient Greeks (as well as Romans Quintilian and Cicero) attribute ethos to some connection between the rhetor, his audience, and characteristics that he possesses or performs. I would like to add to this characterization of ethos by interrogating the mechanisms through which those characteristics, which differ from culture to culture and from situation to situation, come to be invested with this quality of credibility. In connecting ethos with agency, I argue that it is a confluence of cultural ideologies and communicative technologies that determine the qualities necessary for credibility to exist within a community. For example, while Aristotle argues for a performative understanding of ethos, the addition of agency to this definition points to the fact that such a performance is only possible for a rhetor in a context where the audience can observe his body language and hear his voice. As such, the agency of the physical construction of the agora interacted with other cultural elements and practices to place rhetorical value on these characteristics that could be performed by a speaker.

I suggest that we think of ethos as a characteristic of the internal environments that digital communities create based on their shared rhetorical practices. As a rhetorical conundrum, the rapid spread of misinformation online requires an expanded definition of the concepts of both ethos and agency as they manifest in rhetorical theory. While these concepts are closely related, they are not synonymous, nor do we yet have work that puts them into conversation with one another as a way of more productively understanding digital rhetorics.

This discussion is based in the understanding that communities create, and are defined by, their own internal rhetorics. As such, rhetorics are fluid, adaptive, and integral to the communities associated with them. It is this characteristic of community rhetorics that allows successful communication, and therefore persuasion, to take place among community members. This understanding is also closely tied to a parallel interpretation of culture as the defining characteristic of a community. As groups of people live and communicate with one another, they gradually develop patterns of speech and ways of thinking that reflect their shared interactions. Over time these solidify into what we might recognize as key cultural elements—beliefs, values, speech patterns, even logical constructs. These cultural elements form the boundaries of communities and help members of communities recognize one another and, as such, the rhetorical practices that define communication within that community. For this reason, when I discuss rhetoric or rhetorical practices in this dissertation, these terms should always be understood as explicitly cultural; I will not make distinctions between "digital rhetorics" and "cultural rhetorics" because I understand both of these as ways of discussing the community-based nature of rhetorical action. To quote Angela Haas, "Rhetoric is always already cultural" (2012), and digitality is simply a feature of how certain communities communicate to develop that culture. The following discussion of ethos likewise relies on this understanding of rhetoric.

Culturally Situated Ethos

For the purposes of this project, I define ethos—broadly and simplistically—as the contextual quality of a particular text, individual, or piece of information that allows it to be valued by members of a community to which it is communicated. Rhetorical study has a history of characterizing ethos as a quality of an individual, or as authority derived from an institution. While Quintilian's characterization of "a good man speaking well" is now both quite dated and intensely problematic, the association between this definition, as well as other ancient definitions of ethos discussed previously, and the idea of an embodied characteristic enacting a set of recognizable virtues often remains prominent in even the most progressive definitions of ethos. Drawing on the idea of an audience recognizing virtue or goodness in a speaker, and therefore holding that speaker's words in higher esteem, many rhetoricians continue to interrogate how writers and speakers (as individuals or institutions) might create or perform ethos in a given context. Patricia Bizzell (2006) points out the ways in which activist Frances Willard was able to cultivate rhetorical ethos by performing recognized tropes of Methodist womanhood to call her followers to the movement for women's suffrage, while Carolyn Skinner (2009) follows similar logic in her analysis of anatomy and physiology lecturer Mary Gove's credibility—a difficult construction for a woman of science in the mid 1800s—and its relationship to traditionally positive or "feminine" qualities that her audiences were willing to attribute to her character. These examinations take into account that ethos, rather than being an inherent characteristic of an individual, is derived from a relationship to one's culture and community.

The relationship between an individual and their community is never static; rather, it is always in flux. Nedra Reynolds (1993) specifically articulates ethos as location regarding the social and cultural position from which a speaker/subject establishes authority. She says, "In this view ethos is not something "embodied" by the classical orator with his audience, nor it is crafted in solitude by the modernist artist in his garret (Brodkey). Ethos, like postmodern subjectivity, shifts and changes over time, across texts, and around competing spaces" (p. 326, emphasis in original). Reynolds's characterization aligns well with the ways that ethos has been taken up by feminist rhetoricians as a characteristic that is contextually responsive and indicative of the speaker/subject's relationship to her surroundings and topic of discussion. For example, Coretta Pittman (2006) draws on Aristotle's emphasis on the ability of the moral performance of an individual to hold persuasive power, and then complicates this understanding by pointing out that because our interpretation of moral character is culturally dictated, this process often results in the exclusion of certain groups. Specifically, she demonstrates the ways in which black women writers are more likely to have their moral character questioned because of the ways that Western classical models of ethos stigmatize these individuals.

These culturally situated definitions of ethos are illustrative in the sense that they point to contextual constructions of credibility that happen outside the individual; they refer to a person's ability (or lack thereof) to fit with a set of cultural expectations that both shape the rhetorical situation and exist independently of that individual. Often they point to communal beliefs or ideologies that dictate what constitutes moral or acceptable behaviors and then discuss relationships between those mandates and the individuals in question. This relationship between cultural ideologies and the individual is important, but it is not the whole picture. Technical communication scholarship adds to this discussion by pointing to instances where cultural ideologies confer ethos on things that are not human, specifically on networks and genres.

Recent work has both built upon and complicated this understanding of ethos as culturally situated by placing the locus of ethos in networks or genres. Julia Marie Smith's (2017) chapter "A Gay Girl in Damascus: Multi-vocal Construction and Refutation of Authorial Ethos," is a prime example of this redistribution, as she attributes ethos to the development of networks of recognized accounts through social media. In this chapter, Smith notes the readiness and tenacity with which digital communities put faith in the persona of Amina, who claimed to be a lesbian, Syrian-American activist living in Damascus. In reality, Amina[3] was the online persona of Tom MacMaster, a straight man living in the southern United States (Smith, 2017). Even after an exposé verified by MacMaster himself, many of Amina's admirers refused to believe that they had been duped. In this case, the ethos of the network was so powerful that, even when parts of that network publicly disavowed Amina, the remaining sectors were able to sustain her persona as a credible one for some time. Notice here as well that Amina herself was no longer communicating directly with any members of this community; she had never physically existed, and her online identity had been dissolved. Her ethos, then, could not reside in any manifestation of her personhood but rather in a collective understanding agreed upon by her network of followers. Amina's story is not unique, for another compelling example, consider

[3] In this section I refer to the persona of Amina as "she" and "her" despite her lack of corporeal existence. I made this rhetorical choice because, as Smith points out, the persona of Amina became real to the community that embraced her.

the case of Jenna Abrams—a conservative online persona recently exposed as a Russian media bot. Both of these examples offer the possibility of understanding the locus of ethos as outside the human body, yet still conferred using culturally constructed characteristics that are recognized as credible within the community.

While the conferral of ethos on a non-human might at first seem strange, it is in fact not all that unusual in technical communication scholarship. In their analysis of ethos in technical manuals, Frost and Sharp-Hoskins (2015) argue that it is often not only possible, but necessary to separate the idea of credibility from a human body. In technical manuals, which characteristically exclude the name of the author or authors and often appropriate text from other sources, the ethos must belong to the document itself rather than the individuals who wrote it for the document to have its intended effect, thereby avoiding misuse of the product. This interpretation aligns well with our usual understandings of genres as technologies that shape discourses; following this logic, genres themselves, in addition to individual documents, can enact ethos.

All of the definitions of ethos discussed thus far have relied on the ability of an audience to recognize (whether present or performed) certain traits within a speaker, network, or document. However, the unanswered question of how that recognition occurs remains. In the following discussion of agency, scholars demonstrate the power of non-human actors to influence rhetorical practice. It is this influence, exerted by spaces, objects, technologies, systems, and humans alike, that allows for communicative action and therefore the demonstration of the cultural qualities through which ethos is conferred. As such, a thorough consideration of agency is necessary for productive understanding of how ethos manifests in various communities and, as such, why those communities bestow credibility in the ways that they do.

Rhetorical Agency

For the purposes of this dissertation, I define rhetorical agency as the power to influence or affect the dynamics of rhetorical action. While ethos describes the credibility or trust that community members invest in individuals, networks, and institutions, agency points to the ways in which both human and non-human actors (to use the Latourian term) shape those communities by allowing communication to take place. In this definition, agency does not imply either intent or cognition as humans understand it; instead, as a concept, agency is entirely separate from any suggestion of consciousness, thought, or personhood. Rhetoric is a human phenomenon. As such, it is neither possible nor productive to attempt to separate rhetoric from human participants. My claim that non-humans can and do have agency in rhetorical situations does not refute this concept. Rather, it suggests that humans interact with our environment and the things, people, and ideas that make it up in ways that shape our rhetorics. Humans—our thoughts, our feelings, our bodies, our cultures—are still very much at the center of rhetorical activity; we simply act in response to other influences, both human and non-human, that shape our rhetorical practices as well as our cultures and technologies.

In our actions we respond to things out in the world; sometimes those things are human and sometimes they are not. When we use tools and technologies, consciously and to achieve our own purposes, we make use of the affordances and constraints that they have (in simple terms: the things they do). In other words, the cultural construction of meaning is a process that is both interactive and collaborative among human and non-human actors. In response to a hot, sunny day, a person might sit under a tree that provides shade, or (to modify a classic example) we use hammers (not marshmallows) to pound in nails. It is the characteristics of these objects, these actors, that help to shape the actions of human participants. In other words, these non-human actors exert influence by how they exist in the world in relation to other things; they allow, or do not allow, certain activities to take place. To draw on the model of thinking provided by Jim Johnson (1988), "every time you want to know what a nonhuman does, simply imagine what other humans or other nonhumans would have to do were this character not present" (p. 299). Furthering this explanation, Johnson describes the work that would need to be done to replace the existence of a hinge on a door (a nonhuman actor):

> To size up the work done by the hinges, you simply have to imagine that every time you want to get in or out of the building you have to do the same work as a prisoner trying to escape […] plus the work of those who would rebuild the prison's […] walls. If you do not want to imagine people destroying walls and rebuilding them every time they wish to leave or enter a building, then imagine the work that would have to be done in order to keep inside or keep outside all the things and people that, left to themselves, would go the wrong way. (p. 299)

The hinge in this example, by virtue of its existence and presence in the situation, makes various human behaviors likely or possible. Of course, the hinge does not mean to do this; it has no intentions, no thought, no consciousness as human beings understand these concepts. However, because of its presence, human actors behave differently. The dynamic of the space and the interactions that take place within it change.

The hinge, of course, is a microcosmic example in that the environment it influences is relatively small (a room or building, the occupants thereof, and the situations they encounter). The hinge is also open to some degree of agentic interpretation because it was created by a person to fulfill a purpose. Macrocosmic instantiations of this process are both more complex and less capable of being associated primarily with individual human actors. Consider, for instance, the essentially universal responsiveness of human cultures to the physical and geographical environments in which they exist. Jared Diamond's (1997) transdisciplinary work *Guns, Germs, and Steel: The Fates of Human Societies* offers a close examination of this cultural response to environmental factors while also foregrounding the relationship between cultural responses to physical conditions (arid landscapes, for example) and the hegemonic ideologies that arise from the disparities those conditions create.

These hegemonic ideologies themselves might also be considered agentic non-human actors, as agency is not limited to physical or tangible artifacts but can include actors such as social systems or power structures as well. Things like gender and patriarchy, race, sexuality, (dis)ability, social class, and the many other identity characteristics that we might think of are not human themselves, nor do they possess the kind of central consciousness that we might associate with an anthropocentric definition of agency; however, they absolutely exert influence in rhetorical environments and shape rhetorical action. Foucault (1977) characterizes some iterations of these systems in his discussion of the social conditioning and disciplining of bodies, as does Butler in her 2004 book *Undoing Gender*.

Both rhetoricians and technical communication scholars more specifically have noted the ability of non-human actors to shape rhetorical environments. Frost and Haas (2017), for example, note that the mediation of ultrasound technology acts as a gatekeeping mechanism for women's access to and understanding of their reproductive healthcare, though the technology often goes un-critiqued. Brock and Shepherd (2016) likewise articulate this phenomenon, and its rhetorical erasure, in their examination of matching systems used by Google, Match.com, and Facebook that push users to engage with certain kinds of content. They claim:

> As rhetoricians we often engage in one of the most powerful existing enthymematic activities: we convince ourselves that we are actively making decisions about how to participate in a given system when, in reality, we accept options made apparently available to us from a set of constrained possibilities. In other words, we allow ourselves to be persuaded that we are the only agents involved in a particular situation when, in reality, there are networks of visible and invisible actors working to persuade us to specific ends—often including further participation in relevant persuasive computational systems. (p. 18)

Brock and Shepherd are specifically discussing website interfaces in this paragraph, but it is not difficult to extend that application to the various interactions between humans and non- human actors that have formed the bulk of this section. The language, in fact, bears a striking resemblance to the ways in which socially critical rhetoricians have critiqued the erasure of privilege in dominant discourses (Haas, 2012, among others). In both cases, non-human structures (i.e., algorithms and socio-cultural hierarchies) exert rhetorical influence that affects human discourse and activities as well as beliefs. While these structures are rendered invisible by both their wide prevalence and the apparency of human agency, they remain agentic within the rhetorical situation. Furthermore, their invisibility only strengthens their agency, as it results in fewer opportunities for critique.

Rhetorics of place tend to emphasize the rhetorical agency of geographic locations in relation to the cultural associations that various groups have with those locations. Places, these scholars argue, hold cultural memory in a way that shapes the communities who interact with them (Bar-Itzhak, 1999; Endres, Senda-Cook, & Cozen 2014; hooks, 2004). Rhetorics of space focus on the rhetorical power that the physical construction of a location possesses. Scholars who engage with rhetorics of space (Andrews, 2017; Dickenson & Ott, 2013; Rickert, 2013; Soja, 1989; Swarts, 2007) contend that observable features of a location influence both how people interpret that location and how they interact with each other because of that interpretation. Work that combines rhetorics of place and rhetorics of space (Bray, 1997; Wright, 2005) invests cultural capital in features of a location and therefore suggests a symbiotic relationship between cultures and the locations in which they develop. Space and place, then, are examples of factors that shape community interactions and therefore rhetorical practices. They are not humans in and of themselves, but they are features that humans recognize and respond to.

The same is true whether the spaces are physical, as in the works discussed above, or digital, as in the forums and social media sites in which digital communities develop. These spaces become invested with cultural influence; their digital makeup becomes the foundation for the communicative practices that define communities. As Beck (2015) demonstrates, cookies and web beacons store user information to customize user experiences online, allowing algorithms to adapt certain content on digital sites to suit particular users. Technological interfaces play a powerful role in shaping “post-fact” discourses for precisely this reason. The personalized algorithms built into digital technologies provide an unusually powerful filtration system that help to create highly polarized communities wherein communicative norms are established by the combination of site features and commonalities in tagging criteria that filter users to those sites. Pariser (2011) calls this phenomenon a “filter bubble” and points to the lasting impact that it has in closing users off from diversified information sources.

The obfuscation of the agency of non-human actors, whatever form they may take, creates an environment in which the only influential factors that human actors are aware of are our own choices. This, in turn, removes the possibility for these human actors to critique the systems to which we belong, and in which we participate every day. We think that our choices are our own, but they are integrally linked with the confluence of factors exerting agency in a rhetorical situation. The assumption that agency is the purview of humans alone likewise obscures the systems through which communication takes place. These systems allow (or prevent) the performance of ethos in various ways, helping to determine how credibility manifests within communities.

Ethos and Agency Together: The Need for Memetic Rhetorical Theory

Existing literature has yet to bridge the gaps among agency of the myriad human and non-human actors discussed in this literature review and the ways in which that agency intersects with the construction of ethos in rhetorical environments (including the digital). It is at this intersection that I situate myself and the work in the following chapters. This project requires an examination of the intricacies of spaces, places, technologies, and artifacts alongside the social systems that shape (and are shaped by) them all. Techno- and cyberfeminists have begun this work already in their interrogations of the ways that technologies can both reinforce and challenge hegemonic social structures (Beck, Blair, and Grohowski, 2015; Blair, Gajjala, and Tulley [eds] 2008; Frost and Haas, 2017; Gajjala and Oh, 2012; Gruwell, 2015).

Taken together, the understandings of ethos and agency as defined in the last few pages suggest that there must be a system of interactions and a confluence of material and immaterial factors that determine how and why communities become invested in certain kind of information. Rather than relying on established patterns of institutionally conferred expertise or academic research, most communities look for and recognize responsive manifestations of credibility that are rooted in communicative practices that characterize those communities. The existing rhetorical models employed by technical communicators are unable to account for the extreme discrepancies that we are observing in closed-community communications, specifically because they attempt to engage with these considerations in isolation, rather than as a coherent but evolving system. In response, I developed a theoretical framework, Memetic Rhetorical Theory (MRT), which consists of an evolutionary model of analysis for recognizing how certain pieces of information become persuasive in different communities. Each of the bodies of theory discussed and reviewed in this chapter have contributed to the development of this theoretical framework. This dissertation develops and applies MRT, which provides a comprehensive framework for identifying, analyzing, and intervening in the confluence of factors that influence (in)effective communicative action, especially in digital spaces. MRT also provides a model for understanding rhetorical systems and emphasizes the successful spread of cultural elements through coadaptation, seeking to understand how a variety of factors, from socially systemic influences to features of specific technologies, evolve together to form the distinctive rhetorics that determine the success or failure of communication in a particular scenario. MRT is relevant in both digital and non-digital environments; however, I focus specifically on digital communities because so much popular media has argued that the internet is to blame for the "post-fact" era due to the mass influx of information and a widespread inability to sort through it in productive ways. While I complicate this argument, its persistence points to a tension within digital rhetorics that I propose MRT could solve. The following chapters approach the idea of "post-fact" by examining how complex environments formed by groups of co-adapting cultural elements work to create new definitions of credibility in digital communities and how those definitions of credibility shape the way that communities distinguish between fact and fiction.

MRT considers that a community, as a whole, is more likely to be persuaded by an idea that adapts easily to the core beliefs of that community, to the rhetorical practices that its members use to communicate with one another, and to the technologies that facilitate that communication. These interpretations of agency and ethos discussed in this chapter offer critical perspectives that inform understandings of the relationship between these two concepts and the ways they work together to influence the spread of information through digital communities. MRT does not seek to replace these theories, but rather to offer a way of weaving them together to afford more cohesive, comprehensive analyses that have greater potential to lead to productive intervention through successful communication.

While MRT is, as the name suggests, a rhetorical theory, I consider this to be a technical communication project for two interconnected reasons. First, technological interfaces play a powerful role in shaping “post-fact” discourses specifically because the personalized interfaces built into digital technologies provide an unusually powerful filtration system that helps create highly polarized communities. This self-perpetuating cycle is a significant part of what made the spread of a fake news item so difficult to disrupt. Each of the two analyses offered in this dissertation represents the creation of interrelated communities that form based on ideologies shared and perpetuated through technological interfaces. These communities, because they are so ideologically isolated, are characterized by rigidly co-adaptive groups of ideas that are increasingly resistant to new or contradictory information, hence “post-fact”. Second, and following logically, interventions that disrupt this process will need to address these flaws in the interface, which means that these interventions will likely need to be the work of technical communicators.

Chapter 2 establishes MRT as both a rhetorical theory and as a methodological framework that will be applied to the cases in Chapters 3 and 4. Building on the simple overview of MRT offered above, the chapter discusses the origins of memetics (the field from which I draw portions of Memetic Rhetorical Theory) and its recent history, including the places where it falls short as a neuro-biological theory. Next, I argue for the application of memetics in a rhetorical model (hence, Memetic Rhetorical Theory- MRT) that helps us to understand how effective communication and persuasion happens in digital communities. The bulk of Chapter 2 focuses on explanations and illustrative examples of key tenets of MRT to create a through explanation of the theoretical work that frames the entire dissertation, and Chapters 3 and 4 specifically. Chapter 2 concludes with a general discussion of methods of memetic rhetorical analysis.

Chapter 3 applies Memetic Rhetorical Theory to the network of Whole 30 online communities, most of which function as support groups or motivational sites for individuals completing the "Whole 30 Challenge"—an eating program that focuses on the elimination of certain food groups in pursuit of a healthier lifestyle. The program includes a book titled *It Starts With Food*, which creator Melissa Hartwig later expanded into a series, and now includes several different but overlapping digital communities. Chapter 3 begins with a memetic rhetorical analysis (according to the methods outlined in Chapter 2) of *It Starts With Food*, as well as other books published as a part of the Whole 30 collection prior to November 2016. This analysis then extends to the Whole30 Community Facebook page, identifying the ways in which the community on this page takes up or disregards the content of the books. In particular, the memetic analysis in this chapter demonstrates that the community on the Whole30 Community Facebook page engages primarily with content that corresponds to features of the page interface, and that the inclusion of various elements in the books authored by program creator Melissa Hartwig is not a definitive indicator of ethos in this new environment.

Chapter 4 applies MRT to understand the proliferation of a particular fake news item that gained traction in conservative online forums during the 2016 USA Presidential Election—the "bussing in" of protestors to a convention in Austin, TX, by the Hillary Clinton Campaign. This case provides a productive perspective for understanding how digital communities shape concepts like fact and credibility specifically because the original author of the tweet that was cited as evidence of the bussed-in protestors retracted his claim less than 4 hours after the post, and instead indicated that the busses he had photographed were in town for an entirely different purpose. While his original claim spread quickly through conservative websites, the following retraction died out almost immediately. Site analysis for this case will center around Twitter via the hashtags associated with the event, as well as a Facebook group where the original image was shared. This case provides an example of spread of misinformation through association with and adaptation to the existing the existing community rhetorics.

The final chapter reiterates my previous argument that MRT is a more comprehensive way of understanding the rhetorics of digital communities. However, it extends this argument beyond academic analyses and into potential realms for intervention. The application of MRT calls for critical reflection on the forces that shape rhetorical environments in all kinds of communities, and for implementing that reflection in a way that allows us to draw on the existing ecologies to introduce new information in a more productive way. The chapter closes with an example of one such successful intervention as well as a caution that intervening in problematic systems is a gradual and often-times unrewarding process, as successful interventions must draw in part on the features of the ecology that are already in place.

Chapter 2: Memetic Rhetorical Theory

Introduction and Overview of Chapter 2

Chapter 1 articulated the growing concern in both academic and popular circles that the United States is becoming a “post fact” society. With the rapid spread of misinformation, especially in online spaces, the existing models that rhetoricians have for understanding ethos as it relates to community interactions need to be re-evaluated. In particular, these understandings of ethos need to expand to include critical reflections on how the distribution of agency in rhetorical communities affects the construction of ethos in these spaces. In this chapter, I offer a step toward that understanding in the form of Memetic Rhetorical Theory (MRT), a rhetorical theory and methodological framework for understanding the rapid spread of misinformation online. MRT offers a framework for understanding the connections between existing concepts in rhetoric and technical communication (concepts like tropes, genres, actors, and technologies, among many others) and emphasizes the connection between these concepts by characterizing all of them as kinds or categories of memes. MRT then uses the co-adaptive nature of memes as a way of understanding how the distribution of agency in rhetorical environments alters understandings of ethos in those ecologies.

This chapter begins with a brief discussion of memetics, the field that serves as one of the foundations for MRT, as well as a discussion of common critiques of the limitations of that field. Next, I articulate key principles within the fields of rhetoric and technical communication that point to the need for Memetic Rhetorical Theory and explore the principles of that theory in detail. This discussion forms the bulk of this chapter as well as the methodology for this dissertation project. I follow this discussion with an introduction to appropriate methods for conducting a memetic rhetorical analysis based on the methodology of MRT. The chapter concludes with why and how I applied MRT to the cases discussed in Chapters 3 and 4.

Framing MRT in Rhetorical Study

The literature review offered in Chapter 1 discusses ethos and agency as rhetorical concepts. Specifically, this literature review characterized ethos as credibility that is derived from cultural context, and agency as the ability to exert influence that shapes that context. As such, in order to understand ethos, and therefore how ethos is cultivated for and through misinformation in digital communities, scholars must take agency into account by interrogating the ways in which cultural ideologies and technologies work together to form networks of influence that define the culture of communities (what I will later call memetic ecologies). This body of work has helped point to the need for a model for understanding how these networks are created and the effect that this process has on rhetorical action. In this chapter, I offer such a model in the form of Memetic Rhetorical Theory (MRT), an understanding of rhetoric that draws on the field of memetics to recognize the evolutionary and environmentally-situated nature of rhetorical action. This rhetorical model is particularly helpful for understanding the spread of misinformation online because it emphasizes the network and the environment as key factors in determining the factors that define ethos in a given situation.

As an evolutionary model, MRT relies on the understanding that the rhetorical environments created by intersecting networks of actors not only exist and exert influence, they also are continually growing and changing. The information transmitted within these environments must likewise grow and change to adapt successfully to its surroundings, thereby effecting successful communication and rhetorical action. This changeability of communication is reminiscent of Ridolfo and DeVoss's (2009) concept of rhetorical velocity as well as

Lawrence Lessig's (2008) remix, with one crucial difference: Memetic Rhetorical Theory expands on these concepts by asserting that ideas spread and evolve in response to the environments into which they are introduced, not only as the result of conscious changes made by human (re)writers.

The following section offers a brief history of memetics as a field of study, including the key features of the science of memetics. This history is intended to provide context for the application of memetic terms and analytical models to rhetorical analyses by pointing out the overlapping goals of memetics and rhetoric. In this section, I will also point out the ways my application of memetic theory to rhetoric diverges from some scholars' interpretations of memetics. Later in this chapter, I construct Memetic Rhetorical Theory by tying memetic tenets and terminology together in order to create a method of analysis I call memetic rhetorical analysis.

Understanding Memetics As a Field of Study

Memetics is a distinct field of study focusing on the evolution of culture through the transfer of ideas, information, or communicative activities. The origins of this field lie in Richard Dawkins's 1976 book *The Selfish Gene,* which focuses on the gene as an important element of evolutionary biology, although the study and application of memetics have evolved significantly from this foundation.

Figure 2: "Hey Girl" meme according to colloquial usage

The field of memetics begins with the definition of the meme itself. This definition, of course, relies on an understanding of the term meme outside of the usual colloquial usage. This colloquial usage understands a meme as a particular communicative genre consisting of image/word pairings on the internet. Most people recognize this term as referring to an image, usually shared through social media, with an ironic or humorous caption overlaying the picture although it can refer to audio clips, gifs, and other representative forms as well. Many of these are based on well-recognized images that convey cultural meaning of their own, like the massive body of "Hey Girl" memes that idealize actor Ryan Gosling as the perfect embodiment of a man who is both physically attractive and sensitive to the needs of his (female) partner (see Figure 2).[4] Other well-known examples of this kind of meme[5] include Socially Awkward Penguin, Sarcastic Wonka, and LOLCats (See Figure 3).

Figure 3: Other examples of image-macro colloquial memes

While these are examples of memes as defined by both memetics and MRT, the theoretical definition of the term meme as it applies in this project goes well beyond this isolated genre. It is

[4] It would require another whole dissertation to discuss the nuance and cultural factors—both constructive and problematic—inherent in this genre and common instantiations of it. For now, suffice it to say that these are the artifacts that many people recognize as "memes" in popular discourse, and, while they are examples of the kinds of memes that I am discussing here, they are only a minute representation of a much larger theoretical concept.

[5] This is an example of an image macro. In this context, not all memes are image macros, but all image macros are memes.

therefore helpful, from this point forward, to disassociate the term meme from this genre, specifically, and instead think of it in the theoretical terms that follow.

When Richard Dawkins first introduced the term meme, he was looking for a way to define what he called "the basic unit of cultural transmission" (Dawkins, 1989) and he wanted a term that would invoke both the idea of imitation, which he considered central to the replication of cultural elements, and the idea of evolution, which was his model for how these elements grow and change together. Thus, he combined the words *mimesis*, from the Greek word meaning "to imitate," and *gene*, as in the primary building block of genetic evolution, to create the word meme (Dawkins, 1989).

From this point, however, the definition of the meme began to grow and change, from broad but limited understandings like that of the *Oxford English Dictionary*, to significantly more specific definitions formulated by memeticists, including later iterations by Dawkins himself. Nick Rose summarizes these in his article "Controversies in Meme Theory":

> The definition of a meme is currently ambiguous. A meme can be found variously described as; a unit of imitation (Dawkins), a unit of information residing in a brain (Dawkins), culturally transmitted instructions (Dennett), any permanent pattern of matter or information produced by an act of human intentionality (Csikszentmihalyi), roughly equivalent to ideas or representations, a unit of information in a mind whose existence influences events such that copies of itself get created in other minds (Brodie), actively contagious ideas (Lynch), a mental representation (Gabora), or a self-replicating element of culture passed on by imitation (*Oxford English Dictionary*), etc. (Rose, 1998)

These definitions can be split fairly clearly into internal interpretations of memetics, which locate the meme inside the human brain, and external interpretations which place the focus on communities and cultures built of human interactions. I situate myself among the externalists, as Memetic Rhetorical Theory will not offer any suggestions about the internal workings of the human brain but instead focuses on how memes help to define ethos within communities by facilitating communicative and rhetorical action.

The boundaries of memetics as a field are contested even among its proponents. As a starting point, consider the definition offered by *The Journal of Memetics: Evolutionary Models of Information Transmission*, the only peer-reviewed academic journal devoted solely to memetic theory and investigation. This journal defines its subject as follows:

> Memetics is the theoretical and empirical science that studies the replication, spread and evolution of memes. Its core idea is that memes differ in their degree of "fitness", i.e. adaptation to the socio-cultural environment in which they propagate. Because of natural selection, fitter memes will be more successful in being communicated, "infecting" a larger number of individuals and/or surviving for a longer time within the population. Memetics tries to understand what characterizes fit memes, and how they affect individuals, organizations, cultures and society at large. (*Journal of Memetics*, "Subject Domain: Memetics" para. 2).

The "socio-cultural" focus of memetics, as this definition characterizes it, along with the descriptive model of evolution borrowed from biology, has allowed memetics to attract researchers and proponents from both the natural and social sciences as well as the humanities. Dawkins, of course, was a biologist. Susan Blackmore has an academic history in psychology and the study of consciousness and is well known as a prominent researcher in memetics to this day; her 1999 book *The Meme Machine* is often cited as one of the foundational works of memetics. Daniel Dennett (see 1991 published book *Consciousness Explained* for example), while he is generally a contemporary of Blackmore within the field of memetics, is a well-recognized philosopher.

While interdisciplinarity is a strength of memetics in many respects (Conte, 2000), this diversity would also become the basis for a debate that would severely hinder the progression of memetics as an interdisciplinary but independent field of study. This debate focused on the question of whether memetics should be studied as a phenomenon that is internal to the human brain and therefore reflective of the beliefs of an individual in concert with that individual's physiology, or as a phenomenon that explores interactions in culture and society. At its core, this question is a debate over how to define, locate, and represent culture; with home fields ranging from biology and medicine (Dawkins, Gatherer) to philosophy (Edmonds, Dennett) to psychology (Blackmore, Marsden, and Rose), differing definitions of culture are essentially unavoidable. However, the discussion of how to define culture is never taken up by memeticists at all. Instead, much of the published scholarship in this field focuses on attempts to define and locate the meme itself. As one might imagine, any consensus regarding this definition was impossible without a previously agreed upon definition of culture (since memes are universally acknowledged as "units of culture"). Models developed by social psychologists and philosophers lacked the physical instantiations that biologists sought, while biological models failed to address social interactions that were of interest to social scientists. A rhetorical reading of both *The Journal of Memetics* and Robert Aunger's edited collection *Darwinizing Culture: The Status of Memetics as a Science* show memeticists speaking past, rather than to, one another. As such, much of the scholarship within *The Journal of Memetics* consisted of contested definitions and methods that would apply only to the field of study of the original author, meaning these articles were largely unable to build upon one another's work. The multi- article debate between Aaron

Lynch (1998) and Michael Best (1998) regarding methods in memetics is a key example of this friction, but there are many others.

Because of these tensions, the field of memetics began to stagnate. *The Journal of Memetics* ceased production in 2005, and those who continue to publish work in memetics, like Susan Blackmore and Daniel Dennett (and myself, as evidenced by this dissertation), do so primarily through discussion of the contributions that memetic frameworks can make in their home fields of study.

Foundations of Memetic Rhetorical Theory

Rhetoric is a cultural phenomenon and it can very well be considered the basic instantiation of, and exigence for, culture itself. Angela Haas (2012) articulates this connection to culture while pointing to the ways in which critical race theory can help to make apparent the white male rhetorics that saturate technical communication discourse:

> I understand *rhetoric* as the negotiation of cultural information—and its historical, social, economic, and political influences—to affect social action (persuade). I also believe that every culture has its own rhetorical roots, traditions, and practices. Although sometimes forgotten, rhetoric seeks engagement with and participation in effective and responsible civic discourse. Rhetoric is a 'techne', or art of knowing—a revealing, an opening up. […] In sum, rhetoric is always already cultural. It takes into account that subjectivity and knowledge are interrelated. Despite that rhetoric relies on stabilizing this knowledge in order to represent it to others, that knowledge can only be fixed momentarily and tentatively because dynamic social, historical, cultural, political, and economic factors continue to influence its production—and what individuals can know and the knowledge

> that rhetoric can represent is limited. Thus, rhetoric is a result, a precursor, and a limit to productive knowledge making. (p. 287).

If we accept this definition (which I do) then the link between rhetoric and culture should be integral to our understandings of both. As such, the questions that memetics tried to answer in the past regarding how culture spreads are really the same questions that rhetoric has been trying to answer all along: How does communication happen? Why does rhetoric work?

Because we understand rhetoric as a cultural phenomenon, and indeed because rhetorics are what define the boundaries of culture itself, the model of cultural transmission offered by memetics can be illustrative for both rhetoricians and technical communicators. Memetics offers a mechanism for understanding the relationships between the cultural, technological, and environmental factors that shape work in rhetoric and technical communication; it is a way of putting the various factors that determine rhetorical success in conversation with one another to better understand and intervene in those processes. Technical communication is a rhetorical activity that is steeped in cultural exigency as well as cultural implications (Haas, 2012; Katz, 1992). As such, to do technical communication work well and to intervene productively in technical communication scenarios requires a thorough understanding of the cultural situation into which that work enters. This understanding relies on attention paid to the network of actors that create this cultural and rhetorical environment.

Rhetoric has long been concerned with the issue of agency. In particular the scholars referenced in Chapter 1 demonstrate a distinct split among rhetoricians and technical communication scholars regarding the ability of non-humans (things, objects, natural phenomena, ideas, systems) to have agency: that is, whether anything that is not human can act or have influence without human direction. In discussions of culture (and therefore also discussions of rhetoric) this debate becomes problematic specifically because our operative understandings of both rhetoric and culture characterize them as interrelational, human phenomena. This would seem to preclude the idea that anything other than humans can exert influence over either culture or rhetorical action. This interpretation, however, suggests a very limited understanding of the spheres of influence that shape communication, and therefore cultural development.

The issue, at least for rhetoricians, is not "can culture exist independently from humans," but rather "can factors other than human actions influence human culture?" Critical examination of many of the existing theories in rhetorical study would suggest a resounding "yes" in answer to the second question. The following paragraphs briefly summarize some of the ways that rhetoricians have demonstrated the agency of non-human entities in rhetorical action. Taken together, then, this brief overview of existing rhetorical theories demonstrates how, consciously or not, rhetoricians have historically often engaged with these entities, which we now recognize as memes, as agentic in their own rights.

This question is most readily recognizable in the suggestion of rhetorical agency of non-human objects and material items (alternatively, and less specifically, called "things"). While technical communication scholars often associate this assumption with Latourian philosophy, specifically Actor Network Theory (Latour, 2005, 2011), and digital rhetoricians draw it commonly from Object Oriented Ontology and related fields (Barnett & Boyle [eds.], 2016; Bogost, 2007; Bryant, drawing on Heidegger, Harman, Morton), this understanding is also common to Indigenous philosophies and rhetorics (Powell et al., 2014; Haas, 2012), rhetorical applications of phenomenology (Ahmed, 2006; Couture, 1998), and New Materialisms (DeLanda, 2011; Gries, 2015; Ahmed, 2006). The breadth of this work suggests that this characterization of rhetorical agency as existing outside the sole purview of human action is by no means new for rhetoricians.

In fact, even the most arguably humanist branches of rhetorical theory assume the rhetorical agency of social systems which, while they might be made up of human interactions, are certainly not human themselves, nor can they be accurately described as conscious in the way that humans are. These include rhetorical theories that critique power systems such as gender and patriarchy, race, sexuality, (dis)ability, social class, and the many others that shape society and determine how we relate to ourselves and others (Haas, 2012; Jung, 2014; Spivak, 1988; Mohanty, 1988). Foucault has contributed a lot to our understanding of how these kinds of systems work, as has Bourdieu. In fact, social structures and systems of power are so pervasively persuasive and systemic that they form their own internal logics (Ratcliffe, 2005). Examinations of these systems constitute entire sub-fields of rhetorical study situated within communities and at their intersections. These include feminist rhetorics, queer rhetorics, disability rhetorics, and rhetorics drawing on critical race theory.

Rhetoricians and other scholars have also begun to interrogate the spread or transmission of communication over time. In their article "Composing for Recomposition: Rhetorical Velocity and Delivery," for example, Jim Ridolfo and Danielle DeVoss build on previous work by Lawrence Lessig (*Remix*, 2008) to argue for a process included in the invention stage of composing that would encourage composers to think about how others might use or revise the work that they are creating in the future, anticipating that these future users will likely change the work to suit their own needs. They call this concept "Rhetorical Velocity" and offer the following definition:

> Rhetorical velocity is, simply put, a strategic approach to composing for rhetorical delivery. It is both a way of considering delivery as a rhetorical mode, aligned with an understanding of how texts work as a component of a strategy. In the inventive thinking of composing, rhetorical velocity is the strategic theorizing for how a text might me recomposed (and *why* it might be recomposed) by third parties, and how this recomposing may be useful or not to the short- or long-term rhetorical objectives of the rhetorician. (2009)

In this definition, and throughout their article, Ridolfo and DeVoss articulate the need for a theoretical understanding that texts (and other compositions) move beyond their original authors and into new spaces to serve new purposes. This understanding is reminiscent of previous work by compositionists who interrogate the ways that writers build on the work of others who came before them, such as the concepts of "patchwriting" articulated by Rebecca Moore Howard (1995, 1999), or "assemblage" (Johnson-Eilola and Selber, 2007). These scholars are concerned with best practices by authors/ composers in the production of texts as well as with rhetorical issues relating to the interpretation of that text by an audience. I draw on Ridolfo and DeVoss, Lessig, Howard, and Johnson-Eiloa and Selber for their understandings of the movement of information and its change over time as rhetorical processes, though this project is less concerned with the choices that authors make as composers and more concerned with the uptake of various communicative elements in community discourses.

As a rhetorician, Laurie Gries takes up this notion of movement and change over time similarly in her 2015 book *Still Life with Rhetoric: A New Materialist Approach for Visual Rhetoric.* Drawing on previous work in new materialism as well as visual rhetorics, Gries analyzes both the spread and the transformation of culturally significant images through popular media. Likewise, Jenkins et al. (2013) characterize the relationship between the spread of such media and the sharer's understanding of the social environment as follows:

> In a gift economy, circulated texts say something about participants' perceptions of both the giver and the receiver; we all choose to share materials we value and anticipate others will value. People appraise the content they encounter according to their personal standards and the content they share based on its perceived value for their social circle. In other words, some of what is interesting to individuals may not be material they want to spread through their communities, and some media texts they spread may become more interesting because of their perceived social value. (p. 199)

Both Gries and Jenkins et al. describe the movement of communication through environments; however, while Jenkins et al. focus on responsive choices made by users to develop cultural capital, Gries emphasizes the confluence of material and social factors that help to craft social responses.

Memetic Rhetorical Theory

In the development of Memetic Rhetorical Theory, I build on the work of these scholars by focusing on the ways in which combinations of technological, material, social, and rhetorical factors come together to create environments that determine how ethos is constructed in the communities within those environments. This model relies on the understanding of change over time and through transmission, like rhetorical velocity, but moves toward an understanding of this change as environmentally responsive, building on the model presented by Gries, rather than solely as the result of conscious changes made by composers.

As the origins and even the name suggest, MRT incorporates memetics, which draws heavily on models provided by genetics that draw parallels between memes and genes. The vast majority of published works focusing on memetics begin with a reference to Darwin's *The Origin of Species* and most continue with biological metaphors throughout their discussion. This is not surprising considering Dawkins's background in biology, but it is also illustrative considering that we have very few ways of talking about change over time and in response to situational stimuli that *wouldn't* utilize terminology that has ties to evolution, a biological concept. If we are truly to argue that evolution is not solely a biological concept, that culture and cultural elements evolve as well, then we must also be willing to apply evolutionary terms in non-biological contexts. In my development of Memetic Rhetorical Theory, I spend significant time articulating these definitions. As such, I will not be abandoning terms with biological origins unless they are unclear or unhelpful in rhetorical study. Biology will just have to learn to share.

Next, and more specifically to the development of Memetic Rhetorical Theory, critics point to the inability of memetics to account for physiological phenomena and/or to situate humans in relation to other species (as genetics does). However, neither of these issues are of concern in this particular project as I characterize rhetoric as a human phenomenon[6] for the purposes of this discussion and rely on a rhetorical definition of the meme as outlined below.

I see these critiques, while valid, as an issue of haphazard and inconsistently defined terminology. Rather than invalidating the concept of memetics, it simply necessitates a set of clear definitions that draw boundaries between memes and genes. Likewise, because rhetoric is not necessarily concerned with either brain chemistry or psychology of individuals, but rather with cultural communication, the most commonly cited methodological concerns with memetics

[6] Discussions of animal instantiations of rhetoric are outside the scope of this project, as Chapter 1 defines rhetoric as a characteristic of human culture

become irrelevant. Thus, the rest of this chapter focuses on the development of Memetic Rhetorical Theory (MRT), which combines the model offered by memetics with the theoretical foundations of rhetorical study. The articulation of this theory requires rhetorically informed definitions of terms common to existing memetic theory—such as meme, memeplex, co-adaptation, and replication—as well as the introduction of new terms necessary for a wholly external memetic rhetorical model, such as the concepts of memetic ecologies and memetic cataclysms. This is where I begin.

Defining the Meme

To develop Memetic Rhetorical Theory, I start with a definition of the meme that is applicable to rhetorical study, which differs only slightly from the definitions offered by memeticists in the past. This similarity is due in large part to the common goals among rhetoricians, technical communicators, and memeticists that I articulated in the previous section; we all are hoping to understand how and why successful communication happens.

A *meme* in memetics and MRT is both a theoretical concept and an agentic actor that functions as a unit of communication. As such, in the formation of Memetic Rhetorical Theory, I rely heavily on Dawkins' original definition of a meme (also used by Blackmore and others) as any feature of communicative interaction that replicates (that is, is used or appears more than once) and that, by virtue of its presence in an interaction, exerts influence over the content and outcome of it. Within this definition, oft-cited examples of memes include songs (Blackmore references "Happy Birthday"), words and phrases, and gestures; in these cases, "replication" relies on human memory and repetition of the meme from one human to another as the form of transmission. However, I distinguish my definition from that of both Dawkins and Blackmore with the addition of non-human actors as agents of communication. Using this understanding, examples of memes include those previously referenced, but also include interface features, environmental factors, sounds, images, features of images or any other discrete element related to communication that may or may not rely solely on human beings for transmission. As such, I define a unit of any rhetorical action as a meme.

At this point it is necessary to discuss the terms *imitation* and *replication* as these must necessarily be used differently in biology, where their use in memetics originates, than in rhetoric, where I am applying them now. As stated previously, a common critique of memetics is that it relies on biological terminology commonly associated with genes, thereby creating false equivalencies. This is true of the terms *imitation* and *replication*, which in genetics suggest identical recreation of the gene (Blackmore, 1999). Here, I attempt to break that pattern in two ways. First, I choose to abandon the term *imitation* in MRT[7] because the connotations of conscious choice associated with this term are, for me, too strong to be overlooked and therefore likely to cause theoretical misunderstandings. Next, I offer a specifically rhetorical definition of *replication*. Rather than defining *replication* as the process of creating identical copies of the meme, which has been a pitfall of memetics in the past (see Sperber, 2000 among others), I define this term in MRT as meaning that a form of the meme has been reproduced that relies on a subset of the physical, sensory (i.e., visual, auditory, haptic, etc.), ideological, technological, or rhetorical features of the meme being replicated.

In developing MRT I differentiate between two categories of memes: *interface memes* and *content memes*. *Interface memes* are features that have to do (functionally) with how information is transmitted within a system or community. They are features of the interface that

[7] I understand that this would be appalling to Dawkins, and many other memeticists. However, it is necessary given the way that MRT understands agency.

work together to determine how community members interact with information in the system(s) that connects them and allows them to interact with one another. These are typically associated with what technical communicators recognize as genre features, including the order, style, and format in which information appears (Henze, 2013; Wall & Spinuzzi, 2018). These features replicate in the sense that they appear in every interaction between a user and that particular site function. For example, a common interface meme on the internet is a search bar. Search bars serve a particular rhetorical function, they derive contextual meaning from the situation or environment in which they appear (users know that typing content into the search bar on Google will yield different results than typing that same content into the search bar on Facebook), and they appear in many places on the internet, so a search bar fulfills all the necessary criteria to be considered a meme. While the search bars may look different on various sites, they function similarly and share enough visual similarities to allow users to recognize that function; therefore, they replicate. *Content memes* have to do with the construction of ideas that allow members of a community to understand one another. Repeating ideas, phrases, sounds, and categories of images (for example, "before and after photos") are some examples of content-based memes.

This distinction between content and interface memes is largely an organizational strategy and is contingent on the function of each meme within the system; these are not intrinsic designations. It is also important when thinking about these memes to recall that a meme cannot exist in isolation. As a unit of rhetorical action, it is defined (as in, it gains meaning and significance) through its relationship to other memes in the same space/ environment. As such, the designation here between content and interface memes is really a way of emphasizing the connection between form and function and making transparent the process by which form and function evolve symbiotically (that is, they are dependent on one another and grow and change together).

Content memes and interface memes work together to determine how information is transmitted and understood within a given system or community. Individual memes in both categories combine to shape the community. For example, categories of images, like the "before and after" pictures mentioned above, are content memes. In order to gain traction in a particular environment, however, those content memes require the presence of interface memes that will (a) allow for the inclusion of images, and (b) emphasize the connection between images and the functionality of the product/method being discussed either through association with text or by demonstrating this category of picture as standard practice. In other words, ecologies need interface memes that help community members to understand the significance of side-by-side, time-change photographs and connect those images to other memes within the environment. As such, both content and interface memes form the primary units of rhetorical action because their interactions with one another determine what actions succeed or fail in a given situation.

An important distinction here, and one that has been contentious for memeticists in the past (Blackmore, 1998; Sperber, 2000), is that in MRT physiological phenomena are not memes except as they occur in relation to rhetorical action. The common example is laughter, which can be replicated in response to a listener hearing others in the vicinity laugh (hence the common adage "laughter is contagious"). As Sperber (2000) points out, laughter can hardly be an example of learned or imitated cultural interaction in all circumstances considering that infants too young for cultural integration laugh in response to visual or physical stimuli. Likewise, laughter can be triggered involuntarily in adults as a panic response to physical contact, like tickling. Therefore, automatic-response laughter of any kind cannot be a meme in MRT, since it is not rhetorical. The same is true of other physical responses that can be triggered by observing the same responses in others in the vicinity, like yawning, sneezing, or vomiting, as well as specific behaviors or gestures that may be imitated without communicative repercussions (Blackmore, 1998).

However, such phenomena can become memes in MRT when they function as participants in rhetorical action, such as when they act as social cues for acceptable behavior. Consider, for example, a workplace where jokes and comments about female employees' appearances are common. Laughter, as a selected response to those comments in this context, indicates their acceptability and therefore functions as a means of establishing and communicating the ideologies at play in the local culture. In other words, the habitual presence of laughter becomes a meme in this situation *because there is specific cultural*[8] *meaning attached to it*.

It is this characteristic of functioning as participants in rhetorical action that helps us to distinguish between memes and non-memes that nevertheless are present and repeated in an environment. Communication and culture are integrally linked, with rhetoric acting as the bridge between these two concepts. As such, to understand memes from a rhetorical perspective, we must limit their definition to those things that act as communicative elements among humans, or non-human rhetorical actors. This also means that memes are always contextual in that they are defined by their relationships to the memes that surround them. I draw this distinction in part from Blackmore's (1998) article "Imitation and the definition of the meme" which, while focused on distinctions between imitation, learning, and conditioning, offers one of the first unilateral dismissals of the experiential events of individuals as memes. This distinction is

[8] I characterize culture here (like rhetoric above) as a human phenomenon.

important, as it establishes the meme as a purely social phenomenon and therefore places it within the realm of rhetorical study.

Memes, according to this definition, are units of rhetorical action in the sense that they possess agency in the rhetorical situation. That is to say, they are the primary building blocks of the environments that determine the success of any new or existing rhetorical action; they exert influence in this way. In order to succeed, any new memes (new elements of rhetorical action) must respond to those that are already present. This is a manifestation of ethos that does not rely exclusively on a set of predefined characteristics, but rather on the confluence of factors that create rhetorical situations.

In summary, memes in MRT are primary units of rhetorical action. In order to be considered a meme, a discrete element must meet the following criteria:

- It must be repeated (replicated) at least once in addition to its original appearance in a given space;
- It must fulfill a rhetorical purpose by facilitating communication or understanding among actors in a community;
- It must derive meaning for that purpose from contextual relationships with other memes in the system.

Rhetoricians and technical communicators have used a variety of terms to name various discrete elements of communicative action including “genres,” “tropes,” “logical constructs,” “actors,” “code features” and many others. According to the above definition, all of these are memes, as are other things like cultural values, ideas, and technologies. What is unique about the term *meme* is that it *describes all of these things at once and in equal terms*. Memetics provides a model that emphasizes the co-adaptive relationship between all of the features, ideologies, and contextual references that go into a discursive item, like a document or a social media post, or a community. It gives us a way of talking about tropes and code segments—or any other disparate combination of relevant factors—in the same conversation, recognizing that they can all be constitutive elements of the same document or situation.

Memes and Rhetorical Agency

The question of the rhetorical agency of memes is both a central idea of MRT and a common critique of memetics broadly by humanists. In their book *Spreadable Media*, Jenkins et al raise this critique as follows: “While Dawkins stresses that memes (like genes) aren’t wholly independent agents, many accounts of memes and viral media describe media texts as ‘self-replicating.’ This concept of ‘self-replicating’ culture is oxymoronic, though, as culture is a human product and replicates through human agency” (p. 19). There are two problems with this argument. First, it is self-defeating on its face; if memes are elements of culture, and Jenkins et al claim that culture is a human phenomenon, then the claim that memes are self-replicating does not call human agency into question at all. Second, it engages and perpetuates a reductive understanding of rhetorical agency by setting up a false dichotomy between human agency and the agency of non-human actors.

This argument supporting the agency of nonhuman actors, and therefore the agency of memes, in no way suggests that humans do not *also* have agency in these situations. The distinction between agency, which suggests action or influence, and intent, which suggests consciousness, is key to this understanding. While this distinction has been well-articulated in technical communication scholarship (Brock & Shepherd, 2016; Jung, 2014) and memetics (Blackmore, 1999; Marsden, 1998) alike, many scholars continue to gloss or ignore its implications in favor of more anthropocentric arguments (Jenkins et al., 2013, for example). This is easily done, particularly because of the way that memeticists have haphazardly borrowed terminology from biologists. Dawkins's original publication's title, *The Selfish Gene*, seems to ascribe both emotion and intentions to both genes and memes, and the wording has stuck.

Memes, Memeplexes, and Memetic Ecologies

This social element of memes necessitates an understanding of how memes fit and work together; a productive study of memes should never consider them in isolation. In her book *The Meme Machine*, Susan Blackmore coined the term "memeplexes" as a shorthand for the more cumbersome "co-adapted meme complexes" (Blackmore, 1999). These are groups of memes that evolve together over time, building on each other's successes and creating frames of reference that determine the survival rate of new memes that emerge near them. As such, memeplexes are characterized by the internal compatibility of the memes that they contain; they complement one another but are not identical. It is this compatibility function that allows memeplexes to act as both gatekeeping mechanisms and mutually constructive forces for emerging memes. Complex sets of memes that create the parameters of a rhetorical situation can therefore be understood as memeplexes. These might include culturally constitutive ideas like "the American Dream," or gender roles, but they might also take the form of images comprised of recognizable traits (as in Gries's *Still Life With Rhetoric*), specific phrases, or digital interfaces that shape user interactions. New memes are only able to survive in memeplexes with which they share characteristics that contribute to that internal compatibility. Any memes that do not possess these characteristics have no way of relating to the environment and therefore die out quickly, if they replicate at all.

This co-adaptive characteristic of memeplexes points to a new, memetically-informed definition of ethos. Chapter 1 defined ethos as contextually constructed value or credibility, and

MRT seeks to understand how that construction happens. Because memeplexes act as both building blocks and gatekeeping mechanisms to the introduction of new memes, it is the ability of a newly introduced meme to adapt to those memeplexes that determines whether or not it spreads. Memeplexes, then, are the contextual factors that construct value, and co-adaptation is the mechanism by which they do so.

This co-adaptive characteristic is key to understanding why memes spread and, therefore, how information becomes persuasive in a given set of circumstances. In other words, this co-adaptive characteristic is the feature that allows a meme to cultivate ethos in a given situation. The more a meme spreads, the greater its ability to influence a given memeplex and affect the spread of other memes becomes, and so the more rhetorical agency it has. The more rhetorical agency a meme or memeplex has, the greater its ability to cultivate and maintain credibility, ethos, within the system becomes. The same process applies to memeplexes on a larger scale.

Memeplexes, like the memes that constitute them, co-evolve to create larger, interrelated communities. I call these communities *memetic ecologies* because they are the environments created from memes, and into which memes enter. A memetic ecology can be massive, like the political landscape of the United States, or much smaller, like the interactive page operated by a particular animal rights group on Facebook or a community of people using the same Twitter hashtag. These memetic ecologies are defined by the memeplexes that make up their core features and values, and as such these memeplexes become strongly associated with the ecology as a whole. For example, if our memetic ecology is the political landscape of the United States, we know that it is defined by memeplexes like the myth of the American Dream, idealization of both democracy and capitalism, the image of the American Flag and its attendant cultural associations, the two-party system, the Constitution (both as a document and as an idea), and many others. If, however, the memetic ecology is a community that centers on a particular Twitter hashtag—for example, #Whole30—then the constituent memeplexes might include idealization of thin, sexualized bodies, public ideologies that conflate “natural” foods with physical purity, and the site interface on Twitter that allows users to search for and follow this particular hashtag.

Memetic Proliferation

Memes, memeplexes, and the ecologies they create are never static. They constantly grow and change in response to the entrance of new memes or the continued evolution of those that are already present. This process is central to the idea of movement of the meme from one instantiation to another that has been consistent in memetics since Dawkins’s original articulation, and for movement to exist there must also be a temporal element to memetics. That is, memes spread, change, and evolve together through time.

I call the spread of a particular meme or memeplex through a memetic ecology *memetic proliferation*. This term has roots in biology (think “cell proliferation”), but also works well because of its colloquial association with rapid increase in numbers, which is the basis for how memes come to influence a memetic ecology, especially in digital environments. Memes that proliferate enough to become lasting features of an ecology can be termed “successful.” Conversely, memes that die out quickly and fail to impact other memes within the ecology are failures. It is important to note that the proliferation of the meme is the only factor that characterizes its success or failure. As such, success and failure are not, and never can be, value judgements in MRT. Traditionally, success and failure have been considered inherently value-laden terms, especially when placed in a neo-liberal context that equates value, success, and productivity. MRT, however, does not recognize inherent value, goodness, or merit in successful proliferation of a meme. Instead, "success" in terms of memetic proliferation refers specifically to a substantial enough number of appearances of a given meme to allow that meme to exert influence in its ecology. It is a characteristic of the meme itself and is not indicative of any connection between that meme and a general benefit to the ecology or alignment of that meme with the specific goals of a human participant/ participants in that ecology.

Success indicates only that a meme has spread enough to gain lasting traction and influence in the ecology in question. Brodie (2009) echoes this rejection of value judgment, saying, "If I talk about a *good meme* or a *successful meme*, I'm talking about an idea or belief that spreads easily throughout the population, not necessarily what we think of as a 'good idea'"[9] (p. 15). This distinction is analytical and not enacted within the rhetorics of the community in question or necessarily the minds of individual community participants. They (collectively or individually) are always likely to *believe* or *act based on* the supposed merit of the meme, regardless of its factual veracity, utility, or effect. Gatherer (2002) defines this action based on the supposed merit of the meme as two specific kinds of behavior:

1. Rational—defined as behavior based on factual information, that maximizes the long-term material welfare of the agent, and
2. Irrational—defined as behavior based on incorrect premises, that is at best neutral to the agent's interests, and in some cases potentially detrimental. (Gatherer, pg. 2).

I take issue with Gatherer's use of 'rational' and 'irrational' for a number of reasons, not least the traditionally Eurocentric and masculinist associations of these words, but I do find value in the distinction that he draws based on outcome and the veracity (and we might add utility or effect) of the proliferation of the meme. What is key is the understanding that the lasting effects of the

[9]Here we might also say "good action," "useful or useable interface" etc.

adoption of the meme to influence the community and the ecology in the long term, not necessarily the initial proliferation of the meme or memeplex.

This phenomenon often results in the spread of memes that are harmful to the ecology, its constituent culture, and the participants in that culture for a number of reasons. Blackmore (1999) claims:

> Memes spread themselves around indiscriminately without regard to whether they are useful, neutral, or positively harmful to us. A brilliant new scientific idea, or a technological invention, may spread because of its usefulness. A song like Jingle Bells may spread because it sounds OK, though it is not seriously useful and can definitely get on your nerves. But some memes are positively harmful—like chain letters and pyramid selling, new methods of fraud and false doctrines, ineffective slimming diets and dangerous medical 'cures'. Of course, the memes do not care; they are selfish like genes and will simply spread if they can. (p. 7)

Participants, however, are unable to gauge that harm productively specifically because the harm-causing meme is so well-adapted to the memeplexes that make up the ecology. It is worth noting that the most powerful and well-entrenched memes and memeplexes across ecologies are those associated with human physical or psychological needs. Brodie explains, "the memes that appeal to people's instincts are more likely to replicate and spread throughout the population than the ones that don't" (Brodie, 2009, p. 18). Consider, for example, the well-established practice of utilizing fear-based rhetorics for political gain. One of the key "instincts" (what we might think of as core or foundational memeplexes to most ecologies because of human influence) that Brodie describes is an instinct toward safety or physical security. Fear-based rhetorics activate this instinct, which overrides less powerful memeplexes in the ecology, causing the memes acting within the fear-based rhetorical memeplex to spread with much more success than would be otherwise possible.

This distinction between memes that are "rational" (to use Gatherer's problematic term) or helpful to the ecology, and memes that proliferate successfully is the crux of the distinction between understandings of ethos derived from the "good man speaking well" model explored in Chapter 1, and the definition of ethos as *derived from the memetic ecology* that is central to MRT. If as this model suggests, it is the relationship between the meme and the ecology that allows for successful proliferation, then neither the source of a piece of information nor its veracity are determining factors in its spread. Instead, information spreads if it is well suited to the ideological structure, cultural communicative practices, and mediational means of the environment in which it is introduced.

Memetic Intervention and Memetic Cataclysms

Because of the co-evolutionary nature of memetic ecologies, and the interconnected patterns that their constituent memeplexes create, it is nearly impossible to immediately dislodge an entrenched meme or memeplex from its established environment. The memeplexes that form a given ecology rely on one another, creating a system of mutual support that is largely self-sustaining. Consider, for example, the Ptolemaic (geocentric) model of the universe which retained its hold on astronomers, physicists, and mathematicians for over a thousand years (Jones, 2008). If we think of the Ptolemaic system as a memeplex, we might identify its key constituent memes based on ideas or principles that were central to the theory. According to Jones (2008), these would include the idea that the Earth is stationary, principles of eccentric motion, and an epicyclic model for how the other celestial bodies move. Other key constituent memes would include Ptolemy's original medium of publication (his written works *Almagest* and

Planetary Hypotheses) which of course intersect with memeplexes of literacy and intellectualism beginning in the first century AD and continuing for hundreds of years, the personal ethos or author-function of Ptolemy and the others who followed this model (considerable, given the time span), early iterations of the scientific method focused on observation and mathematical analysis, and the pervasive idea of human exceptionalism in the universe (eventually supported with religious overtones by the intellectual and political influence of the church). Notice that these are a collection of ideas, physical objects, interfaces (which I would argue is an appropriate characterization of written literacy), and social forces, all of which intersect with and support each other. The Ptolemaic system memeplex, together with the religious/intellectual memeplex of the church, the newly evolving scientific method, and the intersecting memeplexes of social stratification and literacy, create a mutually dependent memetic ecology in which memes that fit with these structures proliferate easily and those that do not die off.

This is what makes it so difficult to disrupt or disprove patterns and ideas that have already spread within a community; they become so intertwined with other patterns and ideas that removing one meme or memeplex would require the disruption of tens or hundreds of other memes and memeplexes. This pattern is illustrated clearly in the resistance that the Copernican (heliocentric) model of the solar system faced when it was introduced in 1543 (Wudka, 1998) and, to a greater extent, when it was advocated by Galileo Galilei more than 60 years later (Van Helden, 1995). On one hand, the Copernican system was at odds with many of the memeplexes that defined the ecologies of the mathematic, religious, and astronomical intellectual communities; it resisted human exceptionalism, famously contradicted the Bible, and disputed many of the mathematical formulas used to calculate everything from geographic positions to religious holidays (Wudka, 1998; Pogge, 2005; Van Helden, 1995). On the other hand, the system made use of other existing memeplexes within these ecologies, such as adherence to the experimental scientific method, and even drew on some existing (though faulty) elements of the Ptolemaic model, such as the idea of circular orbits (Wudka, 1998). It is this mixture of adaptation to and disruption of existing memeplexes in the ecology that allowed for the eventual success of what is now called the Copernican Revolution, commonly characterized as a paradigm shift within scientific thinking. In terms of MRT, I would call this an example of successful memetic intervention specifically because of the process of disrupting an existing idea through successful adaptation of a competing idea.

Notice, however, that this process was extremely gradual, constituting over 100 years of slight changes in a community that would be considered quite small by modern standards. This pace is characteristic of memetic interventions, which are gradual by definition. A successful memetic intervention must allow time for the disruptive, newly introduced meme to form bonds within existing memeplexes and thereby successfully adapt to its new ecology. The intervention then becomes, in true Darwinian fashion, a question of 'survival of the fittest' between the new meme and the one it seeks to replace.

This process may serve to benefit the community through the introduction of more accurate or beneficial memes, but it may also have the opposite effect. Remember, success is not a value judgement. In our Copernican versus Ptolemaic example, the fittest meme(plex) was the one that stood up to the most rigorous scientific and mathematical interrogation in the end, because these were powerful internal logics within the ecology. The successful meme here happened to be the one that was also beneficial for the advancement of the sciences. However, in many other cases, unhelpful or harmful memes proliferate with greater success because they fit better with the existing memeplexes. For example, racism, sexism, and body-shaming are all memeplexes that are ultimately harmful to society at large, yet they remain incredibly prevalent and tenacious in our collective social consciousness.

Memetic intervention of this kind is by far the most common form of disruption of memetic ecologies. Even drastic changes, paradigm shifts, can usually be attributed to this introduction of new memes, or sets of memes, that re-shape the ecology through adaptation. However, there are some circumstances in which an ecology might change both suddenly and drastically in response to an external stimulus. I call this a *memetic cataclysm* because it essentially wipes out the existing ecology and replaces it with a new set of memeplexes derived from the cataclysmic event. For example, memetic cataclysms are typical of the violence inherent in colonial practices, where the cultures (and therefore the memetic ecologies) of indigenous populations are violently annihilated by the incoming colonizers. Events of this nature tend to involve substantial bodily harm to a significant portion of the community, but it is worth noting that the cataclysm may have different boundaries than the original ecology.

From an ideological standpoint, this is unlikely to be an everyday occurrence in even moderately humane societies since, as we have seen, memes that disrupt the existing ecologies simply die off without making significant impact. For a memetic cataclysm to occur, then, there must be an event that eliminates or disrupts the relationships among such a high percentage of the operative memes and memeplexes in a given ecology that those that remain must restructure themselves in order for the ecology (and the rhetorical community) to survive. This event is, by definition, always an act of rhetorical violence, because it creates a crisis of identity for the community. However, it also often comes as the result of physical, embodied violence as well. This is the oft-noted political philosophy behind acts of terrorism; such acts are meant to drastically disrupt well-established feelings of safety and security within a community, thereby altering the political environment.

MRT provides a useful framework for articulating the ways in which agency distributed among content and interface memes in a memetic ecology determines ethos by either allowing or suppressing the proliferation of a newly introduced meme. This framework allows rhetoricians and technical communicators to more effectively interrogate how and why information, including misinformation, is invested with ethos in a given ecology, and to use that knowledge to craft more potentially successful interventions based on similar processes. The first step in designing those interventions, however, is developing a thorough understanding of the memetic ecology into which one wishes to intervene. I suggest developing this understanding through the use of memetic rhetorical analysis—a set of methods that I articulate in the following section.

Memetic rhetorical analysis allows researchers to identify the key memeplexes to which newly introduced information must adapt, at least in part, in order to be successful. It does so by comparatively analyzing the prevalence of various memes as well as their co-adaptive qualities to determine where intervention is possible and what co-adaptive characteristics that intervention must contain in order to be successful.

Methods: Performing a Memetic Rhetorical Analysis

Memetic Rhetorical Analysis is useful for understanding how and why memes (and therefore information, technologies, tropes, ideas, etc.) spread through ecologies. As such, a memetic rhetorical analysis can take two forms: it can focus on one particular ecology and work to understand the memeplexes that have the greatest influence in that ecology which would help researchers to understand the kinds of new memes that might succeed in that ecology to allow for the most effective communication; or, a memetic rhetorical analysis could track the proliferation of a specific meme or memeplex through an ecology or ecologies in order to understand why that proliferation was successful (or not) and, if any intervention strategies are necessary, which of these might be successful. Chapter 3 of this dissertation will be an example of the first kind of analysis, while Chapter 4 will be an example of the second.

Demarcating the boundaries of the study is key because the distinction between a *meme* and a *memeplex* is often a question of the scope of the ecology under study. In a study of a large and complex ecology, it is likely more useful to use *meme* to describe features that might be considered *memeplexes* in a smaller ecology, as long as the constituent memes that make up those memeplexes are not individually relevant to the analysis. In a smaller, more locally focused study, however, something that would have been a memeplex in the larger study might function as the whole ecology, in which case the meme itself becomes a much smaller unit of analysis. As an illustrative example, consider the following analogy: To answer some kinds of research questions, a researcher may want to examine a single train on a track where the cargo, cars of the train, the engine, the caboose, the track, and the turns in that track are all memes that work together to get the train and its contents where they're going. However, in a narrower study, it might be helpful to know how the component parts of the wheel work together, in which case the wheel system itself becomes a memeplex, located within the ecology that is the train-and- track combination. Conversely, in a broader study, a researcher might want to examine a whole system of trains on various tracks that allow a company to transport their product nationally. In this case, the trains themselves are a meme (or separate memes, if say, the make and model of individual trains cause them to serve different purposes in the system), as are the various track patterns, and the whole system of trains, tracks, and shipments is the memeplex.

Step 1 of a memetic rhetorical analysis, then, is to define the parameters of the study. If the goal of a study is to analyze a variety of memes/memeplexes in a single ecology then it is first necessary to determine the necessary boundaries of that ecology for the study in question. MRT suggests that, because all rhetorical action is a result of successful co-adaptation and evolution, existing ecologies build off others that came before them and overlap in many ways with others that exist at the same time. This overlap and evolution means that studies without firm spatial[10] and chronological boundaries can quickly spiral out of control. As such, memetic rhetorical analysis of an ecology begins with a clear definition of the time and place (either physical or digital) in which the study will be bound.

Memetic rhetorical analysis of a meme or memeplex and its proliferation begins with the identification and definition of that meme or memeplex. If it is a memeplex that you wish to study, you must also identify and define its constituent memes. Definitions of the memes should include the physical, sensory (i.e., visual, auditory, haptic, etc.), ideological, technological, or rhetorical features of the meme, so that you can track the replication of that meme as defined previously[11]. If you are tracking a meme or memeplex, you must also decide on an originating point, both spatial and temporal, of that meme. Keep in mind that all memes are evolutions of previous memes, so identifying an originating point for the meme that you wish to study is about finding the time and place when all the elements of your definition of the meme came together and were introduced as a single meme to a new ecology.

[10] These can be physical spaces or digital spaces—in MRT there is no meaningful distinction between the two.

[11] Reminder: I define the term "replication" in MRT as meaning that a form of the meme has been reproduced that relies on a subset of the physical, sensory (i.e., visual, auditory, haptic, etc.), ideological, technological, or rhetorical features of the meme being replicated.

A productive memetic rhetorical analysis must also identify key memes or memeplexes that characterize the memetic ecology or ecologies in question. Remember that a *meme* in MRT as a unit of rhetorical action, and that memes by definition must replicate. However, only one replication within an ecology is necessary in order for a rhetorical element to be defined as a meme. The fact that a meme exists does not mean that it is successful, nor that it is key to the ecology—the repetition only indicates that it is present as a meme in that ecology. This is why memetic rhetorical analysis focuses on the identification of key memes, and not all memes, in an ecology.

To identify *key* memes in a memetic rhetorical analysis, it is helpful to understand them as any one of a group of rhetorical features, whether content or interface based, which are necessary (either individually or combined together) for a communication to be understood and accepted by the community within a given ecology. The necessity of a particular feature is demonstrated through its repetition throughout the ecology—if this is a feature that knits the community together by establishing accepted rhetorical practice within the community, it must show up often. The more often it shows up, the more essential it demonstrably is to the ecology or to the community. *Often* here is a relative term, not a numerical designation. The more key memeplexes exist in an ecology, the more thinly the repetitions of each memeplex will be spread, making it impossible to provide a number or percentage that would indicate a key memeplex across all ecologies. Instead, this determination is made by comparing the frequency of appearance of various memes within an ecology.

The next step in a memetic rhetorical analysis is to determine if the memes identified in the initial analysis are successful (that is, they spread and gain traction in the ecology) or not. This can be accomplished by selecting a different segment of the ecology—sometimes a later date range within the same forum, or, as in this analysis of the Whole30, a transition to a different forum—and conducting the same kind of analysis to identify key content and interface memes. Those memes and memeplexes that repeat in both analyses have succeeded, meaning that they have continued to proliferate and become a part of the ecology, allowing other memes to build on them in turn.

Finally, a productive memetic analysis should interrogate why some memes succeed while others fail by examining the memeplexes that they are a part of, and what features of the ecology changed or remained consistent among the segments analyzed. The success of a meme within an ecology indicates both its adaptive characteristics and the influence that it exerts, and therefore the ethos that it possesses and its agency to influence the ethos of other memes.

Ethos as a Feature of Memetic Ecologies: Fake News and Junk Science

The articulation of MRT offered in this chapter emphasizes the ability of a meme to adapt to its ecology as the primary—and, in fact, the only—indicator of its ability to succeed and spread. This understanding suggests a reinterpretation of *ethos* as derived from the memetic ecology, rather than an inherent quality of a speaker, document, or institution. This understanding can help digital rhetoricians and technical communicators to understand why misinformation spreads so easily through online communities, particularly when the source of the misinformation is unknown or apparently irrelevant. Memetic Rhetorical Theory suggests that the ecologies of online communities have evolved in such a way that misinformative memes are able to derive ethos from their relationship with previously existing memes and memeplexes present in these ecologies.

In the following chapters, I offer the results of a memetic rhetorical analysis of two communities: the Whole30 Community Facebook page (Chapter 3) and the political discourse community that coalesced around the idea of "fake protests" in Austin, TX following the 2016 presidential election (Chapter 4). I chose these two digital communities as sites for memetic rhetorical analysis in part because digital spaces afford the opportunity for memetic proliferation that is both rapid and well-documented. While this process does occur in non-digital spaces as well, it becomes much more difficult to track without the steady documentation and automatically archived discussions that these digital spaces rely on. Furthermore, while these analyses demonstrate both goals of memetic rhetorical analysis as defined above, they also point to an apparent community dismissal of embodied ethos, as the original source of the content in each community is disregarded in various ways. The following memetic rhetorical analyses will reveal that this redistribution of ethos and its particular separation from embodied individuals is a frequent characteristic of social media platforms that allow or encourage sharing outside of friend groups, as ecologies based in these platforms rely in part on interface memes that rhetorically separate posts by individual users from their constructed online identities. With ethos tied to information, rather than individuals, in these contexts, the processes through which communities develop the characteristics from which ethos is derived become more transparent.

The final chapter reiterates my previous argument that MRT is a more comprehensive way of understanding the rhetorics of digital communities. However, it extends this argument beyond academic analyses and into potential realms for intervention. For example, because digital spaces and technologies have such power in the construction of memetic ecologies, the persistent use of cookies on social media sites contributes substantially to the polarization of communities—practical application of MRT therefore calls for more responsible practices by site developers that would impede, rather than facilitate, the process of isolating memetic ecologies. Likewise, the application of MRT calls for critical reflection on the forces that shape memetic ecologies in all kinds of communities, and for implementing that reflection in a way that allows us to draw on the existing ecologies to introduce new information in a more productive way. The chapter closes with an example of one such successful intervention.

Chapter 3: The Whole30 Memetic Ecology

Introduction

Chapter 1 of this dissertation characterized ethos as a concept that is theoretically complicated and deserves new attention in what some have called the “post-fact” era. Furthermore, Chapter 1 suggested the addition of the concept of agency to discussions of ethos to address the ways in which cultural, technological, physical, and ideological factors come together to craft ethos contextually in various communities. Chapter 2 offered a framework for understanding the confluence of these factors in the form of Memetic Rhetorical Theory, which brings together various cultural and rhetorical actors and strategies (which we might understand as genres, tropes, technologies, features, or myriad other concepts) under the designation of *memes*. This designation encourages rhetoricians and technical communicators engaged with MRT to understand all of these elements as potentially equal and co-adaptive, rather than isolated or mutually exclusive.

This chapter, Chapter 3, explores the Whole30 through memetic rhetorical analysis. The Whole30, as a popular nutrition program, offers insight into one way that scientific research spreads and is valued in online, non-academic communities. This analysis points to the value that this community places on the reporting of individual experiences, even from strangers, and the ways in which this self-reporting often outweighs what is traditionally thought of as credible scientific data. In an exploration of the memeplexes that characterize both the Whole30 books and the Whole30 Community Facebook page, this memetic rhetorical analysis shows that while the program was already primed with content memeplexes that encourage this valuation of personal experiences before it moved into a digital space, the co-adaptation with the interface memes that define the Whole30 Community Facebook page strengthened this valuation in the digital space. This analysis will show that because of the co-adaptation of these content and interface memes, the qualities from which ethos is derived in the ecology of the Whole30 Community Facebook page focus on the reporting of individual (though functionally anonymous) experience, and not on scientific study. The chapter will conclude with a discussion of the ways in which the disparity between this definition of ethos and academic definitions of scientific ethos that focus on credentials and methods of study creates a fissure between scientific researchers and the publics with whom they communicate, resulting in concerns about "junk science" from academic and public audiences alike.

About the Whole30

Weight loss regimens and fad diets are among the most common and easily accessible examples of conflict among public audiences and scientific practitioners. Even a casual observation of public weight loss discourse shows contradictory ideas (is animal fat helpful or harmful for weight loss? Do we *need* to eat carbs if we aren't endurance athletes?) and leaves many dieters frustrated and skeptical of nutritional science. The Whole30 is one such nutritional program [12]; it provides guidelines for a particular style of eating and challenges participants to commit to this eating program for a 30-day time period without lapses. This program originated in 2009 through a series of blog posts authored by its creators, Melissa and Dallas Hartwig. It gained further popularity with the 2012 publication of *It Starts With Food*, Melissa and Dallas Hartwig's guide to what they characterize as a "powerful 30-day nutritional reset." Since that time, the program has expanded to include several more books, a thriving online community

[12] Most Whole30 texts and communities steer away from the term "diet" because diets are associated with temporary eating changes whereas the Whole30 is supposed to be a permanent lifestyle change. The eschewing of "diet" terminology is very common among all kinds of nutritional/eating change groups (i.e., diets often pretend not to be diets so as to avoid the negative connotations of dieting).

spanning the program website and several social media channels, and participants around the world. The focus of this program is on spending 30 days practicing what the Hartwigs call "Eating Good Food" or, to put it a different way, *not* eating all of the following:

- Added sugar, whether natural or artificial
- Alcohol
- Grains of any kind, including corn, rice, oats, and wheat as well as quinoa, and amaranth
- All forms of beans, including soy products and their derivatives
- Dairy of all varieties
- Any food with MSG or sulfites
- Or any food that is made from compliant ingredients but visually or psychologically mimics "bad foods." (Whole30-ers call this "Sex With Your Pants On" or #SWYPO alluding to the idea that by eating these foods Whole30-ers are cheating psychologically, even if they aren't cheating technically, ingredient-wise).

The theory behind these restrictions is that they prevent participants from consuming foods that might trigger personal sensitivities, like hidden allergic reactions, and they deny participants the possibility of eating for emotional reasons. The intensive restrictions also encourage conscious eating habits, such as reading nutrition labels on packaged foods, and are characteristic of a nutritional "reset" that the program creators claim re-orients the body biologically to have a healthier relationship with food.

Disruption of Scientific Ethos in the Whole30

The rhetorical communication of the Whole30 program deliberately calls academic understandings of scientific/medical/nutritional credibility into question. The Facebook

Community page, which is home to significant online interaction within this program, encourages this reinterpretation of ethos though a combination of rhetorically agentic interface features and accepted community standards for online communicative behavior.

The Whole30 books (which form the exigency for the online communities) contain explicit conversations about building the credibility of the program. There is a significant amount of seemingly valid nutritional science that is built into the Whole30 program. Melissa Hartwig herself is a certified sports nutritionist, and the use of elimination diets to gauge the effects of certain food groups on an individual's medical condition is not uncommon. In fact, much of the "scienc-y stuff" (to use the official Whole30 terminology) that the Whole30 literature references appears to come from peer-reviewed medical, nutritional, and even psychological journals,[13] though other sources are also included. However, even within the context of the books, the connection between academic/scientific research and the information provided is deliberately de-emphasized. Within the texts, the Hartwigs discuss the credibility of the program (the fact that it "works" for dieters in various ways) as being separate from its connections with established scientific methods. Specifically, they say that the credentials that they as authors hold, and the peer-reviewed research built into the program are (and should be) insufficient to convince people that the program works. They explain:

> We have scientific studies to back up our recommendations. We have years of experience and documented Whole30 results to confirm we're on the right track. It's the best of both worlds—the academic evidence and the boots-on-the-ground experience that comes from working with thousands of people and getting amazing results. Win-win.

---

[13] This is based on observation of the "References" sections listed in *It Starts with Food*, and *Food Freedom Forever*. I will discuss the relationship between the scientific information and the cited sources later in the chapter.

> But none of those published studies take into account *your* life, *your* history, *your* context. The most relevant form of experimentation for you is *self-experimentation*, so you can figure out for yourself, once and for all, how certain factors affect *you*.
>
> And that is exactly what we are proposing here, with our Whole30 program. Grounded in science, based on thousands of observations and proven results, and anchored with a thirty-day structured self-experiment.
>
> Win-win-win. (*It Starts With Food,* p. 21)

This characterization of the relationship between peer-reviewed research, observation, and personal experience indicates a certain degree of mistrust in relying solely on established scientific methods; they are characterized as impersonal, and often inaccessible, through the contrast between phrases like “academic evidence” and “boots-on-the-ground experience.” The ethos, the reason the Whole30 community finds the information credible, must come from somewhere else. The following memetic rhetorical analysis will explore the ways in which the Whole30 ecology, beginning with the books and moving to the Whole30 Community Facebook page, defines personal experience as a definitive requirement for the ethos of information.

Data Collection

I began my memetic rhetorical analysis by identifying the controlling memes at play in the books that form the foundation of the Whole30 program. These books were all authored by Melissa Hartwig (the first co-authored with her ex-husband, Dallas Hartwig), and they serve as comprehensive reference guides for Whole30 dieters. Their titles are as follows:

- *Food Freedom Forever: Letting Go of Bad Habits, Guilt, and Anxiety Around Food*
- *Whole30 Cookbook*
- *The Whole30: The 30-Day Guide to Total Health and Food Freedom*

● *It Starts With Food*[14]

I defined this set of books as a single, complex memeplex (each book alone is, of course, also a memeplex). I looked for memes that were consistent between books in order to determine the controlling memes in this memeplex.

Next, I analyzed the officially-sanctioned content on the Whole30 Facebook page as well as community posts between January 1, 2018 and March 1, 2018. These dates are significant because activity on the page increased dramatically during the early months of the year, affording an analysis with ample data to characterize community trends. I chose to extend the analysis over two months because of the 30-day nature of the program. I noticed that many community members posting on the Facebook page were beginning their Whole30 Challenge early in January (as is not unusual with diet changes) and felt that it was important to allow enough time in my study for the original posters to finish their program and for other, new participants, to begin. This helped to ensure that I wasn't unnecessarily limiting the scope of the memetic ecology by focusing specifically on one cohort of Whole30 participants. It also provided me with a picture of the ecology that spans all the stages of the program, rather than appearing artificially focused on the early days.

I chose the Whole30 Facebook page as the site of this singular study because in my preliminary analysis it seemed to represent the greatest diversity of activity of any of the social media sites on which the Whole30 appears. While Whole30 is a popular board and tag on

[14] I did not include two published Whole30 works, The *Whole30 Fast and Easy Cookb*ook and *Whole30 Day By Day: Your Daily Guide To Whole30 Success*, because their publication dates in December 2017 were too close to the start of my Facebook analysis time-frame. I do not think it is reasonable to expect any unique memes in these two books to have the same potential to proliferate in such a short time as those in other books had in the 1.5-6 years they have been on the market. As such, their inclusion might have skewed my analysis.

Pinterest and a hashtag with a significant following on Twitter, these sites tend to contain content that is limited to a particular category of discussion. Pinterest, for example, is dominated by recipe-oriented memes, while the Whole30 website has both limited functionality and discussion boards that are moderated for content consistency. While memetic rhetorical analyses of these spaces would certainly be interesting (what is it about Pinterest that encourages the spread of recipe memes to the exclusion of almost anything else? How do interface memes that are standard in cookbook genres change as they adapt to the Pinterest ecology?) and are ideal projects for future research, they are not necessary to achieve the goals of this dissertation project.

Whole30 Books: Defining the Memes

The following paragraphs identify the most prevalent, and therefore the most influential, memes in the Whole30 books that I identified earlier in the chapter. For this discussion, I identified three interface memes that shape the delivery of the information in all four books and six content memes that appear consistently throughout the books and act as formative ideas within the body of texts. While countless other memes appear in the series, I identified these as the most influential based on the frequency with which they appear throughout the books (see subsequent sections for details). Together, these interface and content memes govern the ways that information is transmitted and understood in this memeplex.

Interface memes

The graph below (Table 1) illustrates the differences in frequency of appearance between the interface memes that I identified as key memes in the book memeplex versus another interface meme (the use of charts and diagrams) that appears in the book memeplex but that I did not identify as key. *The Whole30 Cookbook* and *The Whole30: The 30-Day Guide to Total*

Health and Food Freedom are segmented using units with major headings while *It Starts With Food* and *Food Freedom Forever* use chapters. In this graph, the Y axis counts the number of chapters and major headings within units in which each meme appears. There are 116 total chapters and major headings within units in the four books. The X axis in this graph names select interface memes that occur in the books in order to give an idea of the range of frequency of appearances for each meme. Notice that the Haptic/ Text based meme (defined at length below) appears in all 116 units because this meme is integral to the genre in which the material appears.

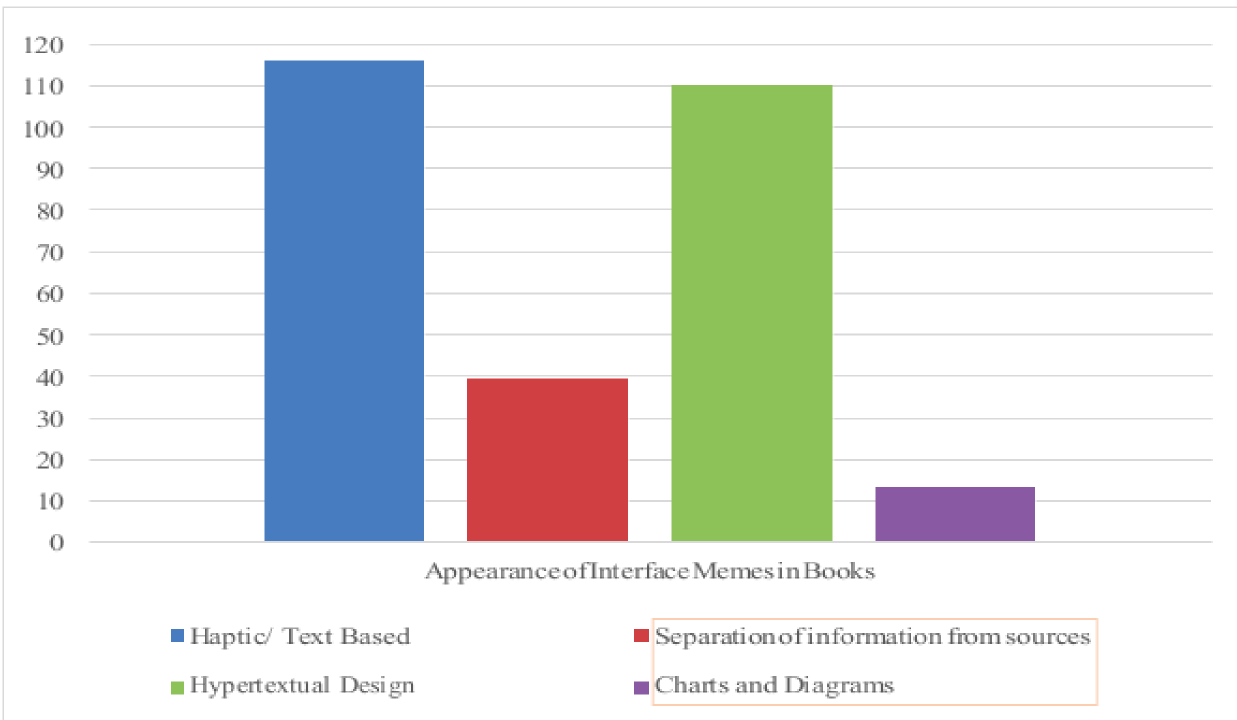

Table 1: Whole30 Book Interface Meme Occurrences

Haptic and Text-Based

The books are textual and material objects[15] that exist in the world and must be purchased (or shared by someone who has purchased them) in order to be read and must be read in order to

[15] Some are available both as hard copies and on Kindle, but as all must be purchased and you still have to touch electronics, the characteristics I am discussing here hold true.

be understood. This is actually a fairly complex memeplex with memes relating to the history of literacy, associated factors of economic access, and embodied accessibility intersecting to determine how and if the books are able to communicate information and to whom; however, for the purposes of this analysis I am characterizing the haptic and text-based nature of the books as a meme so as to bound the discussion in a manageable way. Likewise, this set of features (haptic, text-based, purchase-oriented) is a well-established and concrete memeplex that is present in almost all books, so I am comfortable discussing it as a single meme here.

Separation of Information and Sources

All 4 books include scientifically dense information, meaning they use scientific terminology relating to health, nutrition, and psychology among other fields, and reference studies and research to support specific recommendations. However, the books physically distance discussions of scientific research from its original source a majority of the time. For example, *It Starts With Food,* for example, contains more than 400 references from a combination of peer-reviewed scientific journals, government publications, websites hosted by private organizations, and other books on dieting and nutritional science. These are sorted by chapter in a list called "Master References" just before the index near the end of the book, but any clear textual ties between these references and the information that the authors drew from them is demonstrably absent. Instead, the chapter content usually reads as a general claim that "research" or "studies" support the content, without tying to a particular source. In fact, there are very rarely (I count 4 instances in the 320-page book) references to which source particular pieces of information come from. Even when these textual references do occur, the connections are speciously defined. For example, in Dallas Hartwig's introduction to the book, he claims "it was not unusual for me to read an article in the *British Journal of Nutrition* about dietary factors that were of special relevance for individuals with rheumatoid arthritis," and this reference includes a connection between a physical ailment and dietary factors, but no specific reference to the author, title, or year of publication of the article. A dedicated reader could closely examine the "Master References" list and attempt to locate the article in question, but the in-text citation itself is absent, and there are no textual cues to indicate that such a search would be in any way productive for the reader.

This is an interface meme because the physical, spatial separation between the information cited and its full source helps to shape the way that the reader engages with that information. It does so by allowing the reader to easily engage with and recognize the information but makes it more difficult to find and engage with the source.

Hypertextual design

The Whole30 books included as part of this study were all constructed hypertextually; that is, the writing and formatting not only allow for, but actively encourage, non-linear reading. This meme appears in several instantiations, including textual indicators to "skip" or focus on upcoming sections to achieve specific goals or cater to specific interests (see Figure 4), calls forward or backward to other chapters (including references to other recipes as ingredients in recipe sections), call-out or definition boxes that allow readers to skim or refer back to content to grasp important ideas, and even chapter titles that facilitate selective reading. Figure 4 (below) is an example of a textual cue that signals to the reader that they can either read all the way through the upcoming chapters, or skip all the way to Chapter 8 without negatively impacting their understanding of the book as a whole. This meme also manifests in the page design of *It Starts With Food*, wherein the frequent use of call-out boxes provide summaries of key points and help to simplify dense scientific language.

“If you’re the kind of person who needs to know not just the *how*, but also the *why*, these chapters [that contain what they call ‘the scienc-y stuff;’] are a must-read. If you don’t care about the science and just want to know what to eat, how much to eat, and how to create lifelong healthy eating habits, feel free to skip straight to the food in Chapter 8” (*It Starts With Food* p. 22).

Figure 4: Textual Indicator of Hypertextual Design in Whole30 Book Memeplex

Content Memes

The chart below illustrates the differences in frequency of appearance between the content memes that I identified as key memes in the book memeplex versus a small sampling of other content memes that appear in the book memeplex but that I did not identify as key. In this chart the Y axis counts the number of chapters and major headings within units in which each meme appears. *The Whole30 Cookbook* and *The Whole30: The 30-Day Guide to Total Health and Food Freedom* are segmented using units with major headings while *It Starts With Food* and *Food Freedom Forever* use chapters. There are 116 total chapters and major headings within units in the four books. The X axis in this chart names content memes that occur in the books, including those defined as key content memes in this memeplex and discussed at length below.

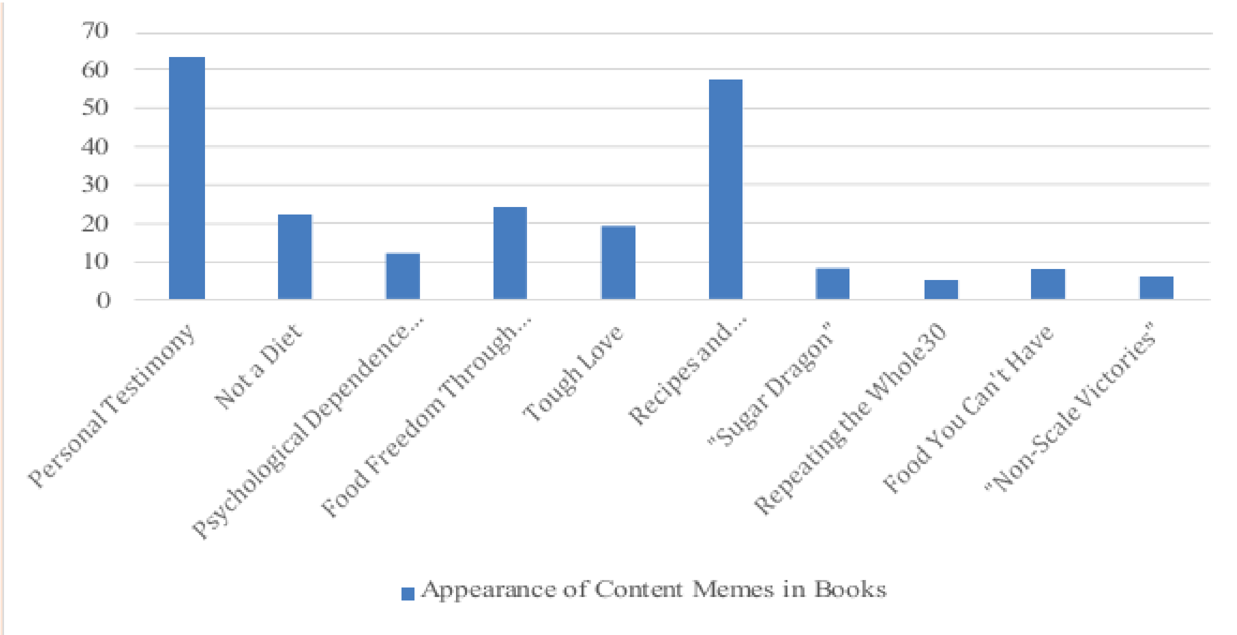

Table 2: Whole30 Book Content Meme Occurrences

Personal Testimonies

Each chapter of *It Starts With Food* and *The Whole 30* begins with a personal testimony[16] from an individual who self-identifies as having successfully completed the Whole30 (see Figure 5). A few of these seem to have direct correlations to the content of the chapters (Chapter 17: Preface to the Program, for example, begins with Tara O. from Edwardsburg, Michigan's overview of how important she found it not to think of the Whole30 as a diet), but most are simple reports of the benefits the participants found from completing the program in general. Of the 22 testimonies in *It Starts With Food*, for example, 18 include references to cured diseases or serious medical problems, while only 7 mention weight loss and three focus on self-control and the elimination of binge-eating.

[16] There is an important distinction to be made here between the inclusion of personal testimonies (which is a content meme) and the placement of these testimonies (which is an interface meme).

"I'm 46 years old and have lost the same fifty pounds over and over again, only to gain it back—and more. At the beginning of the year, my cholesterol was so high I was sure I'd need to go on medication. But by the end of my Whole30, my overall cholesterol level dropped 83 points, triglycerides dropped 82 points, LDL dropped 63 points, and HDL rose 3 points. Plus I lost ten pounds and over seven inches. Thank you!"

- Patty M., Boise, Idaho

Figure 5: Example of Personal Testimony from Whole30 Book Memeplex

It's Not a Diet

Throughout the books, the authors work to include but de-emphasize the idea of weight loss. In both the personal testimonies (see Figure 5) and the descriptive and explanatory text, the idea of weight loss is framed as a supplemental and less-important benefit when compared with the other outcomes claimed by the program, like improved mood, better overall health including the elimination of existing diseases or reduction of symptoms

Likewise, while the Whole30 challenge has a recommended but flexible timeline of 30 days, the idea that the lifestyle changes created by this 30-day challenge should be permanent is prevalent. Finishing the program according to the guidelines requires that participants re-introduce the foods that they have eliminated gradually after the 30 days are up, allowing time to see how their bodies react to, say, a serving of dairy, or some added sugar. This will help participants determine what food groups are negatively affecting their bodies so that they can continue to avoid those food groups while enjoying the others that have no adverse effects. This process, the authors repeatedly claim, necessitates a lifelong change in the participants' relationship with food, rather than the colloquial understanding of a "diet" as a temporary change in eating habits to affect change in one's body (usually weight loss).

Psychological Dependence on Bad Foods

The "Scienc-y stuff" included in these books emphasizes the idea that "bad foods" (food items that contain ingredients on the forbidden list at the beginning of the chapter) interact with the body to form unnatural and unhealthy physical and psychological responses. *It Starts With Food* and *Food Freedom Forever* characterize this psychological dependence as both a habitual response, built upon years of eating food for comfort, and a chemical response to the disruption of hormone levels caused by an unhealthy diet. The books use this construct to demonstrate the necessity of a strict program to disrupt these hormonal imbalances, while also pointing to the idea that this psychological dependence (and the resulting challenges to personal willpower) are common reasons for the failure of traditional "diets."

Freedom through Control of Eating Habits

The idea of healthy eating as liberating is common in all 4 books; one title, *Food Freedom Forever* even specifically emphasizes this metaphor. The books describe unhealthy relationships with food much like a prison sentence or a war zone. They emphasize the anxiety that people often feel in eating situations when they don't understand how/why their food choices are bad, or they feel powerless to overcome their cravings. Freedom, then, is characterized as the absence of this anxiety and the understanding that it is possible to escape from unhealthy cycles. The emphasis, again, is on making "good" food choices and the power in recognizing that food intake is all about making conscious decisions.[17]

Tough Love

Melissa Hartwig is famous for her tough-love approach to the Whole30 program, and the language that she uses as an author in the Whole30 books emphasizes this approach. The

[17] The program contains few critical interrogations regarding the availability of "good" or healthy foods across geographic locations or socioeconomic backgrounds. While there are some references to ideas like "some people may not be able to afford organic produce" a systemic interrogation of barriers to "good eating" is missing altogether.

strictness of the program offers little room for negotiation, and Hartwig places significant rhetorical emphasis on the idea of choice as well as on putting food choices in perspective with other kinds of health and psychological issues. She famously claims that “Beating cancer is hard. Drinking your coffee black is not hard” (*ISWF*) as a way of re-framing the narrative that the program is ‘difficult’ and attempts to discourage emotional or automatic, unthoughtful eating habits by focusing on all food intake as a choice. This mentality carries through all the book in the collection, including warnings like “You’re not off the hook just because you’re in the birthplace of gelato” in *Food Freedom Forever* (p. 133) and reminders that adults with credit cards can buy treats whenever they want (this speaks somewhat to the audience for this program as well), so cake does not constitute a special occasion.

Recipes and Recommendations

All the books contain suggested recipes, tools for meal planning, and recommendations for best practices while completing the program. These manifest differently and in various quantities throughout the texts but are defining features of all four. For example, *The Whole30 Cookbook* consists almost exclusively of recipes and recommendations for cooking and meal prepping techniques while *Food Freedom Forever* offers advice for navigating the Whole30 socially and emotionally, including sections on how to talk with friends and family about your eating habits and how to stick to the program when on vacation.

Whole30 Community Facebook Page: Defining the Memes

The following paragraphs identify the most prevalent, and therefore the most influential, memes that make up the Whole30 Community Facebook Page. The three interface memes that I have included are standard interface features of the Facebook site; they are not unique to the Whole30 page, in part because Facebook does not allow interface customization. This means that in addition to being standard features of this page, they are readily recognizable to users who must have Facebook accounts in order to access the page, and therefore easily understood as part of a larger ecology (Facebook) that users know is focused on building and maintaining interpersonal relationships. These interface memes are standard to the page and therefore present whenever allowable content is uploaded, so in 100% of posts analyzed. I likewise identified five prevalent content memes on the page, which I selected based on the frequency with which they appear in individual posts (all memes included appear in at least 40% of the 426 posts analyzed).

Together these interface and content memes combine to form the memeplexes that define the Whole30 Community Facebook page ecology. Notice the drastic difference in the interface memes and the only partial overlap in the content memes between the books and the Facebook page, which the analysis following the defining of the memes will discuss.

Interface memes

The chart below illustrates the differences in frequency of appearance between the interface memes that I identified as key memes in the Facebook Whole30 Community Page ecology versus a small sampling of other content memes that appear in the ecology but that I did not identify as key. In this chart the Y axis counts the number of posts in which each meme appears. There were 426 total posts in the time period analyzed. The X axis in this chart names interface memes that occur on the page, including those defined as key interface memes in this ecology and discussed at length below.

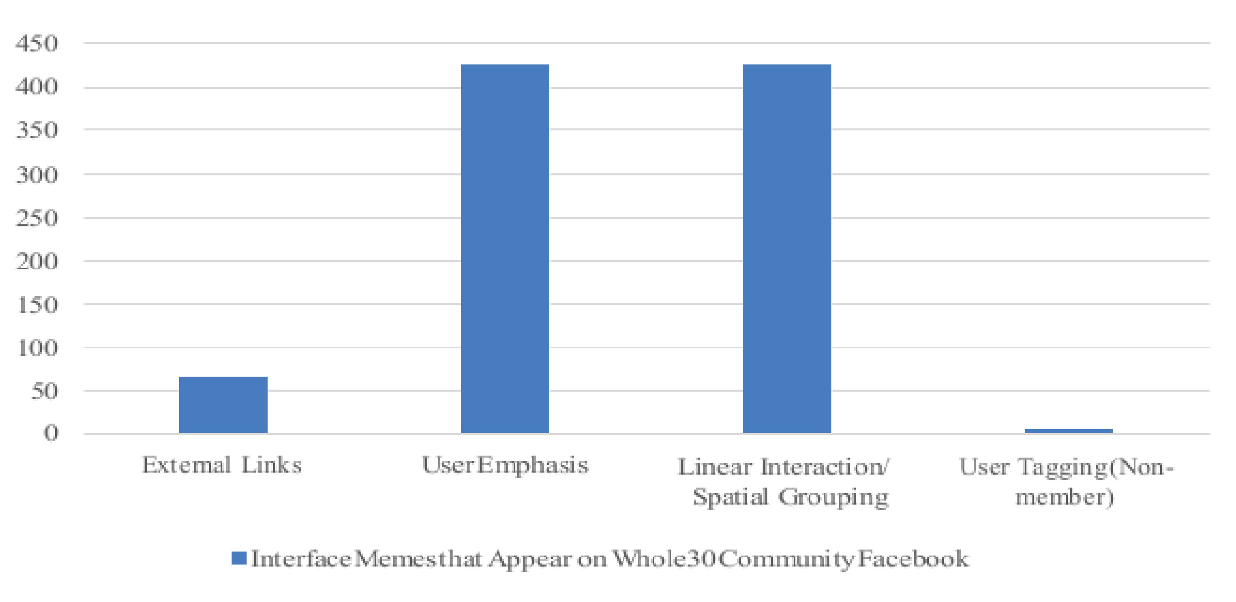

Table 3: Whole30 Community Facebook Page Interface Meme Occurrences

User Emphasis

In the Facebook community page—and on Facebook generally speaking—there is a close spatial link between the content a user posts and that user's identifying information, including their name (as designated on their account) and their profile picture. On the screen, the user's name appears in a larger font, bold typeface, and navy-blue coloring, which emphasizes the user who contributed the content before the type of the content itself.

Linear Interaction (Spatial Grouping)

Comments, likes, etc. appear in close proximity to original content and in chronological order. These are organized on the page chronologically by contribution, meaning that the position of the post on the page depends on *when* it was uploaded and not on *who* uploaded it. As such, the narrative that a reader experiences is the narrative of the page as a whole, as a set of isolated content interactions, not the comprehensive narrative of a single user's experience, or a set of recognizable individual users' experiences.

Content Memes

The chart below illustrates the differences in frequency of appearance between the content memes that I identified as key memes in the Facebook Whole30 Community Page ecology versus a small sampling of other content memes that appear in the ecology but that I did not identify as key. In this chart the Y axis counts the number of posts in which each meme appears. There are 426 total posts that occurred within the time period analyzed. The X axis in this chart names content memes that occur in the ecology, including those defined as key content memes in this ecology and discussed at length below.

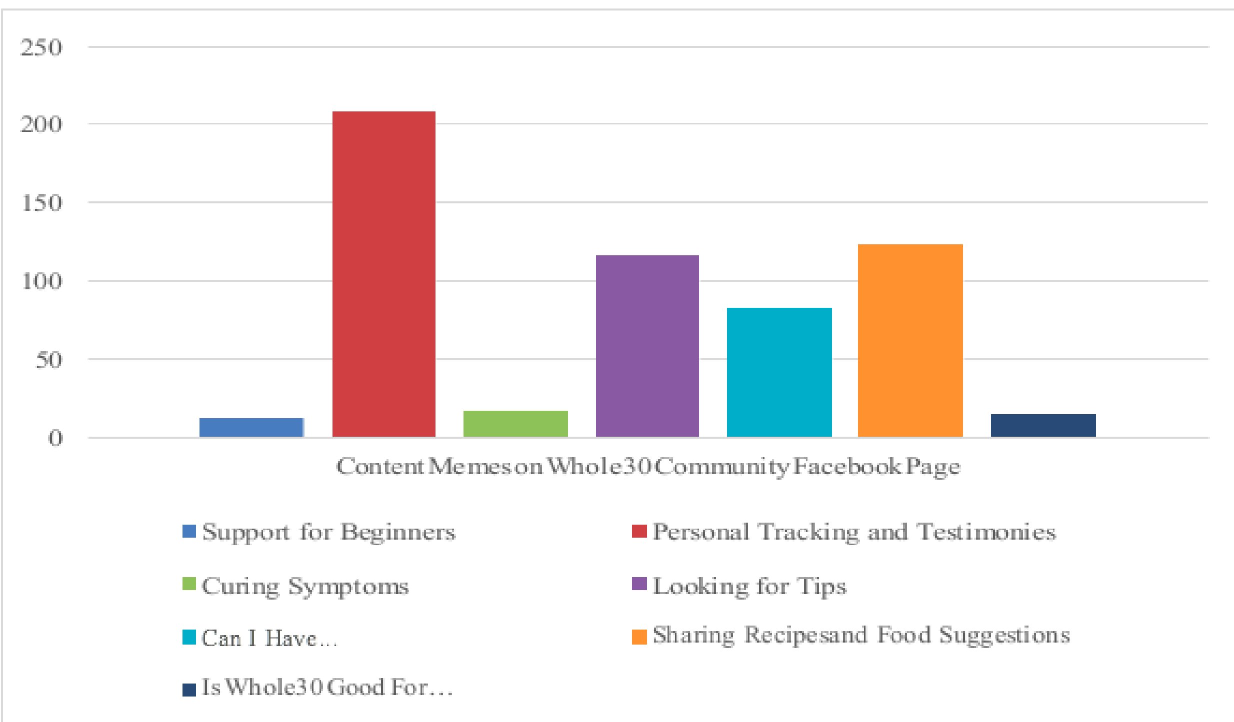

Table 4: Whole30 Community Facebook Page Content Meme Occurrences

Personal Tracking and Testimonies

Community members use the forum space to report on their personal progress, intentions, or results. This often takes the form of a simple summary of where the user is in the program (abbreviations such as R2D16, for “Round 2, Day 16” are common) and/or a brief discussion of how the program is going for them. Users will occasionally point out problems that they are encountering or benefits that they are observing. This meme also manifests as individuals indicating the start (or plans to start) or end of their Whole30 program.

Looking for Tips

Community members use the forum space to ask others for advice on solving specific problems related to the Whole30. These often have to do with incorporating existing habits into the Whole30 lifestyle (i.e., a user might indicate that they are used to taking protein supplements after a workout and ask if anyone knows how to get the same level of protein intake in a compliant way) but might also include requests for advice about cooking or shopping techniques, or general “I’m new to this, does anyone have any tips?” style posts.

“Can I have…”

Users often post inquiries about foods or specific ingredients, asking others if these are allowable on the program. In many cases the user will include a picture of the food (especially the ingredients list) along with their post (see Figure 6 below). This meme is distinct from “Looking for Tips” because the users are seeking “yes” or “no” answers regarding a specific food or product, rather than advice more broadly.

Figure 6: Example of "Can I have..." Content Meme in Whole30 Facebook Community

Sharing Recipes and Food Suggestions

These are unsolicited posts (i.e., they are not in response to specific requests for suggestions) that users share on the community page containing references to brands or products that are Whole30 compliant or recipes for compliant meals. This meme, like others I have discussed, appears in a few different manifestations. Some are full recipes containing lists of ingredients, preparation instructions, and cook times, others are simply pictures of food with a brief endorsement ("yum!"), and still others are reports that the user has discovered a food that they like that is compliant with the plan. Many are combinations of one or more of these manifestations (See Figure 7 below).

Figure 7: Example of "Sharing Recipes and Food Suggestions" Content Meme in Whole30 Facebook Community

Analysis

The interface memes and content memes defined in the above sections are fully dependent on one another within the confines of the book memeplex and the Whole30 Community Facebook page ecology. Together, the interface and content memes in each space form the memeplexes that define that space. The varying dynamics between the memeplex of the books and the memeplexes that shape the Facebook page determine what memes will succeed or fail when they move from the books to the ecology of the Facebook page. The interface memes in particular (and the memeplexes they create) are markedly different between the Facebook community page and the Whole30 published books, which causes the content memes to shift and adapt accordingly.

In the Whole30 books, the interface memes encourage participatory reading through hypertextual design, allowing the reader to customize their reading experience to suit their own interests and needs. This user focus transforms the books, which are in a genre that is usually more author-controlled, into interfaces that encourage user agency. Likewise, by physically separating sources from the information that they provide, the books de-emphasize the traditionally academic locus of ethos (the research study authors and publishers) and place the emphasis again on user experience. The combination of these memes creates an interface memeplex that encourages agency and interaction by the reader rather than sole communication from expert authors and researchers to a passive audience. This memeplex aligns well with the content meme, prevalent in both the books and the Facebook community page, of personal testimony. The emphasis that the Hartwigs place on the individual experiences of users, both in the quote at the beginning of this chapter and in the frequent inclusion of personal testimonies in the book series, lays the groundwork for the participatory community of users on the Facebook Community page.

Taken together, the Facebook interface memes defined above form an ecology that rhetorically emphasizes interpersonal communication with a focus on content-input by individuals. This shift takes the user focus that is present in the book interface memeplex and adds the element of interaction with other users. User interface is the controlling meme in the broader Facebook ecology and this holds true within the Whole30 community page as well. It is impossible to post any content without that content being directly tied to a specific user.

Moreover, Facebook has stricter parameters than many other social media sites in that the account regulations work hard to ensure that accounts created for individuals represent the off-screen lives of those individuals as closely as possible. Names thought to be fake, for example, are searched for and deleted by Facebook site administrators.[18] This creates the community expectation that users will post based on their own lived experience. The interface memeplex will not allow any meme that does not bond with this user emphasis to exist on the page, so all information that is added is characterized *first* as personal experience. This is not a conscious choice made by users, but rather a default characterization of the content that is dictated by the features of the interface. However, the user input meme exists symbiotically with the content meme of isolated posts and anonymous personas. The content is user-focused but the users lack fully-formed personas within the community. The users' names are irrelevant and carry no recognition; it is the fact that they *have* a name that makes the contribution persuasive.

Two content memes from the books appear prominently in the Whole30 Facebook community: Personal testimonies and recommendations/recipes. Both of these, however, have evolved to better suit the ecology of the Facebook community page. Instead of manifesting solely as static reports as they appear in the books, personal testimonies on the Facebook page include elements of personal tracking as well. When reporting their results, users mention where they are in the program (including when or if they have finished) and specific details of their progress in time-oriented phrasing (i.e., "R1D15, my skin has

[18] The way that Facebook goes about this is intensely problematic. In 2017, a Daily Beast article noted that transgendered users' accounts were being deleted for use of their preferred names (Allen), and Native Americans reported difficulties verifying their names as well (Bodago, 2015).

cleared up and I have TONS of energy”). This evolution shows co-adaptation of the testimony meme with the user content input meme within the interface memeplex, as it is specific to that user and tied to their account, rather than being selected by authors or site administrators and used as a frame of reference.

Because of the anonymous yet personal quality of the interface memeplex, personal tracking and testimony memes are rhetorically constructed as being generalizable to the average page user. The interface memeplex places the locus of ethos in this community on personal results, so users know a testimony is credible and that they can achieve similar results specifically because another user shared this as their own experience.

The recipes and recommendations meme likewise evolved to suit the Facebook ecology. In the books, the recipes are detailed (typically one-page) and often organized by category cookbook-style so that finding desired recipes is facilitated by the hypertextual design. The recommendations are also detailed and often supported by what the authors call “scienc-y stuff” (that is research). On the Facebook page, however, recipes tend to either be short and non-descriptive, including only ingredient proportions and summary instructions, or simple links outward to other sites, while recommendations come in the form of simple endorsements or images of food products or brands. While links outward occur, these are framed in the context of recommendations or suggestions, again meaning that the inclusion of the content is contingent on the original poster’s personal experience with it, rather than any intrinsic quality of the linked content itself. Hence, the ethos (the credibility) of the post relies on that recommendation meme and the content only spreads as a result of its inclusion.

These posts rely on the ethos of the named yet anonymous user, much like the tracking and testimony memes; however, recipes and recommendations are focused on a tangible product rather than an anticipated outcome. The shared source of ethos means that tracking and testimony and recipes and recommendations are rhetorically linked within the site interface, suggesting that even though all of these are posted by different users, utilizing the recipes and recommendations from one group of users will allow page readers to achieve the same results as the users who reported their tracking and testimony.

The multi-user site interface also allowed the recipes and recommendations meme from the books to evolve into requests for information that users can expect to be answered. This function created the looking for tips and “can I have…?” memes that are present on the Facebook site. The ecology of the Facebook page that utilizes interpersonal communication and includes the sharing of recipes and recommendations allows memes that seek out this kind of information to co-exist symbiotically.

The combination of these interface and content memeplexes means that the Facebook community page is an ecology that not only emphasizes but is built on personal testimony and anecdotal results. These are used as community resources as well as support mechanisms, meaning that it is among the most common and integral memeplexes in this ecology. This also means that ethos in this ecology is derived from the relationship between information and individuals, and not from scientific methodology or personal credentials.

Discussion

At the beginning of the chapter, I offered a quote from *It Starts With Food* that characterized the Whole30 founders’ beliefs about how readers should decide if an eating regimen will work for them. In summary, the Hartwigs claimed that a program that is put forth by experts, supported by research, and proven through an individual's personal experience is the epitome of dietary credibility—the "win, win, win" scenario. As a rhetorician, I understand this quote to be a characterization of how the authors understand the origins of ethos in their program; if it works, then it is credible, and if it is credible then it has ethos. In the books, which are a static genre that must be purchased and focus on interaction solely between the author(s) and the reader, this ethos is distributed according to the Hartwigs' summary: they are the experts who support the program, they include (but obfuscate) research from credible and often academic sources, and they encourage readers to make the program their own along with the reading. On the Facebook page, however, there are far more interactants; there are many authors and many readers. The ecology on the Facebook page is therefore much more focused on interpersonal interaction, and the expert endorsements and scientific research that are present in the books have no memeplex that they can readily adapt into. The personal experience resource is the only locus of ethos within the books that is suited to the ecology in Facebook, and so the only one that survives the transition. The Whole30 Facebook page is therefore an ecology that eschews traditional academic interpretations of ethos and relies instead on methods of validating information that are usually disregarded by scientific researchers—personal experience.

There is no standard set of criteria, agreed upon by the multitude of public and academic audiences, for determining the validity of scientific practice. While scientists tend to agree that the scientific method is a universally validating practice, many public audiences do not agree that this is the case. The general public is unlikely to trust studies that they do not understand (largely because they have no access to these studies) and cannot replicate, and the myriad sources offering contradictory information on best practices for health and wellness are both overwhelming and dismissive of any one-size-fits all approach. Science has prided itself too long on being impersonal, but now that distance makes it inaccessible for practical application by the populations that need it most. This is a commonly recognized barrier to scientific communication, recognized in Randy Olson's *Don't Be Such a Scientist: Talking Substance in an Age of Style* (2009) as well as Yu and Northcut's recent (2017) addition to the Routledge Studies in Technical Communication, Rhetoric, and Culture series, *Scientific Communication: Practices, Theories, and Pedagogies.* Melissa and Dallas Hartwig emphasize this distance between academic science and personal application in the Whole30 program books, and so offered participants (starting with themselves) equal voice in determining whether or not the program works for them. This effect was magnified intensely in the online community, where the experience of the users is rhetorically foregrounded by the interface of the site.

As academics who value traditional conceptions of ethos, our inclination might be to dismiss spaces like the Whole30 Facebook community page as breeding ground for junk science, as places where intellectualism goes to die and our life's work as researchers is dismissed as boring. Admittedly, my first inclination as a researcher was to think of this rhetorical turn as anti-intellectual, but this was short-sighted and ultimately an unproductive lens for my analysis. As a technical communicator, I find it more valuable to think of the junk science designation as a rhetorical tool too often used for deriding public science and a way of dismissing the responsibility that we have to communicate our research in an accessible way. The memetic rhetorical analysis in this chapter suggests that the site users on this page are looking for answers, they are looking for ways to use science, but they rely on the personal experiences of people like them, with the same goals and struggles, to find answers they can trust.

Chapter 4: The Memetic Proliferation of Fake News

Intellectually and emotionally weakened by years of steadily degraded public discourse, we are now two separate ideological countries, LeftLand and RightLand, speaking different languages, the lines between us down. Not only do our two subcountries reason differently; they draw upon non-intersecting data sets and access entirely different mythological systems. You and I approach a castle. One of us has watched only "Monty Python and the Holy Grail," the other only "Game of Thrones." What is the meaning, to the collective "we," of yon castle? We have no common basis from which to discuss it. You, the other knight, strike me as bafflingly ignorant, a little unmoored. In the old days, a liberal and a conservative (a "dove" and a "hawk," say) got their data from one of three nightly news programs, a local paper, and a handful of national magazines, and were thus starting with the same basic facts (even if those facts were questionable, limited, or erroneous). Now each of us constructs a custom informational universe, wittingly (we choose to go to the sources that uphold our existing beliefs and thus flatter us) or unwittingly (our app algorithms do the driving for us). The data we get this way, pre-imprinted with spin and mythos, are intensely one-dimensional.

-George Saunders, *The New Yorker*

Introduction

Chapter 3 used memetic rhetorical analysis to explain how and why some memes from the original ecology of the Whole30 book selection successfully proliferate on the Whole30 Facebook community page while others do not. This analysis speaks to an understanding of ethos that relies on the distribution of agency among interfaces, community ideologies, and community members, rather than investing ethos solely in the person of Whole30 founder and book collection author Melissa Hartwig. This understanding of ethos suggests that the Whole30 community finds information credible because of the adaptation, both in form and content, of that information to the ecology into which it has been introduced.

This chapter, Chapter 4, interrogates a similar relationship between ethos and agency through the memetic rhetorical analysis of a fake news item. This fake news item began as a Twitter post. Interestingly, the original poster himself debunked the claim within 48 hours; however, the claim continued to spread. The following analysis suggests that the original twitter post did not gain its immense popularity because of any ethos inherent in the original poster's identity, because if that were the case then the original poster's retraction would have gained the same level of popularity. Instead, this case demonstrates the characterization of ethos that Memetic Rhetorical Theory proposes: ethos comes from the successful adaptation of the memes that comprise new content to the memetic ecology into which they are introduced. I begin this analysis with a brief discussion of the term fake news, including the ways in which this term acts as a meme itself, the meaning of which is different (and even contradictory) depending on the ecology in which it appears. Next, I offer the story and analysis of a fake news item made by a Twitter user claiming that he had found proof that the Hillary Clinton presidential campaign or other powerful democrats had created fake protests in an attempt to discredit Donald Trump's victory in the 2016 presidential race. Using Memetic Rhetorical Theory to analyze the proliferation of this story, as well as the failure of the same poster's retraction to proliferate, I conclude that the memes that made up the original tweet were so successful in spreading through conservative online fora because they were well adapted to the ecologies that were already in place in these spaces.

Fake News as Two Distinct Memes

Fake news has become a buzzword in American politics. The popularity of this term, as well as the increasing polarization of political discourse, allowed for a memetic evolution of the term itself. The term or designation “fake news” is a meme, as evidenced by its frequent replication in all kinds of political and journalistic discourses throughout the past half century, while the practices of intentional false reporting and intentional smear campaigns, which could be considered related memes, date back thousands of years (Burkhardt, 2017). Originally, the fake news meme was associated with news stories that conveyed information that was demonstrably factually inaccurate. Because it is the earliest iteration of the meme, I will call this version FNOriginal. FNOriginal formed as part of a memeplex that relied on other memes of journalistic integrity and objective factual accuracy, and it continues to be well-adapted to this memeplex. As such, FNOriginal still exists in its original form, as discussed below. Scholars and journalists in the mainstream media usually are referring to FNOriginal when they use the term fake news. This is likewise the reason that the academic publications cited below maintain this original definition.

The memes of journalistic integrity and objective factual accuracy with which FNOriginal co- evolved do not exist in all ecologies; as Chapter 1 of this dissertation demonstrated, the introduction of “alternative facts” into political discourse signaled the rise of changing ideas about media objectivity, leaving room for multiple and conflicting representations of events. A drastic increase in public interest in fake news began in 2016, and in many ways was supported by the idea that mainstream news sources ignore or alter certain stories to fit a political agenda. As Allcott and Gentzkow (2017) report, these traits are particularly strong in conservative political discourse, creating a conservative political discourse ecology in which the memes of journalistic integrity and objective factual accuracy are not present. However, because news media and political discourse of all kinds intersect often, the term fake news was introduced into the conservative political discourse ecology. This introduction took place both through the frequent practice of scholars and media sources repeatedly accusing conservative media sources of propagating fake news, and through the repeated use of the term by Donald Trump, as discussed below. With its original co-adaptive memes absent, FNOriginal evolved, as memes do, to adapt to this new ecology and so took on a new meaning, becoming a new iteration of the meme which I call FNEvolution. FNEvolution is the label that describes the use of the term fake news as a rhetorical strategy for undermining media outlets. In this progression of definitions, it is clear that the term “fake news” as used in political contexts, is itself a meme that has adapted from journalistic and academic discourses to suit the current ecology of conservative political rhetoric.

In scholarly and journalistic communities, fake news was originally used to refer to the factual accuracy of information and whether something was correct, right, or true. Allcott and Gentzkow (2017) define “fake news” as “articles that are intentionally and verifiably false, and could mislead readers.” Pulitzer Prize-winning news source *PolitiFact* likewise defines fake news in saying, “When PolitiFact fact-checks fake news, we are calling out fabricated content that intentionally masquerades as news coverage of actual events” (Holan, 2017). In both of these definitions, there is a clear distinction between truth or “actual events” and the content that the authors define as fake news. This dichotomy suggests an inherent belief in the existence of irrefutable fact. Both journalism and academic studies exist within memetic ecologies that value capital-F Facts, and both utilize research methods that seek to uncover facts. This ecology consists of a set of memeplexes that foreground the idea of indisputable or universal facts and the ability to discover and communicate those facts through established methods. As such, in this ecology the ‘fake’ in fake news simply means that the content of the news piece does not match with those universal and identifiable facts.

The presumption of objective falsehood built into these definitions as part of the criteria for identifying fake news relies on a set of agreed upon standards for establishing fact in public discourse. However, as this dissertation has shown, such agreed upon standards for identifying true facts are difficult to come by and, as this chapter will show, they are particularly difficult to come by in contentious political discourse. If facts can have alternative facts, then fake news is no longer an objective classification, but rather a rhetorical one that is used to achieve specific goals. This inability to agree upon a standard set of facts that holds true for all factions of political discourse is what led to the second iteration of the meme “fake news,” FNEvolution.

FNEvolution is the use of the term fake news to denigrate media outlets, especially by calling those media outlets out for bias against conservatives. FNEvolution comes in part from the appropriation of the term fake news by the Trump campaign and by Trump himself after it had already entered public discourse. They used it as a way of undermining media outlets that published content portraying Trump in a negative light. Jankowski (2018) explains that, “Trump and other politicians have usurped the term and use it to brand traditional media sources [e.g. *The New York Times*, CNN], with which they disagree. In this manner, the term has acquired status as a pejorative label for liberal media outlets, and has lost commonly accepted meaning” (p. 248). This tactic is widely used, with the president having infamously referred to a CNN reporter saying “You are Fake News” and using the term 223 times in personal tweets since the election (as of May 3, 2018- Trump Twitter Archive).

Notably, Trump’s usage of this term shifts over time from reference to a specific story or piece of information as shown in a tweet claiming, “intelligence agencies should never have allowed this fake news to ‘leak’ into the public. One last shot at me. Are we living in Nazi Germany?” (Donald Trump, January 11, 2017), to a general reference that seems to refer to the mainstream media at large, or to specific organizations (usually CNN or *NY Times*), as when he says “At some point the Fake News will be forced to discuss our great jobs numbers, strong economy, success with ISIS, the border & so much else!” (Donald Trump, July 3 2017) and “Steve Bannon will be a tough and smart new voice @BreitbartNews…maybe even better than ever before. Fake News needs the competition” (Donald Trump, August 19 2017). Not surprisingly, this definition of fake news raises particular concern for journalists, causing a number of reflective and opinion pieces that warn that mistrust and degradation of the media are common forerunners of totalitarian governments (Garofalo, 2017; Tharoor, 2017; Yates, 2016).

These two parallel but conflicting memes of the designation fake news are able to exist at the same time because they appear in different memetic ecologies: so-called ‘mainstream’ journalism and academe (which tend to lean politically left) and far rightleaning conservative political discourse (Donald Trump's twitter account, Fox News, and Breitbart being notable examples). Conservative political discourse, however, has long accused traditional media sources of left-leaning bias, and this manifests as a distrust of mass media which grew even more significant during the 2016 election. Fake news in this context, then, is more akin to a "calling out" on political bias in reporting than a judgement about factual accuracy.

These differences play out clearly in the saga of one tweet, identified by the *New York Times* as fake news, discussed in the following sections. While the *Times* article uses the FNOriginal meme to emphasize the factual inaccuracy of a particular tweet, it is the FNEvolution meme that contributes to the memeplex in conservative political discourse with which that original tweet aligns, meaning that the FNEvolution meme is the co-adaptive meme that allows the information in the tweet to proliferate.

Introduction of Fake News Story

On November 9, 2016, a tweet, posted by user Eric Tucker, claimed that a series of busses that he had photographed on his way to work in Austin, Texas were being used to transport protesters to "fake protests" against Donald Trump's election. Tucker's tweet shows photographs of several busses parked along a street along with the claim, "Anti-Trump protesters in Austin today are not as

Figure 8: Eric Tucker's Original Tweet

organic as they seem. Here are the busses they came in. #fakeprotests #trump2016 #austin" (Maheshwari, 2016).

The New York Times commented on the rapid spread of this tweet in a brief article titled "How Fake News Goes Viral: A Case Study." In this article, author Sapna Maheshwari characterized a Twitter user's tweet as fake news and discussed its rapid progress through various online fora. The *Times* article also reported that Tucker rescinded his claim shortly following his original post, but that this retraction did not have the same reach as the original tweet (Maheshwari, 2016). The following sections of this chapter discuss the movement of this tweet (or its content) through several micro-ecologies. These micro-ecologies were originally identified by the *New York Times* as sites that had "picked up" Tucker's tweet. I add to their identification of these sites with the addition of a memetic rhetorical analysis in order to illustrate why and how Tucker's original tweet was able to spread successfully in these spaces while his retraction was not. This analysis shows that the naming of this fake news item by traditional media sources (such as the *New York Times*) and the retraction of this fake news item by the original source were ineffective means of disrupting its spread. This is in part because this fake news item co-adapts so successfully with the FNEvolution meme as it proliferates in conservative political discourse communities.

Maheshwari, as a journalist, uses the term fake news to refer to the FNOriginal meme and its attendant definition, and demonstrates that the story contained in Tucker's tweet matches this criteria both by referring to his own retraction and by independently verifying that the busses were actually in town that day to transport attendees to and from a convention that was unrelated to the election. She then tracks the content of the tweet from Tucker's network of about 40 followers to a re-post of the same tweet in a Reddit community supporting Donald Trump along with the headline, "BREAKING: They found the buses! Dozens lined up just blocks away from the Austin protests" (Maheshwari, 2016). Through the use of the word "Breaking" and its affiliation with language typically used in journalism, the post was rhetorically associated with news reporting rather than an observational post by a private user.

Because Tucker's tweet contains a set of co-adapted memes (identified below), Tucker's tweet qualifies as a memeplex. It is well-adapted to the conservative political discourse ecology, which spans several social media sites as well as other kinds of websites and offline fora as well. As a memeplex, Tucker's tweet contains a set of memes, all of which appear in various other memeplexes and ecologies at the same time. The memes present in this one tweet rely on a thorough understanding of conservative political rhetoric at the time that the tweet was introduced, meaning that the memes are part of an already complex memetic ecology. These memes are also a part of other ideological memeplexes that make up the ecology of conservative political discourse, meaning that Tucker's tweet is able to allude to these other memeplexes as a way of making meaning within this ecology. The memes both derive meaning from and contribute meaning to this ecology. As such, the tweet exists as part of a larger conversation that relies on a set of understood facts and logics that are characteristic of conservative ideological rhetoric at this time.

The following paragraphs identify the memes present within this memeplex (Eric Tucker's original Tweet). Because memes are identified through repetition, I have identified these memes based on their appearance in one or more of the memetic ecologies that intersect with Tucker's tweet; these ecologies are the social media site twitter and conservative political discourse during to 2016 election. Characteristic features of Twitter are, by definition, replicated in every Twitter post and for that reason are defining memes in that ecology. I identified memes for this analysis that were features of conservative political rhetoric during the 2016 presidential election by looking for ideas, phrases, or images that appear in Tucker's tweet and then looking for repetition of those ideas, phrases, or images in conservative news sources, blogs, or other ideologically-oriented fora in the 18 months surrounding the post of the tweet[19]. The appearance of these memes in outside fora is cited in the discussion of each meme.

The Memes

Caption-to-Image

This feature of Twitter foregrounds the text and allows the images to follow sequentially; it is therefore an interface meme that rhetorically emphasizes the textual content by influencing the way that users view and interact with the information contained in the tweet. In the case of Tucker's tweet, his caption "Anti-Trump protesters in Austin today are not as organic as they seem. Here are the busses they came in. #fakeprotests #trump2016 #austin," comes prior to the three images of busses on the street in Austin. This

[19] The repetition of these ideas, phrases, or images in these fora as well as in the tweet fulfills the repetition requirement to classify them as memes. Per the definition in Chapter 2, repetition only technically needs to occur once to classify the repeated element as a meme. The success or prominence of the meme is determined by the frequency of repetition of the meme in question as compared to other memes in the ecology.

arrangement allows the text to provide immediate framing context for the three images, linking the images to the already established conservative rhetorical approaches that suggest deliberate (and “fake”) attempts to discredit Donald Trump and priming the audience to interpret the pictures of busses accordingly. In this way the caption-to-image structure is reminiscent of a claim-to-evidence argument structure in which the photographs provide evidence in support of Tucker’s claim that the “Anti-Trump protesters are not as organic as they seem.”

In many ways, this process mimics what Eric Tucker might have experienced before posting the tweet: with a set of internalized ideologies that allowed or encouraged him to believe that certain groups of people have a vested interest in making it (artificially) appear that many citizens are against the election of Trump, by his own later admission he immediately connected the presence of busses full of people to the construction of these supposed artificial protests. In other words, when exposed to a new meme (the presence of busses on that particular day in Austin) his brain interpreted that meme according to the ecology that it already had in place, and therefore fit it in with the memeplex of artificial protests that Tucker already believed.

#hashtag

In identifying the memes in the Tucker’s tweet memeplex, I want to begin by distinguishing the use of a hashtag as a function, which is an interface meme, from a specific hashtag itself, which is a content meme. The #hashtag feature on Twitter as an interface meme allows users to share tweets with others who have similar interests but may be outside their immediate circle of followers. This is achieved through the hashtag search function that Twitter offers. As interface memes, the hashtags function rhetorically as a means of audience selection and act as features that can help determine who interacts with the post in addition to the original poster's followers and how they do so. Tucker's tweet makes use of the hashtag interface meme by tagging the tweet to appear in searches for #fakeprotests, #trump2016, and #austin. The search for #fakeprotests would have been populated largely by conservative commentators, as would #trump2016, and Tucker's post uses this interface meme to expose the content of the tweet to an ecology to which it is already well adapted and therefore likely to proliferate. #austin is a reference marker for the city of Austin, Texas. Its use in this context, then, ensures that a wide variety of people, not only those with political interests that align with Tucker's, might come across this post. The local focus of the hashtag also means that the people who would physically encounter the protests on that day (Austin locals or visitors) are also the people who are most likely to see the post suggesting that they are fake. The use of this hashtag shows that the post was introduced into the #austin ecology on Twitter; however, this post or its constituent memes did not spread through the #austin ecology. Memetic Rhetorical Theory would suggest that the reason it did not spread through this ecology is because it lacked the necessary content memes to co-adapt with the existing memeplexes in that ecology; however, that is an analysis for another study.

Notice that, as an interface meme, the hashtag function only works because of the way that hashtags characterize, and therefore help define, the content of the post. As a search tool, the hashtag interface meme relies on a relationship between the hashtags included in a tweet and the other content of that tweet to return appropriate responses when the search function is used. In memetic terms, this means that the interface hashtag meme is co-adapted to the content memes of each individual hashtag in the post (in this case, #fakeprotests, #trump2016, and #austin). This is further proof of the theoretical idea that content memes and interface memes are symbiotic, not mutually exclusive, categories.

Hashtags allow users who produce tweets to categorize their tweets according to the content they contain. This also allows the user to link the content of the tweet to a specific idea or ideas, and the implied associations between the content of the tweet and those ideas is a way of expressing a maximum number of ideas in the limited space that Twitter posts allow. In Figure 2, for example, the user uses #yesallwomen to connect the content of her tweet to the larger idea that all women experience sexual harassment and feelings of fear in the way she is describing. The hashtag also mirrors and dismisses the common rebuttal to stories of sexual harassment that "not all men" behave in these harmful ways. Use of the hashtag allows the poster to convey the complex idea of her experience in the larger social context and participate in that conversation without using a higher percentage of her limited allotment of characters to spell out something like "while this is my personal experience, it is not unique to me, and in fact all women face similar struggles simply because we are women; let's talk about it."

Figure 9: Example of Hashtag Use to Link Tweet to Larger Ideas

#austin

As a content meme, #austin conveys the idea that the content of the post relates to or takes place in the city of Austin, Texas. It is used for a variety of topics that are of interest to citizens or others who are somehow invested in the city. Examples of common uses of this hashtag include weather updates and rescue pets local to Austin as well as citywide events or tweets by travelers visiting the city. This particular hashtag, at the time Tucker's tweet was posted, did not carry partisan political affiliations. As such, its inclusion in Tucker's tweet signaled only that Tucker himself was referring to the protests specifically taking place in Austin on that day. It serves as a geographical marker, rather than an ideological one.

#fakeprotests

As a content meme embodied by the hashtag #fakeprotests to characterize the content of the tweet, the belief in fake protests as a feature of the American political landscape appears twice in Tucker's tweet, both as the hashtag and implied in the text content stating that the protests happening on that day in Austin were "not as organic as they seem."

The idea of fake protests, that is, protests that were staged for political purposes and made up of participants who are not truly invested in the cause, was a prominent feature of the 2016 presidential election (Bond, 2016). I call this idea, and the belief in it, the fake protest memeplex. A central meme in this memeplex is the rhetorical act of naming a political demonstration a fake protest—call this FakeProtestNamed. Like the related FNOriginal meme, this meme has evolved substantially from its inception; it is now habitually applied to protests that accusers simply wish to discredit. The idea of a fake protest paints participants as unthinking (often money-hungry) pawns of larger powers who seek to discredit Trump and his presidency or conservative policies more broadly. This allegation was a particular feature of conservative online sources targeting the Clinton campaign. On October 12, 2016, about a month prior to Tucker's tweet, Eric Trump shared a story via Twitter in which a woman claims to have been paid $3,500 to protest at a Trump rally (Firozi, 2016). Buck Clay of SOFREP News, a conservative-leaning and heavily military-focused news site, published an exposé (6/10/2016) of alleged attempts by the Clinton campaign to hire protesters to disrupt Trump rallies; however, Snopes debunked the claim that liberal groups were using Craigslist to recruit protesters-for-pay around that same time (Snopes.com). These allegations, shared often on social media and repeated across various news sites (used loosely), are individual iterations of the FakeProtestNamed meme that together form a memeplex within the ecology of conservative political discourse during the 2016 election. This memeplex consists of several similar memes that co-adapt to reinforce the claims that paid protests were being used to discredit conservative candidates, and Donald Trump in particular.

Ideologically, the fake protest memeplex is part of a larger memeplex consisting of the belief that the majority (often called "silent" with a certain degree of dramatic irony) of Americans are (or were at the time) pro-Trump and, as such, reports of large number of people expressing disagreement/ dissatisfaction with him are deliberate attempts at misdirection by the liberal media and/or individual powerful liberals. Conservative news site *Breitbart* contributor A.J. Delgado adamantly voices these beliefs in his article, "20 Reasons Why It Should Be Donald Trump In 2016," and cites various social media posts by citizens as evidence that others understand the true situation (Delgado, 2015). The article draws specifically on the memeplex outlined at the start of this paragraph by claiming that suggestions by "the liberals" that Trump is "losing" (that is, losing the presidential primary race at the time and therefore unpopular) are deliberate attempts at misdirection intended to cause Trump supporters to shift their support to another candidate, thereby losing Trump's essential votes and costing him the race. According to the article, such misdirection and falsified attempts to paint Trump as unpopular are common tactics of the liberal media. Delgado uses the Facebook post in Figure 2 (below) as an example of a citizen who "nails it" with their description (Delgado, 2015). *Fox News* likewise notes that *CNN* blurred out a man's pro-Trump t-shirt logo when featuring him on an unrelated story (*Fox News*, 2016). The *CNN Headline News* story, which praises retired police officer Steven Eckel for saving a baby left in a car on a hot day, originally showed Eckel's t-shirt slogan reading "Trump for President 2016" but blurred out the slogan in a later showing. *Fox News' Bias Alert* segment frames this as an attempt to make support for Trump appear obscene (Fox News, 2016), with the additional connotation being that it disassociates heroism like that displayed by Mr.

Figure 10: Facebook Post Cited by Breitbart News

Eckel from support of Donald Trump and eliminates representation of Trump supporters from popular media.

#trump2016

#trump2016 is, not surprisingly, the most politically charged of the hashtags, and is generally used to aggregate posts that show support for Donald Trump's presidential campaign during the 2016 election cycle. Posts that use this hashtag will always have some association or commentary regarding Trump and/or his role as a candidate for the presidency; as such, users who search this tag are presumably those who are interested in following conversations about Trump, whether their opinions of him as a candidate are positive or negative.

Figure 11: Images Showing the Trump2016 Meme in Non-Digital Formats

#trump2016 is an evolution of another meme, "Trump 2016,"[20] that exists in both digital and non-digital spheres. Both of these memes, and the various evolutions thereof,

[20] Notably, "Trump 2016" it itself an evolution of a common political meme in the United States in which the pairing of a political candidate's last name with the year of the election indicates support for that candidate or association with the candidate's campaign (for example: "Obama 2008," "Bush 2004," and "Clinton 2016"). This meme evolves every election cycle as new candidates run for office.

show support for or association with Donald Trump's 2016 presidential campaign.[21] The inclusion of the #trump2016 hashtag in conjunction with the other memes in the tweet marks Tucker's tweet as supportive of Trump and helps readers to make the association between that support and the idea of fake, "bussed in" protesters: namely, that these protests are a deliberate attempt to undermine the newly-elected Trump rather than a genuine expression of dissatisfaction by members of the public.

Together, these memes form the memeplex contained within Tucker's tweet. Because these memes also appear in other, connected memeplexes within conservative political discourse surrounding the 2016 presidential election, Tucker's tweet memeplex was able to successfully adapt and proliferate through the ecology based on those connections. The following sections of this chapter will analyze this proliferation in two specific micro-ecologies as a way of understanding how this adaptation took place, and how that adaptation translates to a new understanding of ethos in this context.

The Proliferation of Tucker's Tweet

Tucker's tweet spread extremely quickly through select memetic ecologies. The tweet was introduced to the conservative political discourse ecology through the use of the hashtags #fakeprotests and #trump2016 as discussed above. Conservative political discourse is not bound to a particular geographic location or site but instead spans the entire country and countless internet fora. This means that, once introduced to this ecology, Tucker's tweet

[21] The "or" in this sentence is important, as many internet users would tag negative stories or comments about Trump with #Trump2016 as a way of associating the content of their post with the campaign and emphasizing the connection between that content and Trump as a candidate

as a memeplex and its constituent memes were able to spread into new spaces and proliferate by adapting to the memeplexes at play in those particular spaces. We can think of these spaces as micro-ecologies that all fall under the larger umbrella ecology of conservative political discourse. This means that these micro-ecologies likely have several memeplexes in common, but they may differ in other ways, especially in their reliance on different interface memes that shape the various site platforms. To explore this phenomenon, I use MRT to briefly analyze the proliferation and evolution of Tucker's Tweet in two of these micro-ecologies: the #fakeprotests ecology on Twitter and the Robertson Family Values page on Facebook. While the information in Tucker's tweet appeared in many other micro-ecologies both on and off social media, I chose these two spaces because Tucker's tweet was the origin of the common use of #fakeprotests on Twitter, and therefore the beginning of a new micro-ecology. The Robertson Family Values page, however, was already a well-established ecology at the time the tweet was released. This contrast allows for an illustrative analysis both of a space where a memeplex (#fakeprotests) adapts to suit an existing environment (conservative politics) as well as a space that grows out of connections between that memeplex and other memes from intersecting ecologies.

Proliferation through #fakeprotests on Twitter

Tucker's tweet was the beginning of widespread use of #fakeprotests on Twitter, although the idea of fake protests, as described previously, did appear in other places relating to conservative political discourse surrounding the 2016 presidential election. This tweet marked the start of conversations surrounding the aggregated #fakeprotests, and so was the birthplace of a new micro-ecology. In the 6 months prior to the posting of Tucker's tweet, #fakeprotests appears 8 times on Twitter (other tweets that reference the idea of fake protests but do not include the hashtag are much more common and not included in this count). The hashtag then appears 11 times on November 9th, and 298 times in unique tweets (including links to other tweets or news stories) on November 10th. Of these, 36 individual tweets reference Tucker's tweet specifically, either by quoting from him or tweeting @erictucker. 153 of these tweets reference or quote directly from a *Gateway Pundit* article that quotes Tucker's tweet and shares the images from it. Since widespread use of the hashtag began, #fakeprotests has been used to refer to a variety of other political demonstrations across the United States.[22] These include allegations tying #fakeprotests to the demonstrations organized by student victims of the Parkland school shooting, March For Our Lives, countless anti-Trump demonstrations, kneeling NFL players, and many others. However, as of May 18, 2018 (about 18 months after Tucker's tweet was first posted) #fakeprotests tweets tying back to Tucker's tweet still hold the top 2 spots on Twitter's *Top Tweets* for the hashtag and 33 of the top 50 tweets for the hashtag date to within 5 days of November 9, 2016 (the date of the original post of Tucker's tweet, but also the day after the presidential election). The prevalence of these tweets shows that memes from the original memeplex of Tucker's tweet remain controlling concepts in this ecology, even as the

[22] #fakeprotests is often also now used to refer to political demonstrations around the world, but as this chapter is so heavily focused on United States politics I will exclude these from the discussion. A larger argument could be made, however, for intersections between memetic ecologies of United States political discourse and political discourses around the world as evidenced by the proliferation of these ideas.

specific memes of fake protest and distrust of the media become associated with new events that have joined the ecology in this space over time.

The memes from Tucker's tweet spread quickly to create this new ecology. This occurred through adaptation of these memes to existing conspiracy memeplexes, most notably the financial corruption and political involvement of George Soros, who was almost immediately accused of paying the protesters who arrived on the busses to attend (see Figure 3) and who is still accused of funding many demonstrations that are seen as anti-conservative.

Figure 12: Tweet accusing George Soros of Funding #FakeProtests

The hashtag #fakenews was also quickly introduced to this ecology (see Figure 4), providing for successful co-adaptation between #fakenews as associated with the FNEvolution meme and #fakeprotests as it is used in Tucker's tweet. These two memes were ideally constructed for co-adaptation, as both evolved to suit memeplexes that rely on similar content memes: a distrust of (often liberal) powerful entities who are thought to be intentionally misleading the public and the desire to discredit or challenge anti-Trump discourse.

Figure 13: Co-adaptation of #FakeNews and #FakeProtests

The memes within Tucker's tweet, along with their associations and adaptations with existing conservative and conspiracy memeplexes, form the central memeplexes of this ecology. This means that when Tucker's tweet or other tweets that use #fakeprotests are shared, they rely on a single set of (possibly alternative) facts and assumptions that create a unifying rhetoric—a set of controlling memeplexes that cross micro-ecologies and are characteristic of the ecology of conservative political rhetoric during this time. #fakeprotests as a memetic ecology relies on these controlling memeplexes for coherency, and these memeplexes determine which new memes will succeed and proliferate when introduced to this ecology. It is the successful adaptation of #fakeprotests as a meme to the ecology of conservative political discourse that makes this process possible and that allowed the #fakeprotest ecology to continue to grow over time. However, the #fakeprotests ecology itself is based on a tweet (Tucker's tweet) which has been proved false by various media outlets and publicly disavowed by its creator. The entire ecology is based on one simple piece of misinformation which only proliferated because of its successful co-adaptation with existing memeplexes within conservative political discourse at the time. Because the basis of this ecology is this piece of misinformation, any new memes that do not fit the memeplexes established and drawn upon by that misinformation are unable to proliferate within the ecology. As such, any attempts to intervene in this ecology that are incompatible with these memeplexes will be unsuccessful, regardless of their source or strategy. This became evident when Tucker himself posted the retraction of his original tweet, removed the tweet from Twitter, and publicly apologized for his mistake (Tucker, 2016). Even though the retraction came from the same source, it did not spread through the ecology created by that source less than 24 hours previously because it failed to adapt to the memeplexes that defined that ecology.

The Move to Facebook through Co-Adaptation

Twenty-four hours after Tucker posted his original tweet, a conservative forum called *Free Republic* had caught wind of the story from a Reddit thread. From *Free Republic* the story was posted to the Facebook page “Robertson Family Values” (Maheshwari, 2016). While not affiliated with the Robertson family who gained fame through the popular television series *Duck Dynasty*, the page uses images from the television show and seems to align with the rural, outdoor-focused emphasis of the show as well as the family dynamics between the characters. The Robertson Family Values page describes itself as a page that “promotes Christian, rural, and conservative American values.” This description holds true in the content memes that were posted on the site around the same time as the content from Tucker’s tweet, meaning that conservatism, rurality, and Christianity were the defining memeplexes on the page at this time. Figure 14, for example, shows content memes that support conservatism in the validation of Donald Trump’s election through support of the electoral college[23] while emphasizing the need for

[23] Trump was elected through victory in the electoral college, though not the popular vote. This

fairness to rural voters (indicated in the gray areas of the map). Other posts argue that big government (traditionally liberal) de-emphasizes religion by taking on powers that should be attributed to God, and that Hillary Clinton is a liar and/or criminal.

Figure 14: Post Shared by Robertson Family Values Facebook page on November10, 2016 showing rural and conservative content memes

The content of Tucker's tweet was shared from this page by individual Facebook users, all of whom are page followers, more than 7,500 times. In order to proliferate from this page, the story in Tucker's tweet had to make the seemingly unlikely leap between a discussion of supposed 'fake' protests in Austin, TX and the other content that causes users to follow this page to begin with. In other words, the memes in the memeplex that made up Tucker's tweet had to co-adapt with the memeplexes on the Robertson Family Values page. The conservative emphasis already built into these memeplexes made this possible, as this

disparity caused some ideological dispute in the aftermath of the election, with many liberal commentators claiming that the electoral college does not accurately reflect the will of the voters while conservative commentators argued that the electoral college more fairly distributes voting power among densely and sparsely populated states.

emphasis consists of memes derived from or already present in the conservative political discourse ecology discussed above. Because Tucker's tweet was successfully adapted to the conservative political discourse ecology, then, it was also successfully adapted to the Robertson Family Values Facebook page.

The Retraction

By the afternoon of November 11th, two days after the original tweet went up, Tucker had rescinded his claim that the busses, actually in Austin to provide transportation for a local conference, had anything to do with bringing in protesters. Late that night, he also deleted the original tweet and re-posted the image with the word "False" superimposed at the top in red (Maheshwari, 2016). Neither Tucker's denial of his claim nor the responses from fact-checking websites like Snopes gained any real traction with the community of sharers of the original post (Maheshwari, 2016). While introduced into the same communities by the same individual, the retraction tweet did not contain the necessary memes to adapt within the ecologies where the original tweet was successful, so it was ignored both on Twitter and on Facebook.

Had the ethos been an embodied characteristic of Eric Tucker, then the retraction tweet should have proliferated with the same degree of rapidity. This, however, was not the case. This failure of the correction-meme to proliferate despite sharing an origin point with the original story suggests that the ethos of the original story came from the ability of the content to align with the existing beliefs of the groups who were sharing it, rather than relying on any presumed authority of Tucker himself. These attempts at intervention relied on the presumption of a unified understanding of truth and facts; however, this unified understanding is not present in disparate ecologies where truth and fact are characterized by different and often contradictory memeplexes. As such, a simple introduction of corrections or new and contradictory facts into these ecologies cannot be the most productive way of intervening in these spaces.

Memetic rhetorical analysis shows that new memes, and therefore new information (which is made up of memes), are successful when introduced to a new ecology only if those memes draw on and co-adapt with the memeplexes that constitute those ecologies. When ecologies are made up of memeplexes containing content memes based on misinformation, corrections of that misinformation that contradict these memeplexes are doomed to fail. In Chapter 5, I discuss the difficulties associated with this kind of intervention in detail and offer solutions for addressing these difficulties using MRT. I conclude with one such example of successful memetic intervention and the caveat that memetic interventions, while more likely to succeed because of their co-adaptive nature, are often gradual, uncomfortable and/or problematic.

Chapter 5: Memetic Intervention

Introduction

This dissertation began in Chapter 1 by identifying the ways in which the intersections of conversations about ethos and agency contribute to the social changes that lead to the modern era being known as “post-fact”. In particular, Chapter 1 argues that because ethos is a culturally constructed concept, much like rhetoric itself, it exists in a mutually constructive relationship with the agentic actors that influence how people communicate, and therefore how culture is (re)formed over time. Chapter 2 builds on this discussion by laying out a model for understanding this mutually constructive relationship in the form of memetic rhetorical theory (MRT). MRT suggests that all the building blocks of culture (and rhetorical action) called *memes* evolve together to create rhetorical environments called *memetic ecologies*, and that the co-adaptive nature of these ecologies determines what new memes are able to spread successfully; in other words, these meme ecologies determine what new memes have ethos in that space. Chapters 3 and 4 show MRT in action by conducting memetic rhetorical analyses of the proliferation of memes through specific memetic ecologies, with both cases demonstrating that the original source who authored the information has little effect on how or if that information spreads within communities. This analysis suggests that ethos, then, is a characteristic indicating successful adaptation of a meme to a memetic ecology and not an inherent or embodied characteristic of a person.

The case studies discussed in Chapters 3 and 4 of this dissertation illustrate the idea that the agency of the various memes in these memetic ecologies affects the creation and distribution of ethos in those ecologies. In both cases, the original source of the information seems to be relevant to the spread of that information through new ecologies only if the ethos of that source is already an established memeplex within that ecology. This is evident based on the fact that of the Whole30 information published by Melissa Hartwig via her published books, only the memes that were adaptive to the interface structure of the Whole30 Community Facebook page gained traction and remained able to proliferate in that ecology. This would suggest that, because of the interactive and user-focused nature of the Whole30 Community Facebook page, the community on that page values content from other participants more than the content from the books or their author. This is a characteristic derived from the unique features of the memetic ecology in this space, rather than a characteristic of the Whole30 community more broadly. For example, simple observation suggests that Melissa Hartwig participates much more actively on the Whole30 website fora, frequently referencing her own experiences as well as various parts of her written works (books as well as published articles and interviews) to answer questions or give advice to participants on the site. On the Whole30 website, then, Hartwig's ethos is emphasized and cultivated through the structure of the site and her own use of its features, while that same ethos is virtually non-existent on the Community Facebook page where members have learned to rely on each other. Likewise, Eric Tucker was the source both of the original claim of fake protestors in Austin and of the retraction, but only the memeplex of the original claim proliferated through the communities that were predisposed to believe it.

In other words, the communities studied in this dissertation do not invest either Hartwig or Tucker with ethos as individuals. Rather, certain memes gain traction in the ecologies based on their adaptability to the memeplexes that are already in place. In the public Whole30 Facebook community page discussed in chapter 3, as well as the public Robertson Family Values page and #fakeprotests Twitter hashtag in chapter 4, the social media platforms rely on interface memes that rhetorically emphasize the act of posting by an individual rather than the profile or identity of the individual poster themselves.

These cases also demonstrate the tenacity of successfully-proliferated memes, as they become characteristic of the ecologies through which they have spread. This tenacity is the reason why misinformation memes are so difficult to counter once they have spread through a particular ecology; they cannot be corrected through simple contradiction or even redactions because they have already co-adapted with other defining memes.

Intervening in the Spread of Misinformation

Interventions in the spread of misinformation must follow the same process of co-adaptation that other successful memes in an ecology have followed in order to intervene in the memeplexes to which the original piece of misinformation has adapted. While numerous attempts to disrupt the spread of misinformation in both science and politics have been made, these often take the form of simple fact-checks or corrections, rather than gradual co-adaptations. In the early 2000s, fact-checking sites like Snopes (as well as other, less popular sites) began to appear online in an attempt to counter attempts at misinformation regarding politics, or false claims made by political figures (Young et al., 2018; Nyhan & Reifler, 2010). Existing research in the fields of communication and digital media show that the introduction of fact-checks—contradictions or corrections of information that has been posted on social media, usually sourced from news articles or fact-checking websites—is not usually effective at changing minds on social media (Garrett et al, 2013; Hannak et al, 2014; Lewandowsky et al., 2012), making the disruption of the spread of misinformation extremely challenging. Research also suggests that varying techniques can be used to mitigate this resistance; however, these techniques tend to be focused on *individuals'* acceptance of the corrected information. For example, in a study of fact-checking as a social undertaking via Twitter, Hannak et al. (2014) argue that while fact-checks are usually ignored by original posters on social media, this effect is lessened if the original poster has a reciprocal social media relationship with the fact-checker.

Their study demonstrates that when original posters and fact-checking posters have frequently commented on each other's posts and/or posted to each other's timelines, the original poster is more likely (though still not extremely likely) to respond to a fact-check by agreeing with the correction or backing off their original claim (Hannak et al. 2014). In their study of the spread and disruption of misinformation, Lewandowsky et al. (2012) similarly suggest that the compatibility of information with things that the reader already assumes to be true is a key factor in determining whether or not that information will be accepted by that reader.

Both of the above studies suggest appeals to the credibility of the correction as possible avenues for successful intervention. However, they determine that credibility in different ways: Hannak et al (2014) emphasize the personal relationship between the original poster and the fact-checker, placing the locus of ethos in the embodied personage of the fact-checker themselves; Lewandowsky et al., however, focus the locus of ethos on the information itself and its relationship to the reader's pre-existing beliefs.

At first glance, the studies by Hannak et al. and Lewandowsky et al. might appear contradictory; while Hannak et al. suggest that ethos is derived from interpersonal relationships, Lewandowsky et al. argue that ethos is tied to relationships between pieces of information, not individuals. Memetic rhetorical theory suggests that, rather than being contradictory, these ways of determining the origin of credibility both point to the contextual nature of ethos. In other words, in both scenarios ethos is derived from a concept or relationship that is already valued in the space in which the study takes place. Understanding how that derivation takes places requires acknowledgement of both the ecologies that influence these spaces and the ways in which new content has adapted to fit those ecologies. In this understanding, ethos that is built through interpersonal relationships, as Hannak et al. discuss, is derived from complex reasoning regarding the nature of that relationship and the kinds of qualities that the original poster (based on their cultural conditioning) recognizes as trustworthy as well as the established practice between the original poster and the fact-checker of sharing information, thoughts, and ideas through the social media site. Ethos that is derived from the relationship between the fact-checker and previously accepted information, as Lewandowsky et al describe, follows a similar process in adapting to the existing ecology. However, in this case the ecology is based primarily on the logical[24] construction and coherence of ideas rather than an interpersonal relationship. The successful cultivation of that ethos is a matter of recognizing the memeplexes that control the ecology into which the fact-check has entered, and introducing the fact-check meme in such a way as to allow it to adapt to and build on those memeplexes. In both cases, the credibility (the ethos) of the newly-introduced fact-check meme is derived from the existing ethos of another memeplex already operating in the ecology, be that a personal relationship, a logical construction of ideas, or some other construction.

Ecker, Lewandowsky, and Tang (2010) demonstrate that providing prior warnings about the possibility of false or misleading content can help individuals to fact-check within their own memories, however, notably more than a third of participants in their study continued to rely on misinformation to make inferences even after acknowledging that the misinformation had been retracted (2010). This continued reliance on misinformation by more than one third of

[24] I am using "logic" here in a literal sense; it does not imply inherent accuracy or correctness, but rather the process of drawing conclusions and defining relationships between ideas using inferential reasoning

participants means that while *individuals* might be persuaded by specific conversational tools or interpersonal relationships in one-on-one interactions, the misinformation remains a part of group discourse even after that successful persuasion occurs. In this way, misinformation remains a part of the memetic ecology once it has been introduced. It is therefore available as an established meme, if not a dominant meme, in that ecology for other newly introduced memes to co-adapt with and gain traction through. As an existing feature of an ecology, the misinformation meme continues to hold persuasive power in this way and can allow other memes to cultivate ethos based on co-adaptation with it.

As a rhetoric and technical communication project, this dissertation concludes by offering ways we can intervene in the memetic ecology of community discourse as a whole, rather than in the individual beliefs of specific community members. As such, intervention through memetic rhetorical theory must work to introduce correction memes in a way that allows those correction memes to adapt and proliferate widely within the existing ecology. Successful intervention in this context would mean that the correction meme proliferates to such an extent that other memes within the ecology begin to adapt to it (the correction meme) rather than to the original misinformation meme. Notice that this successful intervention is not absolute; the misinformation meme might continue to proliferate alongside the correction meme, or the ecology might split into two separate ecologies: one in which the correction meme is dominant, and one in which the misinformation meme is dominant. It is nearly impossible to entirely wipe out a meme that has once been successful, and as such whether or not a misinformation meme continues to proliferate in some form or space should never be considered a measure of the success of an intervention. For example, if you recall the proliferation of the Copernican model of the solar system in Chapter 2 as a successful, well-adapted correction to misinformation, the modern Flat-Earth theory is an example of the continued proliferation of certain elements of the Ptolemaic model. Nevertheless, successful memetic intervention serves the dual function of both introducing a correction meme into an existing ecology in such a way as to allow that meme to co-adapt and proliferate, altering the ecology slightly in the process, as well as possibly creating new ecologies through that evolution in which further interventions are possible.

This kind of intervention is gradual, not radical, and in order to succeed it requires a thorough understanding of and engagement with the memetic ecology as it stands. As such, successful interventions in the Whole30 Facebook community would, by necessity, require a cultivation of ethos through engagement with personal testimony as the controlling memeplex in that ecology. For example, if a person were to determine that the restrictive eating habits promoted by the Whole30 program (and therefore discussed on the Whole30 Community Facebook page) are harmful[25] and wish to intervene in that community, then personal testimonies from many individuals who have experienced specific, harmful effects posted to the page would be significantly more effective than research-based posts from a single individual cautioning against these practices. If, however, the goal of the intervention was to disrupt the strength of the personal testimony meme and attempt to cultivate more traditional or academic understandings of ethos in this space (not necessarily something I would recommend, but I am speaking hypothetically here) then a way of doing so might involve altering the interface memeplex of that page (not something the average user has access to) and transitioning slowly toward a platform with a more consolidated information distribution interface, so that content flows from a centralized point and is not aggregated from multiple users.

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[25] Note that this dissertation does not make this argument, though I acknowledge that another person might. This example is hypothetical, and interventions are always determined by the goals of the intervener and therefore subject to that individual's judgement and values.

Eric Tucker's own experience proved that the ecology formed by #fakeprotests is incredibly difficult to disrupt through intervention. The flaw in Tucker's attempted intervention was that it attempted overthrow the ecology rather than engage with it—with his retraction, Tucker effectively tried to initiate a memetic cataclysm in this community, but without the violent means was ultimately ineffective. A more effective memetic intervention would have challenged only one memeplex within this ecology, rather than attempting to disrupt all of them simultaneously. A responsible technical communicator should determine the specific meme or memeplex that is most crucial to disrupt for their intervention to succeed, as well as whether or not such an intervention would be worth engaging with the other memeplexes that support that ecology. For example, because Tucker's tweet was eventually shared through several prominent news sources, an argument that discredits the tweet by associating it with the media (which Chapters 1 & 4 demonstrate is a popular target of conservative political conspiracy theories) might be effective in this space. However, such an intervention requires that the intervener is comfortable perpetuating these anti-media conspiracy theories (not something I would be comfortable with myself). Memetic intervention is therefore a useful tool, but not wholly perfect and not always appropriate for those for whom the emotional labor costs of such a gradual method outweigh the benefits of engaging with members of wholly disparate memetic ecologies. However, for those with both the mental fortitude and social currency to engage successfully in these ecologies, memetic intervention is a powerful tool for initiating social change.

With this goal of intervention in mind, I turn to a brief analysis of #MeToo as an example of successful memetic intervention. I want to preface this example by emphasizing that I am characterizing this example as successful memetic intervention because the #MeToo movement utilized successful adaptation to an existing ecology to achieve a specific goal. This does not mean that the movement is in any way perfect or without problems. Because the co-adaptation of memetic ecologies is so strong, and because memetic cataclysms as defined in Chapter 2 are inherently violent, examples of a memetic intervention that do not rely on existing power structures, social dynamics, and cultural tropes as part of the memeplexes that support the ecology in question are impossible. Most troubling of all, interventions that rely on these memeplexes also inherently reinforce them through that same process of co-adaptation, so by intervening with one problematic memeplex, we often strengthen others by default. Critical awareness of this kind of compromise is essential, as the following discussion of #MeToo will demonstrate.

#MeToo: An Example of Successful Memetic Intervention

In the 2017 iteration of #MeToo, the goal seems to have been the intervention in rape culture, and specifically in the element of rape culture that seeks to undermine accusations of rape, sexual assault, or sexual harassment by women. When successful (which it often unfortunately is) this undermining results in mitigated or eliminated consequences for the sexual predator. The widely-proliferated misinformation in this sense, then, is a cultural assumption that it is for whatever reason acceptable to dismiss accusations of sexual assault.

Conversations about sexual assault were at the forefront of public discourse in the United States in October of 2017 due to an article published in *The New York Times* on October 5th exposing Harvey Weinstein's history of sexual misconduct (Kantor and Twohey, 2016). The article cites a memo written by Lauren O'Connor, a Weinstein Company employee, that outlines details of what O'Connor calls "a toxic environment for women at this company" (Kantor and Twohey, 2016). In particular, O'Connor and many other women referenced both by name and anonymously within the article, accused Weinstein of abusing his influence and position of authority within the film industry to coerce women into performing sexual acts with him.

Within the same article, the authors cite comments from Weinstein's lawyer, Lisa Bloom, saying that "[Mr. Weinstein] denies many of the accusations as patently false," and from Weinstein himself referring to content in Ms. O'Connor's memo as "off base." These comments are evidence of a rhetorical move to discredit the accusing women almost as soon as the scandal broke, drawing on the same piece of misinformation cited above that encourages the dismissal of these kinds of accusations.

In response to this scandal and as a way of drawing attention to the pervasive nature of sexual harassment and assault in Hollywood, actress Alyssa Milano posted a Tweet on October 15th asking all women who have been victims of sexual harassment or assault to respond with "Me Too" (see Figure 15). Her post was wildly successful: by the next evening the hashtag #MeToo was trending #1 on Twitter, and by December 1 it had spread through Twitter users representing 85 countries (Sayej, 2017).

Figure 15: Alyssa Milano's "Me Too" Tweet

Milano claimed that her goal was to give "some idea of the magnitude of how big this problem is [and] get the focus off these horrible men and to put the focus back on the victims and survivors" (Sayej, 2017). By demonstrating the magnitude of the problem, the #MeToo movement following Milano's tweet made it more difficult to dismiss individual accusations as false money- or attention-seeking behavior by one woman, and instead pointed to these accusations as symptomatic of a pervasive issue within the power structures of Hollywood. As an intervention in the misinformation ideology described above, #MeToo was demonstrably effective as it drastically increased conversations surrounding sexual assault and harassment around the world. Many articles (Burke, 2018; Finn, 2018; Morris, 2018; and others) also credit the hashtag with social acceptance of these kinds of stories when told by women. Reuters reports that calls to U.S. sexual assault hotlines also skyrocketed following the trending of #MeToo, with calls increasing 25% in November, 2017 and 30% in December, 2017 from numbers the previous year (Lambert, 2018). Repercussions, both legal and social, for sexual misconduct also surged as the movement gained prominence, with prominent figures such as Louis CK, Morgan Freeman, Charlie Rose, and many other losing contract deals or their jobs, and/or facing criminal charges for sexual misconduct. While a *post hoc ergo propter hoc* claim that #MeToo directly caused these changes would be unsubstantiated, at present #MeToo is the largest aggregator of sexual assault claims that is publicly available, meaning that the hashtag movement was indisputably successful in generating public conversations surrounding sexual misconduct and in achieving Milano's goal of emphasizing both the magnitude of the problem and the experiences of survivors.

This particular goal was well-suited to the Twitter ecology because Twitter (as established in Chapter 4) allows for the sharing and aggregation of ideas through the use of #hashtags across groups of users who may not follow one another. Within this platform, #hashtag movements are able to de-emphasize the focus on the identities of individual users who post using the tags and instead demonstrate the quantities of people discussing a given topic. By using this feature to tag stories of sexual assault or harassment, the #MeToo movement was able to function itself as a demonstration of the pervasiveness of sexual misconduct. This demonstration likewise crossed many boundaries, from geographic to economic, and helped to spark similar conversations in a variety of locations and industries.

While this hashtag movement has been a positive cultural influence in many ways, it is also indicative of the strength of white and socioeconomic privilege as memeplexes in our national discourse. Catherine Rottenberg articulates this problem most concisely when she says, “it is only when powerful, wealthy and mostly white women come forward that influential men have been forced to resign from high-profile positions” (Rottenberg, 2017). It is also true that successful proliferation of #MeToo on a national scale did not occur until a white, wealthy actress tweeted the call; however, the Me Too movement (outside of the #hashtag) actually began more than 10 years prior to both Milano’s Tweet and the Weinstein scandal as a campaign built by activist Tarana Burke to help women and girls of color to cope with sexual violence. Burke’s movement, while it achieved substantial success as a community effort, did not gain national attention until it was recognized by participants in #MeToo, and like many modern feminist movements #MeToo is hindered in its intersectional reach by persistent privilege of white, wealthy, able-bodied, cisgender women. By building on the established ethos of these women, #MeToo was able to achieve its interventional goal, but did so by participating within the confines of existing misogynoir (Bailey, 2010) as a memeplex in the ecology of our national discourse. This is not to say that any leaders of or participants of the #MeToo movement post 2017 did so intentionally, but rather that the co-adapted memeplexes of racism, sexism, misogyny, and rape culture are so strong within our national discourse that projects that attempt to disrupt them simultaneously are unfortunately ill-adapted to the ecology and therefore only proliferate within micro-ecologies that have already evolved to challenge one or more of these constructs

As the #MeToo movement demonstrates, though intervention in the spread of misinformation is possible, its success on a mass scale tends to be incomplete as well as problematic. This unfortunate fact is true because of the strength of the memeplexes that define the ecology of our national discourse and the co-adaptive nature of these memeplexes that makes disrupting them simultaneously extremely difficult. In the modern era, with social media and its various forms acting as interface memeplexes that shape the way that communities share and receive information, the connections among these memeplexes are both newly transparent and especially fraught with new dimensions of old socio-economic power dynamics.

Successful memetic intervention that is critical of both the memeplexes that it relies upon and the memeplexes that it challenges is essential to avoid exacerbating both the spread of misinformation and the social harms that that misinformation can cause. Memetic intervention relies on the cultivation of ethos within an existing ecology; however, this ethos cannot be a quality of an individual. Instead, the ethos necessary for successful memetic intervention must be understood as a quality derived from the ecology itself. Technical communicators can better intervene in the proliferation of misinformation by interrogating the relationships between genres, media, and community rhetorics in order to understand the memeplexes that shape the ecologies where intervention is necessary. Successful intervention can only occur through adaptation of correction memes based on this understanding. Moreover, we must never consider the relationships between these memeplexes to be static, but rather representative of the evolving nature of mass consciousness and the technologies that mediate it.

Technical communicators are in an ideal position to undertake this challenge critically. Because interventions must, by necessity, rely on enough existing memeplexes within an ecology to gain traction and proliferate extensively enough to overcome misinformation within that ecology, critical analysis of what memeplexes an intervention relies on and where those memeplexes intersect with others is crucial to avoid doing more social harm than good. As technical communicators, we are well-positioned to use our expertise to interrogate the relationships between community ideologies and the genres and media through which they proliferate. With our knowledge of the ways that form and function work together to create meaning, we can examine the interactions among content and interface memeplexes to better understand and intervene in the spread of misinformation.

Technical communication research has long interrogated the connections between content and interface in communicative scenarios. With the continued evolution of communication technologies, new theories and methods of analysis are needed to shed light on the symbiotic relationships between these technologies and the cultures that they shape and are shaped by.

Memetic Rhetorical Theory provides a way of understanding the mechanisms through which this relationship takes place. Such an understanding is necessary if we are to craft successful interventions that draw on the full range of affordances available in communicative discourse while avoiding the harms that come with uncritical engagement with existing memeplexes.

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