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Rhetorical Sandwiches: Layering Ethos and Epideictic Appeals as a Persuasive Strategy in Public Discourses of Healthy Eating

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Abstract: Drawing on interdisciplinary scholarship anchored by feminist rhetorical theory and rhetorics of science, health, and medicine, this essay presents findings from a critical rhetorical analysis of 21 healthy lifestyle magazine/website articles. The findings demonstrate how authors who provide healthy eating advice use a rhetorical strategy of sandwiching together multiple appeals to ethos that alone might be unconvincing to their audience, but when combined present motivating recommendations for health and consumer behavior change.

Keywords: Feminist ethos, epideictic, food, public health discourse, rhetoric of science, health, and medicine

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> "I always say that chronic inflammation is the root of all evil because many of the health issues we face in the 21st century can be tied back to inflammation," says Dr. Kara. "Research has suggested that dandelion can reduce inflammatory markers in the body." (Hickman, 2023, para. 14)

Under a brightly colored photo of dandelions against a perfect blue sky, "7 Benefits of Dandelion Tea, According to Medical Doctors" opens with the clickbaity lines: "some of us think of the dandelion as a nuisance that's necessary to pluck. But what if we told you that dandelions hold some powerful effects for your health?" (Hickman, 2023, para. 1). At first glance, this listicle[1] published on *The Healthy*, a Reader's Digest-owned magazine/website,[2] seems to be well-supported with quotes from two featured MDs and citations in the format of hyperlinks to external sources. For example, the phrase "Research has suggested" in the epigraph's quote from Dr. Kara appears in listicle item four, "Dandelion tea can reduce inflammation," and links to an article in the research journal *Food and Chemical Toxicology* hosted in the PubMed database titled "TOP 1 and 2, polysaccharides from Taraxacum officinale [common dandelion], inhibit NFκB-mediated inflammation and accelerate Nrf2-induced antioxidative potential through the modulation of PI3K-Akt signaling pathway in RAW 264.7 cells" (Park et al., 2014). In this linked study by Chung Mu Park et al., the authors found promise in the anti-inflammatory and anti-oxidative effects of certain polysaccharides in dandelion; however, the study was done *in vitro*, or outside a living organism in a laboratory environment, which cannot replicate the conditions that occur inside a living body. While the hedge phrase "has suggested" helps qualify Dr. Kara's presentation of the researchers' findings, the listicle includes multiple rhetorical moves like this that layer or "sandwich" expert advice and scientific evidence to increase the credibility or ethos of the

1 Article with a series of items written in list format. Typically, each item on the list is accompanied by a brief explanation and/or commentary.

2 In this essay, I use "magazine/website" as a descriptor because of the hybrid nature of these sites; many have roots in print publishing (and some still publish print issues as well) and thus they have magazine-like articles, yet leverage the affordances of digital spaces to meet the expectations of contemporary online audiences through integration of interactive features, social media presences, newsletters, regular updates, and more.

article's central claims around the health benefits of drinking dandelion tea.

The introduction to "7 Benefits of Dandelion Tea" spotlights its two featured experts in the first paragraph along with hyperlinks to their websites: "Dr. Peter Michael, MD, MBA, a doctor who specializes in the science of aging and chief medical officer at VUE [vitamin teas]—along with Dr. Mahmud Kara, MD, a former physician at The Cleveland Clinic and founder of KaraMD [health supplements]." The short paragraph then concludes that "Between all the long-term and day-to-day dandelion tea benefits, it may be worth tossing a box into your shopping cart." Highlighting quotes from two credentialed physicians who work in the realm of health supplements and nutritionally engineered foods presents a dual ethos appeal: they carry credibility as medical experts, as well as experts in the health and wellness industry, which is often positioned as an alternative to the dominant biomedical establishment (Derkatch, 2018), potentially increasing the article's perceived trustworthiness both with audiences who trust medicine and those who might not. The phrase about tossing a box into your shopping cart links to a specific brand of dandelion tea on Amazon.com, a clear call to action for the reader. In addition to sandwiching appeals to expertise and evidence throughout its seven items, the listicle is sprinkled with value-laden comments or epideictic appeals as an additional persuasive move, like inflammation being the "root of all evil" in item four. There is an important irony to the unreflexive use of "root of all evil" in an article whose health advice offered in good will is a thin veneer over the capitalistic nature of affiliate shopping links, as the phrase originates from a passage in the Bible about the love of money being the root of all evil (i.e., 1 Timothy 6:10). Articles like "7 Benefits of Dandelion Tea" tend to adopt hyperbolic epideictic narratives of praise about science and medicine reminiscent of the shifts Jeanne Fahnestock (1986) found in the adaptations of scientific research into popular science magazines in the 1980s (p. 281).

"7 Benefits of Dandelion Tea" highlights how dietary advice articles in popular healthy lifestyle magazine/websites sandwich together different types of credibility, or ethos, appeals aimed at driving health behavior change, often through direct suggestions about readers' consumer decisions. The sandwich metaphor is salient because a sandwich is typically some sort of bread (or bread-like substitute) with some sort of filling, where the function of the bread is to facilitate quick preparation, portability, and easy consumption (tools like silverware are not required for a hand-held item) (Wilson, 2010). While the act of layering different forms and sources of information to support claims is a practice important in argumentative writing (e.g., synthesis), so too is the ethical and appropriate use and representation of those sources in reasoning. In the rhetorical sandwiches I found in articles like "7 Benefits of Dandelion Tea," there is a clear pattern of expert commentary used as the "bread" around a "filling" of scientific evidence adapted to a general audience in the public sphere, with the goal of driving health consumer behavior change in an ostensibly palatable, portable, and easy-to-consume package.

At play in the rhetorical sandwiches are two key ingredients: the presentation of expertise, typically through inclusion of quoted diet, health, and medical professionals; and evidence, usually through the presentation of accommodated scientific findings. In studying the accommodation of scientific research in popular science magazines in the 1980s, Fahnestock (1986) found shifts from more speculative language in the scholarly research to more certain in the magazines, concluding that they were "an inevitable consequence of

changing the audience for a piece of information and thus the purpose of relating it and thus the genre of the discourse that conveys it" (p. 291). For the purposes of this essay, two of Fahnestock's findings are particularly useful in highlighting how such shifts are more than an issue of translation to a non-expert audience.

First, in science accommodated to a broad public audience an important "genre shift" occurs from deliberative discourse to celebratory or epideictic discourse (Fahnestock, 1986, pp. 278–279). Writing that accommodations "must usually be explicit in their claims about the value of the scientific discoveries they pass along," Fahnestock (1986) argued, "They cannot rely on the audience to recognize the significance of information. Thus … science journalism requires the adjustment of new information to an audience's already held values and assumptions" (p. 279). In the case of "7 Benefits of Dandelion Tea," this even includes the stray reference to a Biblical proverb in the "root of all evil." Further, Fahenstock (1986) wrote:

> Science accommodators who attempt to bring things down to the level of the *National Geographic* or *Newsweek* or one of the science magazines have, at bottom, only two basic appeals to make in their epideictic arguments. For convenience I will call these "the wonder" and "the application" appeals corresponding to the deontological and teleological appeals in ethical argument. A deontological argument attempts to praise or excoriate something by attaching it to a category that has a recognized value for an audience. In science popularizations, all references to the amazing powers and secrets of nature or of the breakthroughs and accomplishments of the scientists themselves are basically deontological appeals. A teleological argument claims that something has value because it leads to further benefits. (pp. 278–279)

In health discourse incorporating accommodated scientific research, according to Fahnestock, "the wonder" and "the application" appeals take on an additional element: the value of the breakthroughs *for the benefit of you and your personal wellbeing*. Second, drawing on stasis theory, which defines and orders the types of questions that can be used in a deliberation, Fahnestock (1986) demonstrated how scientific reports usually operate in the realm of identifying and defining the scope of problems while maintaining a certain level of objective uncertainty through linguistic features like hedging. In contrast, when accommodated in the public sphere, claims from scientific reports increased in certainty and actionability (Fahnestock, 1986). Put simply, in moving from the technical sphere to the scientific sphere, accommodation shifts arguments from "what did they find?" to "what should you do about it?" That said, the texts Fahnestock (1986) examined were early 1980s accommodations of articles from the journal *Science* to its popular print magazine version aimed at the general public. In the decades since, the complexity of digital spaces, genres, and audience expectations and the rapid growth of the health and wellness industry have driven the proliferation and clickbait-ification of healthy lifestyle and eating advice. And while a recommendation to drink dandelion tea might seem (and probably is) innocuous, the "7 Benefits of Dandelion Tea" listicle items invoked dominant norms about health and eating habits through content about the tea's nutrient density, "natural diuretic" effects, and evidence that it helps lower blood pressure, a "leading risk factor for cardiovascular-related health issues—which is currently the leading cause of death in America" (Hickman, 2023, para. 16).

Dominant norms in food- and diet-related discourse in the U.S. are rooted in a hegemonic nutrition model criticized by feminist and critical food studies scholars as one that: relies on the idea that the food-body relationship can be standardized and quantified (a calorie is a calorie to everyone) (Mudry, 2009); re-

ductively views food as a conglomeration of nutrients and their specific roles in the body (Scrinis, 2013); decontextualizes food from culture, bodies, and the environment (Hayes-Conroy & Hayes-Conroy, 2013); and privileges expert knowledge that is disseminated through biomedicine, the diet industry, social institutions, and the media (Hayes-Conroy & Hayes-Conroy, 2013). This hegemonic nutrition model underlies nutrition and health standards in the U.S.; for example, the United States Department of Agriculture (USDA) Dietary Guidelines for Americans' (DGA) delineates what counts a healthy in the context of eating habits, which influences food- and diet-related discourse and practice from nutrition labels to diet plans to social media spaces to healthy lifestyle magazine/websites. Further, the DGA and similar standards like those promoted by the Academy of Nutrition and Dietetics are predicated on the values of upper-middle-class experts in the U.S. (mostly white men) and are largely driven by food industry lobbyists (politics and capitalism) rather than being spurred by conclusive scientific discovery (nutrition research) (Carriedo et al., 2022).

Hegemonic nutrition widely reinscribes dominant norms around physical health and nutrition. This is an especially crucial factor when taking into consideration the power of trends based on science that are translated to the public sphere and proliferated through popular discourse, such as the anti-fat movement in the 1980s and 1990s that encouraged people to eat large amounts of carbohydrates and led to low-fat, high-sugar versions of foods (Scrinis, 2013), practices which have since been linked to increased fatness and a rise in weight-related health problems (Biltekoff et al., 2014; Levenstein, 2012). Hegemonic nutrition and much of the science behind so-called healthy eating can be especially pernicious in commercialized spaces where capitalist interests are the central driver behind health communication, as opposed to a primary goal of improving public health. If high blood pressure is the top risk factor for cardiovascular disease, and Dr. Kara says that's the number one killer in America, then of course one should make efforts to reduce their risk by clicking that affiliate shopping link for dandelion tea.

To unpack how articles like "7 Benefits of Dandelion Tea" work rhetorically, in this essay I examine how dietary advice articles in popular healthy lifestyle magazine/websites sandwich together evidence- and expertise-based appeals to ethos that might be unconvincing to their disparate audiences alone, but when combined present more persuasive health and consumer behavior change recommendations. To explore this, I conducted a close rhetorical analysis of articles from five healthy lifestyle magazine/websites that center health and diet advice: *The Healthy*, *EatingWell*, *Fortune Well*, *Health*, and *Everyday Health*. My analysis revealed how these articles weave expert advice, invocations of scientific research, and praise and blame together to advocate for health behavior change. I selected these five magazine/websites[3] because of their history and extensive reach. *The Healthy* claims 2.2 million visitors per day and 500,000 newsletter subscribers and is a Reader's Digest Lifestyle Group publication, tying it to the over 100-year history of Reader's Digest print magazines (Trusted Media Brands, n.d.). *EatingWell*, which began in print in 1990, claims to be the "largest magazine in the epicurean lifestyle category," "reaching an audience of more than 10 million monthly viewers as well as more than 5 million fans through its social media channels" (*About Us*, n.d. para. 5). The Everyday

3 I focused on the website versions because of the increasing shift to digital-only publications in the magazine world. While *Reader's Digest* and *Fortune* still produce print magazines as of this writing, and they often feature health-related stories, the dedicated spaces of *The Healthy* and *Fortune Well* only exist online. *EatingWell* and *Health* both ceased print publication as of 2022, and *Everyday Health* has always been an online publication.

Health Group suite of brands and publications—which includes *EverydayHealth.com* and the *Cleveland Clinic* medical center and website—has an "audience of over 67 million health consumers and over 890,000 U.S. practicing physicians and clinicians" (*Everyday Health Group*, 2024, para. 1). *Health* claims to reach "over 120 million people annually" (*Find out about Health.*, n.d., para. 1). And, while it does not break down viewership by section, *Fortune.com* has "47 million monthly pageviews" (*Fortune Media Kit*, n.d., n.p.). While Fahnestock and scholars following her approach specifically examined paired articles, or ones where a single original scientific report was accommodated as a new popular article, I did not select paired articles because I am examining layered appeals of which one is accommodation of multiple scientific reports. Rather, to select articles, I used searches and nutrition-specific landing pages within each magazine/website to locate diet- and nutrition-related articles published between 2022 and 2025, briefly reviewed all relevant results, and identified a sample of 21 articles for close reading and thematic coding that demonstrated multiple, layered appeals to ethos (through scientific evidence and expert opinion) and epideictic claims about living a better, healthier life.

Complex and Value-Laden Contexts Require Flexible Ethos-building Strategies

While much scholarship on ethos draws from Aristotle's *Rhetoric*—where ethos refers to the credibility of a speaker based on practical wisdom (phronēsis), virtue (aretē), and good will (eunoia) as displayed in a speech (Aristotle, 2007)—feminist scholars have critiqued this conception as deeply rooted in a patriarchal, oppressive time and place. Much feminist work on ethos examines ethos-building strategies used by women and people in racialized and marginalized communities in order to move definitions of ethos beyond a narrow, Aristotelian model of a rhetor finding the best means available to demonstrate their good sense, good moral character, and good will to a passive audience who needed to be guided correctly.[4] For example, Krista Ratcliffe (2005) concluded that traditional conceptualizations of ethos as a thing cultivated by an individual are linked to the reductive idea of the "rugged white male individualist" (p. 124). Rather, as Cheryl Glenn (2018) pointed out, "ethos does not reside in individual rhetors but in the ways they reflect the characteristics and qualities that are valued by their audience, culture, or community" (p. 84). In an expanded ethos, credibility "emerges as a result of rhetorical negotiation in which speakers and writers are active agents, albeit with discursive and cultural limitations, in the dance of bodies, tropes, and cultures" (Ratcliffe, 2005, p. 126). Further, understanding ethos as something embodied surfaces the relationship of ethos to behavior patterns and "better accounts for the [intersectional] layers of oppression that certain individuals might face" (Shellenberger, 2020, para. 4). Contemporary scholarship has also brought nuance to ethos to better fit digital rhetorical contexts, such as Barbara Warnick's (2004) finding that the credibility of websites relies on factors like

4 In *On Rhetoric*, Aristotle seems to separate the expression of ethos in the context of a rhetorical speech from actual good sense, good moral character, and good will through liberal usage of hedges like something "seems to be" or "appears" a certain way in terms of cultivating ethos with an audience. Additionally, he seems to have been relatively critical of the "uncultivated mind of the audience," arguing that "people are pleased if someone in a general observation hits upon opinions that they themselves have about a particular instance" (2007, p. 168). Aristotle also proposes that "most people are rather bad" and that "human beings usually do wrong when they can" (2007, p. 129). Whether it was misanthropy or thoroughness in his taxonomy, Aristotle seems to have written *On Rhetoric* predominantly focused on appearing good rather than being good. In this sense, the articles I examine are building their ethos in a very Aristotelian manner; I use a feminist approach to surface and critique the problematic nature of their strategy.

easy navigation, frequent updates, and site ownership, in addition to assessments of authorship and information trustworthiness. A feminist approach "situates ethos as constructed, relational, agentive, interconnected, nonlinear, and resistant to overstabilization" (Stambler, 2022, p. 313; refer also to Glenn, 2018; Ratcliffe, 2005; Reynolds, 1993; Ryan et al., 2016; Skinner, 2014; Wright, 2019) and is especially useful as a lens to examine how ethos is negotiated around slippery and contested ideas about health and health expertise in digital spaces.

In complex contexts like health discourse and practice, multiple value frameworks present a rhetorical landscape requiring flexible ethos-building strategies. Studying the approach of women physicians in nineteenth-century America, Carolyn Skinner (2014) wrote that ethos "is not crafted in response to a coherent and identifiable set of audience values but instead is composed in a dynamic context that includes multiple competing ideas about the 'best' virtues" (p. 175). While traditionally, rhetors are expected to analyze their audience and context to formulate the best strategy for building their ethos, "audience members may disagree on priorities, creating a situation in which the ethos a rhetor conveys shapes audience values rather than simply demonstrating virtues the audience already admires," which "can create space in which rhetors can promote the value structure most conducive to their social position and their purposes for speaking" (Skinner, 2014, p. 176). Skinner argued that the existence of multiple value frameworks means rhetors must demonstrate "a great deal of flexibility in ethos construction rather than a narrow focus on identifying and demonstrating one set of ideal virtues" (p. 177). In spaces like health/healthcare where value-based ideals are contested, a rhetor must flexibly develop their ethos, potentially using multiple strategies, in order to influence the values and behavior of disparate audiences; however, there is also a danger in using expertise to build ethos in health-related contexts. Celeste Condit and Lisa DeTora (2021) discussed how a disconnect in "authorship" and "authority" can lead to a situation where "the state of the facts are too likely to be mistaken when someone with high *ethos* puts their name on a research report that they do not know to be true because they have not invented the claims in that document" (p. 96). Recall how the phrase "research has suggested" in the epigraph's quote from Dr. Kara was hyperlinked to a scientific report; the link implies to a reader that Dr. Kara based their argument on that specific article, when there is no explicit way to know if that is true or if it was added by the author or editors.

Value-based or epideictic rhetoric can also have a role in enhancing ethos. In examining the rhetoric of a nineteenth-century French-American Catholic Sister, Elizabethada A. Wright (2019) demonstrated how the epideictic can both "fortify a rhetor's ethos" and "work in various media to shift hegemonic structures by heralding certain shared communal values while damning accepted practices that violate those virtues" (p. 283). Traditionally, epideictic rhetoric is that of praise and blame, often typified as ceremonial speech such as a funeral oration extolling the virtues of the deceased, the end of which is "the honorable and the shameful" (Aristotle, 2007, p. 49); however, contemporary theorists have linked the function of praising and blaming to the instantiation of cultural values (Burke, 1969; C. M. Condit, 1985; Hauser, 1999; Perelman & Olbrechts-Tyteca, 1969; Sullivan, 1993). In other words, epideictic rhetoric can both enhance one's ethos and contribute to the inscription of dominant societal norms and values through the celebration of virtues and condemnation of vices.

Examining epideictic rhetoric in the realm of health and medicine, Judy Segal (2005) argued that it "is a culture's most telling rhetoric, because, in general, we praise people for embodying what we value, and we blame them for embodying what we deplore" (p. 61). Importantly, Karen Kopelson (2019) argued that because the persuasive force of epideictic rhetoric "(re)constitutes what is praiseworthy and blameworthy in human conduct to (re)shape the basic codes of value and belief by which we live, epideictic [medical] rhetoric is inherently normative, and its practitioners invested with special authority and influence" (p. 286). In this way, epideictic rhetoric makes a statement about "the moral capacity of the person being praised or blamed" (Mirhady, 1995, p. 406; refer also to Sullivan, 1993), and value-laden health discourse invites us to notice where we deviate from dominant cultural values and reshape ourselves in order to be worthwhile individuals.

In communicating science and medicine to the public, epideictic strategies are used to engage audiences (Bloomfield & Tillery, 2019; Fahnestock, 1986; Luzón, 2013). Especially in online spaces, authors blend rhetorical strategies from different genres—such as personal narrative and scientific writing—to better engage with a multiplicity of audiences (Luzón, 2013, p. 453). Alan G. Gross (1994) argued that "what counts as a Fact's significance is not the significance science bestows, but the significance the public bestows on scientific knowledge" (p. 18). Ethos-building strategies are therefore critical in terms of gaining readers' trust and epideictic strategies are critical in terms of moving readers to action.

Together, feminist scholarship on ethos and epideictic rhetoric provides a lens that helps foreground how authors of popular healthy lifestyle magazine articles sandwich multiple appeals to ethos with epideictic discourse about hegemonic nutrition, eating habits, and health in order to motivate behavior change.

Appeals to Evidence and Expertise as Ethos-Building Strategies

It is accepted practice in science and health writing to support claims with appropriate, reliable evidence to demonstrate credibility. This is true even in public-facing science and health discourse, though the types of evidence and methods of incorporation into the text differ from norms in the technical sphere (Luzón, 2013), echoing science publication practices meant to support claims with rigorous evidence for a highly technical audience. In popular health writing, providing evidence is an ethos-building strategy; however, as scientific discourse shifts from a technical sphere to a public sphere and more general audience, the assumptions and standards by which claims and evidence are interpreted shift as well (Lyne & Howe, 1990). Less technical audiences are less well-equipped to evaluate scientific claims and evidence against the disciplinary standards for knowledge creation (Kolodziejski, 2014; Lyne & Howe, 1990), especially when the reliability and quality of evidence in public-facing science and health discourse can be less than sufficient. For example, in a small study of dietary advice articles in U.K. print newspapers, Benjamin Cooper et al. (2012) found that most claims made had "no credible scientific basis" (p. 669). In digital spaces that provide affordances like hyperlinking, science accommodations allow greater intertextuality by linking to original research sources (Luzón, 2013), a move also meant to bolster ethos.

If a general audience is less well-equipped to interpret scientific claims and evidence, what better way to

shore up the credibility of technical health discourse in a public sphere than with expert input and review? Expertise is about both specialized skills and a role negotiated within specific rhetorical situations (Hartelius, 2011; Majdik & Keith, 2011; Mehlenbacher, 2022). Ashley Mehlenbacher (2022) argued that "Because judgment about one's expert status is challenging for those who exist outside a narrowly defined group capable of assessing a full range of expert competencies, a great deal of expertise is adjudicated not by technical knowledge, but by character" (p. 46). Thus, inclusion of expertise is both a move to enhance ethos and, in the public sphere, ethos evaluations by audiences are at the core of expertise along with its three aspects: practical wisdom, virtue, and good will. Carolyn R. Miller (2003) argued that in technical discourse, when ethos becomes narrowed to expertise, practical wisdom becomes the strongest element (how the rhetor presents facts and reasoning) and virtue and good will are curtailed; however, this can lead to an "impersonality of an ethos of expertise [that] runs the risk of being persuasive to no one" (p. 202) due to lack of trustworthiness. This peril emphasizes the necessity of the moral components of virtue and good will (Mehlenbacher, 2022) in the situational negotiation of ethos. In that negotiation, "the expert is not only a repository of knowledge, but also a pivot point for exchanges between discourse communities" (Lyne & Howe, 1990, p. 135). The role of pivot point contributes to experts' ethos with general audiences, as quoted health and medical experts can be seen as sharing practical wisdom with general audiences, which, alongside epideictic appeals to helping people live their best lives, may be interpreted by audiences as demonstrative of their virtue and good will.

The inclusion of expert credentials is meant to bolster ethos (Lyne & Howe, 1990; Mehlenbacher, 2022), yet the articles I analyzed often identified experts with an often-lengthy mix of common and uncommon credentials. For example, in "7 Surprising Antioxidant-Rich Foods" (Thomason, 2024), experts are introduced with credentials like "RDN, CGN, CLT," "M.S., RDN, LDN," and "M.S., RDN, LD, CLEC." Notably, the article does not elaborate on what these lists of abbreviated credentials means beyond including them under the umbrella of "dieticians" in the article title; without explanation, the lists of letters after names communicate expertise in a somewhat slippery way. For a public sphere audience likely less capable of evaluating those credentials (I had to look up what half of them were), their rhetorical function is to indicate expertise: someone with so many letters after their name, who is also being presented as an expert and positioned as sharing their practical wisdom in order to help others (virtue and good will), must be a trustworthy source of information.

While trust and ethos are not the same, they are deeply connected. Sociological theories on trust are useful in explicating the relationship between ethos and trust (Bakke, 2019; Gurak, 2018). Prior to the proliferation of the Internet, scientific discourse communities employed strict gatekeeping methods via inaccessible scientific journals and controlled editorial translation to non-expert versions for popular publications (Gurak, 2018), much like the articles Fahnestock studied in the early 1980s. The digital age has removed these barriers, and non-experts now have broad access to raw data and jargon-heavy scientific and technical information, likely without the expertise to appropriately interpret them. Complicating this, credibility evaluations in digital spaces incorporate factors beyond source citations and expert opinions, including user experience factors like usability, usefulness, and meaningfulness, and the frequency with which information is updated (Keshavarz & Esmaeili Givi, 2020; Warnick, 2004). Likewise, we are in an age with a greater level

of information access than ever and a concomitant escalation of misinformation and disinformation leading to a so-called "credibility crisis" (Ksiazek et al., 2023, p. 308). Concepts like "fake news" and "alternative facts" are connected to confirmation bias, or the preference for selecting information that matches one's existing beliefs, which "underscores the dark side of information democratization and flattened discourse hierarchies in digital rhetoric and writing" (Gurak, 2018, p. 125). In sociology, Guido Möllering (2001) advanced a theory that "trust can be imagined as the mental process of leaping - enabled by suspension - across the gorge of the unknowable from the land of interpretation into the land of expectation" (p. 412). In online settings, information travels quickly and widely, and readers spend little time on critical examination of content before making a leap toward trust (Gurak, 2018). While expertise is frequently being leveraged *as* evidence in the healthy lifestyle magazine/websites I examined, what is most interesting is how scientific findings are often sandwiched between comments from unrelated experts as part of both accommodating them and moving the audience to action.

Sandwiching Appeals

Each of the magazine/websites I analyzed positioned itself at a high level as an authoritative source of health and diet information, often gesturing to scientific research as underpinning their work. For example, *The Healthy*'s "About Us" page tells readers that they provide "science-backed and expert-approved answers for pressing health topics that resonate in your life" in order to "to equip you with up-to-the-minute clarity, and to enhance your authority in the ways you take care of yourself and the people you love" (*The Healthy*, n.d., paras. 2–4). Prominent in all of the magazine/websites' claims was an ethos appeal: to helping readers (demonstrating good will) live a good life (virtue) through prudent interpretation of scientific evidence (practical wisdom). These high-level appeals help to reinforce science- and good will-based ethos appeals throughout the website/magazines' entire online presence. In contrast, "7 Benefits of Dandelion Tea," right beneath the subtitle and an ad banner and just above the sunny photo of flowers is a small-print disclaimer stating, "Our editors and experts handpick every product we feature. We may earn a commission from your purchases" (Hickman, 2023). The disclaimer and the affiliate link to Amazon.com tell readers another story, one not about getting "honest, informed takes on your health questions" (*The Healthy*, n.d., para. 3), but about marketing and consumerism instead. With obvious and conflicting stated and implicit goals, articles like "7 Benefits of Dandelion Tea" employ sandwiched expertise- and evidence-based appeals to ethos that might be unconvincing to their disparate audiences alone, but together present more persuasive health and consumer behavior change recommendations. Specifically, the move of sandwiching brings together scientific accommodations, a degree of hedging aimed at maintaining credibility, and credentialed expert advice or commentary in order to present a practical takeaway the audience is encouraged to put directly into action.

Within the sandwiches, expertise is frequently leveraged in the framing of scientific evidence in a way that transforms the expert opinion into its own form of ethos, which is reminiscent of Miller's (2003) finding that "in a technical discourse like risk assessment expertise stands in for ethos" (p. 201). Importantly, risk has become a defining factor in our society (Beck, 1992; Lupton, 2013; Miller, 2003) and much of our dietary discourse is a discourse of risk (Biltekoff, 2013; Lupton, 2005). Increasingly, responsibility for health and body

size has been shifted from the state to the individual (Biltekoff, 2013; Derkatch & Spoel, 2020), and the 'good citizen' takes responsibility for their health by being informed about risks and practicing a healthy lifestyle according to hegemonic norms (Biltekoff, 2013; Derkatch & Spoel, 2020; Petersen et al., 2010). In examining the field of risk analysis through the 1972 *Reactor Safety Study*, Miller (2003) argued that ethos had been narrowed to expertise and utilized as factual evidence, in essence blending ethos with logos. It follows that some elements of this rhetorical blending of ethos and logos would appear in risk-based dietary advice in healthy lifestyle magazine/website articles.

For example, in the *EatingWell* listicle "7 Surprising Antioxidant-Rich Foods, According to Dieticians," all of the list items include quotes from at least one of the four multi-credentialed experts featured in the article (Thomason, 2024). Their expertise is layered with citations to studies in scholarly journals, which are presented as hyperlinked superscript numbers at the ends of sentences, reminiscent of some footnote citation styles. The "Beans" list item begins with discussion of how they can help reduce health risks:

> Beans are a potent source of antioxidants, including flavonoids, phenolic compounds and vitamins like vitamin C, Alyssa Simpson, RDN, CGN, CLT says. These nutritious compounds work together to help fight inflammation, reduce the risk of cancer, alleviate oxidative stress and may also promote heart health.[6] (Thomason, 2024, para. 9)

Here, the superscript [6] links to a 2020 study in PubMed, published in *Current Pharmaceutical Design*, titled "Antioxidant Phytochemicals in Pulses and their Relation to Human Health: A Review" (Ciudad-Mulero et al., 2020). As a recent review article, which should aim to capture current thinking on a topic in a scientific community, it appears to be a credible source, but it is not a full-text free access article so readers without access to the full version would be unable to evaluate it themselves (even as a faculty member with access to a university library, I do not have access to the full text). With logos incomplete, therefore, the expert quote does the bulk of the ethos-building work.

In online discourse about health and medicine, expertise and ethos are manifested in complex ways when professional medical knowledge and personal narratives or recommendations work hand-in-hand (Bakke, 2019). As Miller (2003) found in risk analysis discourse, the "assumptions, interests, values, and beliefs of experts are deployed to answer public questions" in a way that conflates ethos with logos and substitutes for evidence (p. 168). For example, an *Everyday Health* listicle titled "5 Rules for a Healthier Breakfast Sandwich" uses a mix of citations to USDA data and fact sheets, scientific reports, self-citations to other *Everyday Health* articles, and experts presenting both factual data and personal narratives (Lawler, 2025). List item five, "Go for Whole Eggs," reads:

> Eggs are central to the breakfast sandwich and aren't an ingredient you'll want to skip. Each egg adds 6.2 g of protein to your morning meal, according to USDA data. "Eating protein first thing in the morning will help you to have more energy throughout the day and avoid a sugar crash from the typical sugar-laden breakfast foods," Best (RD, MPH) says. One small study of 27 men who were obese or overweight found that overweight individuals who followed a high-protein diet (25 percent of energy coming from protein) experienced greater fullness during the day than those on a normal protein diet (14 percent of energy from protein). Many restaurant menus offer egg whites only; don't assume that's a better option. "Unless you're otherwise directed by your

> healthcare team, whole eggs can be a healthy choice for a breakfast sandwich," Klamer [(RDN)] says. Eggs have gotten a bad reputation as being bad for heart health, but a meta-analysis published in the Journal of the American College of Nutrition found that eating up to one egg a day is not associated with an increased risk of heart disease and may even reduce the risk of stroke. (Lawler, 2025, paras. 12–14)

In this excerpt, evidence is incorporated via links to USDA data, the two studies mentioned, and a link in the phrase "risk of stroke" to another *Everyday Health* article. The research-based evidence is largely sandwiched between the two dieticians' quotes and the self-citation link, which add actionable recommendations to the scientific and nutritional data.

Even simply invoking the idea of scientific research without providing any source information can be an ethos-building strategy by gesturing generally toward evidence. In the 2025 *Everyday Health* listicle "8 Healthy Reasons to Eat Dark Chocolate" (Brooks, 2025), item two, "The Treat May Improve Cognition, Prevent Memory Loss, and Boost Your Mood," begins "No, it's not your imagination—studies show that eating dark chocolate with high percentages of cacao, such as 70 percent, may benefit your brain" (para. 10). No evidence is provided to support this statement beyond the implication that studies have found *what you already know is true*, which is an appeal to confirmation bias dressed up as proof. The item continues, "there is research indicating that chocolate stimulates neural activity in areas of the brain associated with pleasure and reward, which in turn decreases stress and improves your mood, says Joy DuBost, PhD, RD, a food scientist and global director for regulatory affairs and health science at Lipton Teas and Infusions in St. Petersburg, Florida" (Brooks, 2025, para. 10). Similar to the "7 Benefits of Dandelion Tea" example, an expert's credentials are presented both on the medical side of things (as a registered dietician) and in the food industry. DuBost's comments are part of a large rhetorical sandwich around carefully hedged discussion of two scientific reports and a science news article whose results indicate that dark chocolate may have positive effects on memory, learning, cognition, and mood (Brooks, 2025).

Hedging is often used in scientific writing to qualify claims as tentative in order to avoid absolute statements open to criticism. Utilization of rhetorical features like hedging is one of the norms of scientific writing, and when combined with passive voice and strategic word choices, it can "create an ambiguous text open to conflicting interpretations" (Kolodziejski, 2014, p. 179) 179). Left out in the example from "8 Healthy Reasons to Eat Dark Chocolate" are important details like one of the studies having been conducted *in vitro* and another being based on data from the National Health and Nutrition Examination Survey (NHANES) between 2007 and 2014. The NHANES is administered by the USDA and is the data source for the DGA, which in addition to critiques about its hegemonic nature, has also been criticized methodologically due to its memory-based assessment method (Archer et al., 2015, p. 911), as human memory is notoriously unreliable. The listicle item concludes "before you go run out and stock up on chocolate bars, keep in mind" that "studies with larger sample sizes need to be conducted" (Brooks, 2025, para. 13), implying that of course the action you should take is to run right out and buy some, or perhaps follow the inset link complete with a yummy photo to an *Everyday Health* nutritionist's recipe for "healthy" avocado brownies.

In the healthy lifestyle website/magazine articles, hedged evidence was frequently sandwiched between

expert opinion in order to bolster calls to action. Consider, for example, "Snacking on Fruit Could be Good for Your Mental Health" (Mikhail, 2022), which begins with discussion of a scientific study published in the *British Journal of Nutrition* that found an association between frequent fruit consumption and reduced rates of depression. "Snacking on Fruit" provides a one-sentence summary of the findings then presents the hedge "while a myriad of factors contribute to mental health outcomes, the study suggests nutrition could play a role" (Mikhail, 2022, para. 3). This is followed by a comment about the importance of vitamin C for brain health attributed to Liz Weinandy, "a registered dietician at The Ohio State University Wexner Medical Center" (Mikhail, 2022, para. 4). Following the Weinandy quote, the article winds through a quote from the lead author on the *BJN* study and highlights another scientific report with quotes from its author before ending on a direct quote from Weinandy. Notably, the two scholars quoted in the article liberally hedge their statements with words like "may" and phrases like "doesn't prove," but they are sandwiched between the two quotes from Weinandy, who ends the article arguing that "it's exciting to think that even some small changes like replacing cookies or chips with fruit can impact our health. … It's just another reason to eat an apple a day" (Mikhail, 2022, para. 14).

"Snacking on Fruit" also demonstrates what Fahnestock (1986) called the "wonder" claim by touting new possibilities for whole fruits based on scientific research, then later including an "application" claim that the study indicates "more research needs to be done to determine the ideal frequency and portions for mental health" (Mikhail, 2022, para. 10). It is worth noting that the latter claim indicates a logical leap: the study found correlations, and in its own conclusion indicates that the research needing to be done is on determining causality (Tuck et al. 660), not dosage. Jumping to frequency and portions of fruit is an example of what Fahnestock (1986) found in claims shifting from *what is* to *what ought to be done* when moving into the public sphere, a shift that is especially pernicious in health discourse.

All of the articles I analyzed incorporated a multitude of links as part of their sandwiching strategies. While links often led to scientific articles or information from sources like the USDA or Harvard Health, every article also engaged in self-citation, or linking to other articles in their own magazine/website. In general, source attribution strategies in health writing, including self-citation, are ethos-building moves designed to make the claims and calls to action more persuasive to readers (Stambler, 2022). Incorporating linked evidence typically involves making complex technical information digestible for a non-expert audience, as in the MD's explanation of findings from the jargon-laden article in "7 Benefits of Dandelion Tea."

Sometimes, though, science is mobilized in problematic ways. For example, consider the following excerpt from a listicle titled "9 Foods That Are Secretly Hurting Your Brain" that invokes science and research in each item:

> A 2017 study in the journal *Stroke* looked at diet patterns and incidents of stroke and dementia in more than 4,300 participants. Over ten years, those who drank the most artificially sweetened—but not sugar-sweetened—beverages were most likely to be diagnosed with dementia. Because it's impossible to prove the link was caused by the beverages and not another source—for instance, those with diabetes might have been more likely to reach for artificial sweeteners—the study should be taken with a grain of salt (or sugar). Still, paired with these unhealthy effects of soda

> (including diet), the study is just one more reason to swap your soda for sparkling water. (Blumberg & Laliberte, 2023, para. 2)

The list item supports claims with what appears to be compelling evidence, as in the phrase "2017 study," which links to a PubMed article; however, when digging in further, the inclusion of the sources presents problems to readers who might be familiar with medical research. The cited studies in the sugar and salt entries were conducted on rats and mice, which have been critiqued in relation to correlation with human health outcomes in various areas including nutrition (Zimmerman & Zucker, 2020; cf. Atkins et al., 2020; Baker, 2008; Bracken, 2009; Even et al., 2017; Van Norman, 2019). The rest of the cited studies in "9 Foods Secretly Hurting Your Brain" are correlative rather than causative. Despite acknowledging the limitations of cited studies with hedges like "because it's impossible to prove the link was caused by the beverages" (Blumberg & Laliberte, 2023, para. 2), the article goes on to suggest swapping soda for unsweetened beverages with another piece of supporting evidence: a self-citation to another *The Healthy* article titled "8 Reasons to Avoid Soda, and That Means Diet Too" (The Editors of *The Healthy*, 2019). Whether or not the recommendation to ditch diet soda is valid, "8 Reasons to Avoid Soda" follows a similar pattern of presenting claims with a mix of rhetorically sandwiched advice from the authors with links to scientific articles and self-citations. As a listicle that did not feature expert quotations, "8 Reasons to Avoid Soda" relied instead on speaking from the author's place of expertise, listed as "The Editors of *The Healthy*," a byline followed immediately by one stating the article was "Medically reviewed by Elisabetta Politi, CDE, MPH, RD," further attempting to improve credibility.

Lastly, to belabor the metaphor a bit, like a sandwich wrapper branded with the logo of a famous deli, nearly all of the magazine/websites I analyzed included some form of medical board or review process to vet some or all of their articles as a move aimed at bolstering their overall ethos: right away, you are told something about the quality of what's inside. For example, on their "About Us" page, *The Healthy* describes their medical review process:

> When creating health content it's crucial to use authoritative experts and to back up claims with references to medical studies published in peer-reviewed journals and science-based facts. *The Healthy* articles are written by staff editors, qualified writers, and subject-matter contributors. Content with serious medical claims is vetted by a team of consulting doctors and medical professionals that make up our Medical Review Board. (The Healthy, n.d., para. 7)

By wrapping their evidentiary standards and one about an expert review only for "serious medical claims" around their staff credentials, the description here shores up the ethos of both articles with the "Medically reviewed" byline and without, as those latter are still produced by "qualified writers" backing up their claims. Like *The Healthy*, *EatingWell, Everyday Health,* and *Health* all use some form of medical review board or process. While *Fortune Well* does not have a published editorial policy about medical review, the *Well* division of *Fortune* magazine was launched as a collaboration with CVS Health, the owner of CVS pharmacy and Aetna health insurance that provides healthcare and insurance in many thousands of U.S. locations and to millions of Americans (*Fortune Media Kit*, n.d.). Although this is different from the medical review process, partnering with a major healthcare company with significant brand recognition is likewise an ethos-building move.

The Healthy, *EatingWell*, *Everyday Health*, and *Health* all indicate medical review of articles with an additional byline for the expert. The latter three also use a checkmark icon next to the byline that is visually similar to the X (formerly Twitter) "blue checkmark" authenticity verification system; while *EatingWell* and *Everyday Health* use a green checkmark (Brooks, 2025; Rizzo, 2023), *Health*'s is a nearly identical blue to X's (*Nutrition Resource Hub*, n.d.). This adoption of a common rhetorical move in social media is a demonstration of how, as Jenny Edbauer (2005) wrote, "*the elements of rhetorical situation simply bleed*" (p. 9). The healthy lifestyle magazine/websites I analyzed promote their articles on social media and include buttons to facilitate sharing by readers, indicating the overlap in audience expectations. Blending together citational and review practices reminiscent of those in scientific writing with credibility-enhancing strategies used in social media helps reinforce the appeal to ethos with a general audience in an online space. That said, like a local, small-town deli that claims to be "world famous," the medical review label does not really mean much beyond reproducing an ethos-building move that will feel familiar to consumers of social media.

Across the articles I analyzed, authors supported their claims with ostensibly science-backed research that lost a significant amount of hedging and qualifications while being accommodated to a public audience, shifting the argument toward value-laden calls to action to "do this, eat that, buy this" while embracing an authoritative voice. In the accommodation of science to the public, epideictic appeals play a critical role (Fahnestock, 1986) and have been shown to "work in various media to shift hegemonic structures by heralding certain shared communal values while damning accepted practices that violate those virtues" (Wright, 2019, p. 283). In dietary discourse, epideictic rhetoric and hegemonic nutrition ideas abound. "Good" versus "bad" sugars or fats, "clean" eating, "optimized" nutrition—even calling something "healthy" invokes the idea of "unhealthy"—all highlight how praise and blame are at the core of food- and diet-related discourse. Hegemonic ideas about nutrition have become pervasive across social systems and discourse spheres (Scrinis, 2013); they are equally present in the food pyramid, the MyPlate model that replaced it, fad diets, school lunches, and dietary advice provided by healthy lifestyle magazine/websites.

Epideictic discourses of food invoke epideictic discourses of eaters, with individual choices like "healthy" dark chocolate tied to being a good person and, likewise, drinking "unhealthy" diet soda tied to being a bad person. Such discourses incorporate embodied epideictic rhetoric—or "textual depictions of embodied behavior that invite or articulate an attitude of praise or blame" (Applegarth, 2019, p. 130)—at multiple levels: praising and blaming foods like dandelion tea or diet soda by extension implies praising and blaming the people consuming them, respectively. For example, the article "Do Carbs Make You Gain Weight? Here's What a Dietitian Has to Say" invokes the audience by addressing the reader in the second person: "there's a good reason that you need so many carbs" so "let's chat" (Rizzo, 2023, paras. 2–3). The article showcases embodied epideictic rhetoric throughout, praising carbs as a good source of nutrition "the body needs to thrive" and blaming a lack of them for poor health and overeating. Importantly, it's not just carbs to blame, it's *you* and "the type of carbs you choose" (2023, para. 10). Further, phrases like "weight goals" and "skimping on carbs … could potentially cause you to eat more" (Rizzo, 2023, para. 10) invoke diet culture ideas about body size, that thinness is good and fatness is bad, that you should be following your weight goals and not fall into gluttony. In this way, food- and diet-related discourse helps to instantiate dominant societal norms around

body size. And, importantly, through their carefully curated and ostensibly science-backed advice, the healthy lifestyle magazine/website articles I analyzed work to persuade readers about what "healthy" means and that they can live a better life simply by making their recommended choices, especially around the right practices and products to purchase to achieve that ideal.

Conclusion

The healthy lifestyle magazine/websites I analyzed leveraged appeals to evidence and expertise as ethos-building strategies blended with epideictic rhetoric aimed at driving health behavior change, often sandwiching expert opinions around carefully hedged scientific research findings. These rhetorical sandwiches layer multiple appeals to ethos with epideictic rhetoric with the aim of increasing persuasiveness to audiences. Such appeals become especially pernicious in digital spaces where ideas about health and wellness are slippery and contested. The healthy lifestyle magazine/websites are part of the sprawling wellness industry, and in wellness discourse, there is a simultaneous impulse to turn to the latest scientific and medical research, to embrace holistic models and practices, and to legitimize influencers and wellness companies like Gwyneth Paltrow's goop (refer to Derkatch, 2022). The mix of ethos and epideictic appeals and uses of evidence and expertise in the healthy lifestyle magazine/websites I analyzed creates a complex cultural and rhetorical space where readers must constantly navigate assessments of credibility and trustworthiness.

Additionally, health behavior change suggestions often came from experts whose professional or commercial websites were linked to, and sometimes included direct links to recommended products like the Amazon.com link in "7 Benefits of Dandelion Tea." Experts quoted in articles were often also entrepreneurs, book authors, or employed by specific brands. Even self-citation links within a magazine/website leading to related articles can be associated with consumerism: keeping a visitor moving through one magazine/website increases the number of advertisements viewed and potential sponsored links engaged with, which increases revenue. Thus, experts are incorporated in consumeristic ways, which should complicate their ethos by undermining their virtue and good will; yet the prevalence of the practice demonstrates it must achieve what the magazine/websites aim for, which is engaging readers and, ultimately, driving *consumer* behavior change. In many ways, what my analysis revealed is that rhetorical sandwiches and related moves like self-citation are genre conventions in this type of online healthy lifestyle advice article. In an attention economy (Lanham, 2006), keeping people's attention is the way to make money, and rhetorical situations drive genre as social action (Miller, 1984, p. 151). Emma F. Bloomfield and Denise Tillery (2019) argued that in online science communication, "A powerful message is meaningless online unless it gets views, clicks, shares, and links" (p. 25). In some ways, the health behavior change goal is irrelevant, as the bottom line is that the magazine/websites, which do not require a subscription or payment to view articles, are in the business of selling—advertisements, sponsored products, and more—and the idea of pursuing better health is very persuasively wrapped around the capitalism.

Because this essay is a critical rhetorical analysis, and not an audience reception study, I can only gesture anecdotally at the persuasiveness of rhetorical sandwiches. In a recent "Writing in the Health Professions" class activity during a week on health literacy gone slightly awry, I asked students to consider how authors

used both hedging language and evidence to support and nuance their claims, using the example of "7 Benefits of Dandelion Tea." First, I asked students to skim the article "Purification, Preliminary Characterization and Hepatoprotective Effects of Polysaccharides from Dandelion Root" (Cai et al., 2017) to try and figure out what the authors did in their experiment and what they found out from it. Then, I asked them to carefully read "7 Benefits of Dandelion Tea," paying special attention to the listicle item that used Liangliang Cai et al. (2017) as a source. Students were encouraged to explore links, click around, and think about whether and how any claims might have shifted from the scientific reports to the healthy lifestyle magazine/website article. While we had an excellent, generative discussion, what surprised me was that—in the context of a class activity about popular health writing, hedging, and health literacy—about a third of the students in class revealed that they were still so persuaded by the "7 Benefits" article that they added dandelion tea to shopping lists or carts, with one student admitting she texted the affiliate link to her mother during the activity saying they should start drinking it.

Lastly, the healthy lifestyle magazine/websites in my analysis leveraged ethos and epideictic rhetoric in order to advance dietary advice anchored in nutritional science, and thus, their discourses of "healthy eating" reinscribe problematic hegemonic ideas about bodies, food, and health. This is especially consequential given the readership of healthy lifestyle magazine/websites I noted earlier and their extended reach through social media platforms. The sheer reach and pervasiveness of the type of healthy lifestyle discourse these outlets promote speaks to their importance as an object of study. While the rhetorical work I identified in this essay was pervasive across the articles and magazine/websites I analyzed, further research with larger datasets with computationally-assisted analysis or from an audience reception standpoint could provide rich insights. Understanding how authors aiming to be both persuasive and authoritative to general public audiences use sandwiched ethos-building strategies to promote behavior change has implications for understanding layered digital, science, and health literacies and how elements of the rhetorical situation—such as appeals to evidence and expertise interlaced with praise and/or blame that reinforces dominant cultural values—may "bleed" into spaces like #FitTok and Instagram and be taken up in the spread of health information, misinformation, and disinformation.

Biography

Danielle Mollie Stambler (she/they) is Assistant Professor in the School of Writing, Rhetoric, and Technical Communication at James Madison University. Stambler studies wellness, body size, neurodiversity and disability rhetorics, and literacy and digital life, and has scholarship in publications including *Technical Communication Quarterly*, *Rhetoric of Health and Medicine*, and more.

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