Public Pauses

Sociotechnical dynamics of temporal whitespace in the networked press

Mike Ananny

Annenberg School for Communication & Journalism, University of Southern California
Berggruen Fellow at the Center for Advanced Study in the Behavioral Sciences, Stanford University

ananny@usc.edu

On April 18, 1930, BBC Radio's lead story was "there is no news," with the network broadcasting piano music for the remainder of the 15-minute news segment (BBC News, 2017). In January, 2018, Life Time Fitness announced that it would ban all national cable news channels from TV screens in its gyms in Canada and the US, stating that banning "consistently negative" and "politically charged content" was "consistent with the desires of overall membership as well as our healthy way of life philosophy." (Life Time Fitness, 2018) And in August, 2017, organizers of a University of Virginia vigil commemorating the Charlottesville race attacks convened the gathering through a face-to-face "whisper web campaign" that purposefully avoided attracting the attention of social and mainstream media (O'Brien, 2017).

Each instance involves a pause that leaves clues about what role absences could or should play in the creation of public life: mainstream journalists at elite news organizations creating news rhythms by deciding that *nothing* has met their criteria for public attention; a private organization designing its media environments in a way that excludes what it sees as negative, destructive consequences of news; and a social group eschewing social and professional media attention that it sees as incompatible with the solidarity, community-building, and social change it is pursuing through a public convening. These are arguably very different institutional, normative, and sociotechnical contexts, but they suggest that absences might be read for images of the public, for evidence of the power to stop news time, for clues about how media institutions set news rhythms and help to orient public attention in time.

My aim in this short position paper is to sketch some thinking about the public importance and sociotechnical dynamics of such pauses. Specifically, what is news time and how is it made? What are media pauses and how might they be seen as public communication whitespaces? And, finally, what power dynamics are intertwined with the creation or maintenance of such whitespace and what questions might sociotechnical scholars of public communication systems ask to trace the risk and rewards of such absences?

What is News Time and How is it Made?

In an essay on the construction and significance of time in professional journalism, Schudson argues that

> 'timeliness' in news is defined in practice not only by the recency of a reported event but by its coincidence with the searchlight of the journalistic institution. 'Timeliness' operates not by Greenwich mean time but by a cultural clock, a subtle and unspoken understanding among journalists about what is timely and what events are genuinely 'new.'" (Schudson, 1986, p. 82)

This "cultural clock" is a product not only of "naturally" occurring events at institutionally predictable locations, it is a reflection of where journalists choose to make temporal investments, when they decide to orient their attention and production processes, and ultimately what they see as their profession's temporal obligations.

A survey of sociological studies of news work (e.g., Boczkowski, 2010; Gans, 1979; Schudson, 2000; Tuchman, 1973; Usher, 2014) reveals two broad types of time in news work: inside-out and outside-in. Inside-out time emerges from the press's own information values and rhythms. For example, the need to go to air at a particular time might pause or stop reporting; a desire to conserve finite resources may halt long-term investigative work; competition with other news organizations can mean accelerating reporting in order to scoop a rival or updating a story to maintain the appearance of novelty and maintain advertising revenue; an editor's judgment that a particular piece of information has critical public value might necessitate issuing a bulletin and interrupting an audience; a story's similarity to a previously published piece may mean delaying its publication to avoid seeming repetitive.

Outside-in time depends upon forces external to the press. For example, a morning government press briefings may structure an entire day's news cycle; a natural disaster can reorient coverage for days or weeks to come; 2- and 4-year election campaign cycles ensure that resources and coverage is allocated to political issues; and quarterly earnings reports, monthly economic metrics and yearly State of the Union addresses are all anticipated and highly ritualized staples of journalism.

These outside-in and inside-out forces can create structural preferences for particular types of news and social effects. For example, Bell (1995) argues that the press's collective obsession with recency makes much of the news it produces, at best, difficult to understand and, at worst, irrelevant. The defining and most powerful feature of news, he says, is novelty. Journalists value information that is new to them, that is new to those they see as their sources and constituencies, or novel to dominant ideologies. The "live shot" is a perennial journalistic favorite (Katz, 1992), promising the potential of novelty, suspense that ostensibly comes from an outside source, with editors still choosing where and when to point the camera. Seemingly self-evident novelty is the journalist's best defense against charges of bias: the *world* produces events, journalists just cover them.

These ideologically inflected temporal dynamics of news work are evidence of a distributed and institutionally situated press that is anything but independent and completely in control of its own time (Cook, 2006). The professional press's informational rhythms are intertwined with how other individuals and organizations structure time and, culturally, how time is assumed to be meaningful.

People's shared senses of time are rooted in both biological and sociological rhythms, reflected in and structured by time-keeping technologies. As Flaherty (1999) notes, although each person's physiology is unique, the biological features that we share—that our bodies rest and heal, age and die—provide a basic, shared foundation through which we experience time. From this foundation, though, our individual experiences of time are largely structured by how we understand and navigate social interactions. We both assert what we want time to mean (exercising individual agency and autonomy) and we accept time-making forces beyond our control (enjoying the kind of community that emerges from shared rhythms) (Flaherty, 2011).

This tension between independence and influence, between individuality and community is at the heart of how we experience time, and can take a number of different forms. Flaherty (2011), for example, identifies how "time work" entails people asserting agency amidst social structures:

- duration (we aim to accelerate or decelerate perceptions of elapsed time depending on whether current circumstances are thought to be favorable);
- frequency (we personalize how often events occur based on how regularly we want them to happen);
- sequence (we order events according to how we want time to proceed and incidents to interrelate);
- timing (we schedule single events to happen at particular moments that reflect individual desires);
- allocation (we distribute expenditures of time according to the types of experiences we desire);

- time-taking (we treat time as a commodity or capital that can be valued, banked, exchanged and stolen in order to signal power).

He argues that how people understand and try to control time is a basic struggle between individual agency and societal control. This same theme is echoed in Zerubavel (1981, p. xiv) review of how time "functions as a context for anchoring the meaning of social acts and situations," separating, for example, public environments from private environments. Consider how time traditions and rhythms of life divide time between public activities like work, school, worship, volunteering, socializing and private realms like the home, family, sleeping and solitude. Essentially, schedules, reoccurrences and timed events that divide days, weeks, months and years are evidence of how we allocate social, economic, and private resources. How we spend time hints at what we value, both as individuals and groups.

In addition to these rhythms and traditions, social understandings of time are also reflected in, and structured by, time-keeping technologies, what Peters (2015) calls "logistical media." These technologies (e.g., calendars, public clocks, watches) both denote and connote time by marking its passage and signaling its meaning. Such technologies can be tools that help us assert what we want time to be, or objects that impose time upon us. Or, more neutrally, they can leave traces of how people structure their time and understand it differently. Calendars that automatically remind us of appointments have been given permission to interrupt. Clock towers were ways of both telling time and gathering groups. Deciding not to wear a watch might mean that we are free of time-keeping – but a watch it is replaced with an ever-present cell phone that tells time and alerts us to email we have simply replaced one technology of time with another. Essentially, when people adopt, alter and adapt to the affordances and constraints of time-keeping technologies they reveal what they wish time was – and what environments make time to be.

The press is essentially a kind of institutional time-keeping technology: its representations and practices both mark time (yesterday's news is old, today's news is relevant, and year-end reviews bracket information eras) and manage expectations (tomorrow's news is unknown until the press reveals it).

The Whitespace Press & Sociotechnical Pauses

Today's *networked* press is unique in the history of journalistic time because the temporality of news production is infrastructural. Its beginnings, endings, rhythms, frequencies, durations, and pauses are increasingly not only the result of individual agency versus social structure—e.g., an individual journalist trying to exercise news judgment amidst organizational and competitive pressures—or inside versus outside time—e.g., editors trying both to pursue internally initiated long-term investigative projects and to cover daily news emerging from predictable institutional locations like the White House or the stock market, or imposed events like human and nature-made disasters.

As I've argued elsewhere (Ananny, 2018), today's press is an outgrowth of networked, infrastructural dynamics in which both humans and computational processes living in liminal spaces (Ananny & Crawford, 2015) somewhere between editorial judgment and technology design that create, circulate, and suggest interpretations of news content. News today emerges from a mix of human curiosity, institutionalized rituals, algorithmic processes, labor allocations, financial expectations, reader/user practices, and platform designs. It is increasingly difficult to talk neatly about inside versus outside processes, or individual versus collective agency when the making, sharing, and meanings of "news" is spread across infrastructures (Jackson, 2016; Star & Bowker, 2006) that are hard to see, often only seen when they are thought to break, resting upon layers of privatized and inscrutable practices, and are embedded in communities of practice (like search engine optimization and computational advertising) that actively eschew the identities and responsibilities of the press.

Given these increasingly infrastructural dynamics of news production, circulation, and interpretation, with an accompanying surfeit of information and audience participation (often fueled by social media platforms and economic imperatives hungry for increasing amounts of data), how should we make sense of news *absences*—moments when there are pauses, omissions, avoidances, and silences in otherwise noisy media environments? I have begun exploring the idea that such absences constitute an often invisible but no less significant "whitespace press" (Ananny, 2017). Grounded in long-standing but often undervalued traditions of affirmative free speech theory and First Amendment jurisprudence (Baker, 2002; Bollinger, 1991; Emerson, 1981; Fiss, 1996)—and the sometimes controversial claims that democracies are more than just marketplaces of speech and that the answer to bad speech isn't always more speech—the whitespace press makes room for the idea that journalistic absences can be evidence of valuable practices of democratic self-governance like listening, preparation, and non-amplification.

Examples of journalistic absences can include:

- **news avoidance:** *e.g.*, when people eschew individual news organizations, entire genres of journalistic content or social media platforms, at particular moments in electoral cycles or when people feel that the news is harming their emotional health or social relationships (Edgerly, 2016; Hampton, Shin, & Lu, 2017; Ksiazek, Malthouse, & Webster, 2010; Portwood-Stacer, 2013);
- **self-censorship:** *e.g.*, when journalists strategically decide not to interview or quote particular individuals, avoid criticizing powerful individuals and institutions they do not want to offend , eschew entire topics or storylines because competitors have scooped them, or agree to state requests not to publish information seen as in national security interests (Anthonissen, 2003; Boyd-Barrett, 2004; Glasser & Gunther, 2005);
- **conspicuous silences:** *e.g.*, when the Vacaville Prison's *Vaca Valley Star* published "censored" across blank newsprint where articles were supposed to appear but had been censored by the warden; or when Wikipedia's website was entirely black to protest the proposed SOPA/PIPA legislation; or decisions not to publish suicide events or the names of terrorists, for fear of giving visibility to violent acts and perpetrators (Jamieson, Jamieson, & Romer, 2003; Stack, 2000; Truter, 1984);
- **social norms:** *e.g.,* when an era's dominant norms or values push make some stories or topics too taboo or socially deviant (Hallin, 1986) for the mainstream press to cover—like the HIV/AIDS epidemic of the 1980s that only the gay press would initially report (Nelkin, 1991)—the social norms of a particular era can render journalists silent;
- **coverage techniques:** *e.g.*, strategically using silences and pauses in interviews, granting particular sources anonymity or pseudonymity in exchange for access, telling audiences that what they might assume is a news organization's ignorance on an event is actually journalists waiting for confirmation before publishing, holding cameras on scenes without activity as a way of building anticipation among viewers, or simply declaring a story has ended either by identifying narrative ending or simply choosing to cover something else (Carlson, 2011; Casella, 2012; Harro-Loit & Ugur, 2017; On The Media, 2013);
- **labor distribution:** *e.g.,* organizing newsrooms into "fast" and "slow" sub-groups that let some journalists (usually more senior reporters) effectively ignore breaking stories in favor of longer-term projects (Christin, Forthcoming; Reich & Godler, 2014);
- **invisible audiences:** *e.g.,* readers, viewers, or technology users who may not appear visible to journalists because they are simply "lurkers" (Nonnecke & Preece, 2000) who leave no comments, likes, or retweets but are nonetheless the "listeners" (Crawford, 2009) who speakers presume exist, people whose socioeconomic statuses or lack of technology adoption make imperceptible or statistically insignificant to data-driven, algorithmic images of audiences (Lerman, 2013), or protesters

in authoritarian regimes who sometimes avoid media attention for fear of being discovered and attacked (Zhu, Skoric, & Shen, 2017).

Such examples abound. Once you look for them, absences seem to be everywhere.

Public Pauses

Why are such absences—that I collectively conceptualize as constituting the "whitespace press"—publicly significant, and why are they relevant to a discussion on the sociotechnical dynamics of speed?

First, such pauses are sociotechnical indicators of the speed of public life. They are not simply the "effects" of technologies that act on some pre-existing or separate model of public life; nor are they cultural or sociological phenomena that happen to find a home in a particular communication technology. Rather, as the examples sketched above suggest, pauses emerge from inextricably intertwined social practices, institutional settings, and technical capabilities. In the language of Pinch and Bijker (1986) the sociotechnical contexts of such pauses can ascribed significance in various ways, and are often subject to the dominant, closed meanings of social groups with the power to make, interpret, propagate, and dislodge dynamics of the sociotechnical setting. If a journalist were to challenge her newsroom's use of web traffic analytics to make editorial judgments, arguing that there was a potentially vast, unseen, powerful audience that deserved consideration—or a small, elite audience that was reading closely and making change—she would be fundamentally questioning how her newsroom was sensing, modelling, and interpreting silence. If journalists reporting on the Boston Bombing had ignored Reddit users' self-organized investigation—that identified an innocent person as the terrorist—they would have been making a concerted decision to ignore the appearance of crowdsourced intelligence in favor of measured, professional, institutionalized judgment. To appreciate fully the function and significance of nearly every absence in the networked press, scholars should adopt a sociotechnical perspective that foregrounds contemporary journalism's infrastructural nature.

Second, strategically, different kinds of publics may require different types of time, and thus particular sociotechnical dynamics of absence. A *rational, deliberative* public of the type that Habermas (1996) details requires an "ideal speech situation" in which agreed-upon rules of debate govern the communicative processes through which public problems are identified and solutions are devised. In this public, debate proceeds for as long as it needs to, until consensus is reached, with the rhythms of communication always in service of the rules of the rational, deliberative framework. In *participatory* publics (Kelty et al., 2015), communication rhythms live in the social practices and cultural norms of constituents. Realizing a need or desire for a pause might be fraught as different people and groups vie for the power to set communication rhythms and temporal expectations. A conversation's speed may be set by those who show up, participate the most, have the greatest persuasive power, or are most facile with a communication platform.

Because of its subordinate and often threatened nature, an *enclave* public of the type that Squires (2002) describes may need to be insulated from particular forms of reason and broader forms of participation while the group determines its identity, constituency, and power to create change. Although an enclave public might look like it has been paused or suspended to an outsider, such seeming inactivity might belie rich and active internal dynamics that need to proceed at a speed that aligns with the public's goals. (As an example, Squires discusses the US black press and Civil War era Underground Railroad as communicative publics that needed to operate in secret, without broad participation, and according to their own rhythms.) Finally, the *recursive* public Kelty (2005) traces is most concerned with having the power to control the conditions under which it convenes itself as a public—including the temporal conditions. Its definitions and constructions of pauses and speed may shift and sometimes look like the rhythms of a rational, participatory, or enclave public—but the key difference is the public's power to control the sociotechnical dynamics that define its speed. By including absences, silences, and pauses in the sociotechnical dynamics of public-making, scholars,

designers, and policymakers alike might be able to help realize different types of publics, recognizing that no single sense of time—or type or frequency of silence—is appropriate for all publics.

Third, beyond concerns about the sociotechnical dynamics of pauses and the types of publics they can give rise to, recognizing and valuing the absences of the whitespace press may make it possible to realize a different type of relationship between speech and democratic self-governance. Specifically, in contrast to liberal, marketplace models of speech that assume the value of additional speech—the best answer to bad speech is more speech—the ability to see and create publicly generative absences may make it possible to see what Lacey (2013) calls "listening publics": people who are able both to "listen in" to differences that have come to their attention and "listen out for" differences they may not be apt to recognize without institutions designed to support listening (Dobson, 2014). Indeed, there is a logical inconsistency in assuming that democratic self-governance only or even mostly requires speech: without listeners there are effectively no speakers. As Dryzek (2002, p. 149) writes, "the most effective and insidious way to silence others in politics is a refusal to listen." Once listening has been given co-equal status with speaking in systems of communicative self-governance, a host of sites for design and critique open up. It becomes possible to see the often unseen, feminized nature of listening, and the consistently subordinated role that listeners are given in social hierarchies (Brown, 1998), and the invisible, undervalued labor often required to maintain communication systems, listen out for breakages, and hear the interpersonal repair work that often results from listening and adjusting one's perspective (Star, 1991; Star & Strauss, 1999). Indeed, communication systems with the power to pause may make it possible to imagine entirely different images of democracy premised on feminist theories of self-governance, associational life, and social power (Fraser, 2014).

Exploring any of these three paths—the sociotechnical construction of pauses, the diversity of publics such pauses make possible, and the reimagined democracy enabled by listening—involves tracing the risks and rewards of journalistic silence.

It is no surprise to hear from journalists and technologists alike that pauses and hesitations are often not the way to social power or technological dominance. If you don't speak up, people assume you have nothing to say, aren't paying attention, or are too intimidated. Journalists are professional skeptics but, increasingly, that skepticism seems to be more visible, more likely to take the form of speculations that are uttered allowed and widely circulated, often with an accompanying willingness to give voice to anonymous sources or move ahead with a story before multiple confirming sources. While many mainstream, enterprise journalists are still trained to get confirming sources before publishing, there seems to be a willingness to report *on* rumors, seeing stories *about* speculation—with multiple sources speculating—as acceptable uses of public attention. I suspect this willingness to speculate—often couched as journalists' interest in inviting increasingly active audiences into the spaces of speculative evidence that were previously closed—may be drive by a fear of silence. Institutionally understandably in online networks that seem to prize (and economically reward) recency, frequency, and volume over measured silence, journalists may simply be afraid of pausing too long. What kinds of publics can survive when we cannot pause for too long?

Technology platforms face a similar structural conundrum. The absence of traceable online activity—failures to click, like, comment, tweet, rank, rate, upload, add to cart—is the death knell of platforms premised on monetizing user generated content and activity. Generally, listening doesn't sell. Perhaps more niche, elite communication technologies will arise that value pauses, giving those with the ability to afford subscriptions and avoid monetization the power to enjoy different rhythms than those left in spaces of constantly elicited content. Already we see shades of this in Apple's and Google's announcements that future iPhones and Android operating systems would be designed with features designed to let you "unplug" and get time away from your device. And this device-centric view of unplugging against the dangers of tech addiction underpins the "Time Well Spent" movement, founded by reformed Silicon Valley technologists. Such design imperatives and social movements seem to reflect technologically determinist image of temporal problems:

better technology will give us back the time for pausing that technologies took from us in the first place. This may indeed be the solution for some people, but I cannot help but think about the workers—of various colored collars—who simply do not have the option of being unavailable to bosses, clients, platforms, students, partners, children, and parents. I do not discount such innovations, but am highly skeptical of placing faith in technological pauses that seem ungrounded in the political economy of technological practices, and the sociocultural expectations and gendered forms of power.

Coming back to the examples that began this essay—the BBC's "no news" declaration, gyms stripped of TV screens, and vigils hiding from journalists and social media—I want to suggest that silences, pauses, absences, and hesitations be given analytical and empirical attention within the discussion of speed. It may be that silences are ways to control the speeds of sociotechnical systems, and that sociotechnical systems can be read for intended or unintended silences. A sensitivity to silence may help us realize different types of systems, publics, and democracies.

REFERENCES

Ananny, M. (2017). The whitespace press: Designing meaningful absences into networked news. In P. J. Boczkowski & C. W. Anderson (Eds.), *Remaking the news* (pp. 129-146). Cambridge, MA: MIT Press.

Ananny, M. (2018). *Networked press freedom: Creating infrastructures for a public right to hear*. Cambridge, MA: MIT Press.

Ananny, M., & Crawford, K. (2015). A liminal press: Situating news app designers within a field of networked news production. *Digital Journalism, 3*(2), 192-208. doi:10.1080/21670811.2014.922322

Anthonissen, C. (2003). The sounds of silence in the media: Censorship and self-censorship. In R. Wodak & V. Koller (Eds.), *Handbook of communication in the public sphere*. Paris, France: Mouton de Gruyter.

Baker, C. E. (2002). *Media, markets, and democracy*. Cambridge, UK: Cambridge University Press.

BBC News. (2017, April 18, 2017). 'There is no news': What a change from 1930 to today. Retrieved from https://www.bbc.com/news/entertainment-arts-39633603

Boczkowski, P. J. (2010). *News at work: Imitation in an age of information abundance*. Chicago, IL: University of Chicago Press.

Bollinger, L. C. (1991). *Images of a free press*. Chicago, IL: The University of Chicago Press.

Boyd-Barrett, O. (2004). Judith Miller, The New York Times, and the propaganda model. *Journalism Studies, 5*(4), 435-449.

Brown, W. (1998). Freedom's silences. In R. C. Post (Ed.), *Censorship and Silencing: Practices of Cultural Regulation* (pp. 313-327).

Carlson, M. (2011). *On the condition of anonymity: Unnamed sources and the battle for journalism*. Chicago, IL: University of Illinois Press.

Casella, P. A. (2012). Breaking news or broken news? Reporters and news directors clash on "black hole" live shots. *Journalism Practice, 7*(3), 362-376.

Christin, A. (Forthcoming). *Metrics at Work: How Web Journalists Make Sense of their Algorithmic Publics in the United States and France*. Princeton, NJ: Princeton University Press.

Cook, T. E. (2006). The news media as a political institution: Looking backward and looking forward. *Political Communication, 23*, 159-171.

Crawford, K. (2009). Following you: Disciplines of listening in social media. *Continuum: Journal of Media & Cultural Studies, 23*(4), 525-535.

Dobson, A. (2014). *Listening for democracy: Recognition, representation, reconciliation*. Oxford, UK: Oxford University Press.

Dryzek, J. S. (2002). *Deliberative democracy and beyond: Liberals, critics, contestations*. Oxford, UK: Oxford University Press.

Edgerly, S. (2016). Seeking Out and Avoiding the News Media: Young Adults' Proposed Strategies for Obtaining Current Events Information. *Mass Communication and Society*, null-null. doi:10.1080/15205436.2016.1262424

Emerson, T. I. (1981). The affirmative side of the First Amendment. *Georgia Law Review, 15*, 795-849.

Fiss, O. (1996). *The irony of free speech*. Cambridge, MA: Harvard University Press.

Flaherty, M. G. (1999). *A watched pot: How we experience time*. New York, NY: New York University Press.

Flaherty, M. G. (2011). *The textures of time: Agency and temporal experience*. Philadelphia, PA: Temple University Press.

Fraser, N. (2014). Transnationalizing the public sphere: On the legitimacy and efficacy of public opinion in a post-Westphalian world. In K. Nash (Ed.), *Transnationalizing the public sphere* (pp. 8-42). London, UK: Polity.

Gans, H. (1979). *Deciding what's news*. New York, NY: Vintage.

Glasser, T. L., & Gunther, M. (2005). The legacy of autonomy in American journalism. In G. Overholser & K. H. Jamieson (Eds.), *The Institutions of American Democracy: The Press* (pp. 384-399). Oxford, UK: Oxford University Press.

Habermas, J. (1996). *Between facts and norms: Contributions to a discourse theory of law and democracy*. Cambridge, MA: MIT Press.

Hallin, D. C. (1986). *The 'uncensored war': The media and Vietnam*. New York, NY: Oxford University Press.

Hampton, K. N., Shin, I., & Lu, W. (2017). Social media and political discussion: when online presence silences offline conversation. *Information, Communication & Society, 20*(7), 1090-1107. doi:10.1080/1369118X.2016.1218526

Harro-Loit, H., & Ugur, K. (2017). Training Methods of Listening-Based Journalistic Questioning. *Journalism Practice*, 1-17. doi:10.1080/17512786.2017.1356687

Jackson, S. J. (2016). Speed, time, infrastructure: Temporalities of breakdown, maintenance, and repair. In J. Wajcman & N. Dodd (Eds.), *The sociology of speed: Digital, organizational, and social temporalities*. Oxford, UK: Oxford University Press.

Jamieson, P., Jamieson, K. H., & Romer, D. (2003). The responsible reporting of suicide in print journalism. *American Behavioral Scientist, 46*(12), 1643-1660.

Katz, E. (1992). The end of journalism? Notes on watching the war. *Journal of Communication, 42*(3), 5-13.

Kelty, C. M. (2005). Geeks, social imaginaries, and recursive publics. *Cultural Anthropology, 20*(2), 185-214.

Kelty, C. M., Panofsky, A., Currie, M., Crooks, R., Erickson, S., Garcia, P., . . . Wood, S. (2015). Seven dimensions of contemporary participation disentangled. *Journal of the Association for Information Science & Technology, 66*(3), 474-488.

Ksiazek, T. B., Malthouse, E. C., & Webster, J. G. (2010). News-seekers and avoiders: Exploring patterns of total news consumption across media and the relationship to civic participation. *Journal of Broadcasting & Electronic Media, 54*(4), 551-568.

Lacey, K. (2013). *Listening publics: The politics and experience of listening in the media age*. Cambridge, UK: Polity.

Lerman, J. (2013). Big data and its exclusions. *Stanford Law Review, 66*, 55-63.

Life Time Fitness. (2018, January 4, 2018). Our perspective on the recent tv programming change in our clubs. *Twitter*. Retrieved from https://twitter.com/lifetimefitness/status/949044437711310849

Nelkin, D. (1991). AIDS and the news media. *The Milbank Quarterly, 69*(2), 293-307.

Nonnecke, B., & Preece, J. (2000, April 1-6, 2000). *Lurker demographics: Counting the silent*. Paper presented at the ACM Conference on Computer Human Interaction, The Hague, The Netherlands.

O'Brien, S. A. (2017, August 17, 2017). The social media blackout behind the UVa vigil. *CNN Tech*. Retrieved from https://money.cnn.com/2017/08/17/technology/business/uva-take-back-the-lawn-social-media/index.html

On The Media. (2013, April 19, 2013). What do you broadcast when there's nothing to say? *On The Media*. Retrieved from http://www.onthemedia.org/story/288011-what-do-you-broadcast-when-theres-nothing-say/

Peters, J. D. (2015). *The marvelous clouds*. Chicago, IL: University of Chicago Press.

Pinch, T., & Bijker, W. (1986). Science, relativism and the new sociology of technology: Reply to Russell. *Social Studies of Science, 16*(2), 347-360.

Portwood-Stacer, L. (2013). Media refusal and conspicuous non-consumption: The performative and political dimensions of Facebook abstention. *New Media & Society, 15*(7), 1041-1057. doi:10.1177/1461444812465139

Reich, Z., & Godler, Y. (2014). A time of uncertainty: The effects of reporters' time schedule on their work. *Journalism Studies*. doi:10.1080/1461670X.2014.882484

Schudson, M. (1986). Deadlines, datelines, and history. In R. K. Manoff & M. Schudson (Eds.), *Reading news* (pp. 79-108). New York, NY: Pantheon Books.

Schudson, M. (2000). The sociology of news production revisited (again). In J. Curran & M. Gurevitch (Eds.), *Mass media and society* (pp. 175-200). London: Arnold.

Squires, C. R. (2002). Rethinking the black public sphere: An alternative vocabulary for multiple public spheres. *Communication Theory, 12*(4), 446-468. doi:10.1111/j.1468-2885.2002.tb00278.x

Stack, S. (2000). Media impacts on suicide: A quantitative review of 293 findings. *Social Science Quarterly, 81*(4), 957-972.

Star, S. L. (1991). The sociology of the invisible: The primacy of work in the writings of Anselm Strauss. In D. R. Maines (Ed.), *Social organization and social process: Essays in honor of Anselm Strauss* (pp. 265-283). Hawthorne, NY: Aldine de Gruyter.

Star, S. L., & Bowker, G. C. (2006). How to infrastructure. In L. A. Lievrouw & S. M. Livingstone (Eds.), *Handbook of new media: social shaping and social consequences of ICTs* (pp. 151-162). London, UK: Sage Publications.

Star, S. L., & Strauss, A. (1999). Layers of silence, arenas of voice: The ecology of visible and invisible work. *Computer Supported Cooperative Work, 8*(1-2), 9-30. doi:10.1023/a:1008651105359

Truter, C. D. (1984). First Amendment rights of prisoners: freedom of the prison press. *University of San Francisco Law Review, 18*(3), 599-616.

Tuchman, G. (1973). Making news by doing work: Routinizing the unexpected. *American Journal of Sociology, 79*(1), 110-131.

Usher, N. (2014). *Making news at The New York Times*. Ann Arbor, MI: University of Michigan Press.

Zerubavel, E. (1981). *Hidden rhythms: Schedules and calendars in social life*. Berkeley, CA: University of California Press.

Zhu, Q., Skoric, M., & Shen, F. (2017). I Shield Myself From Thee: Selective Avoidance on Social Media During Political Protests. *Political Communication, 34*(1), 112-131. doi:10.1080/10584609.2016.1222471