

Universal Access? Investigating News Deserts in the American Public Media System

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In recent years, scholars, journalists, and policymakers have suggested a robust public media system as a possible solution to the growing local news deserts in the United States. However, to date, the American public media system remains largely understudied and insufficiently understood as a source for local news and information. The present exploratory study aims to provide a systemic overview of the existing public media system in the United States by approximating both the spatial reach of the current system and its capacity to provide local journalism. This analysis uses a geospatial mapping methodology to assess the provision of local journalism throughout the national network, illuminating resource disparities across the system. Findings indicate the existence of news deserts within the American public media system, thus introducing the concept of a public media news desert. The article concludes with recommendations for future scholarship and actionable takeaways to build greater journalism capacity within the existing system.

Keywords: public media, local news, news deserts, journalism

Amid the ongoing economic crisis in American journalism (Pickard, 2020), a robust public media system has been suggested as a possible solution to address growing news deserts—communities with little or no local news coverage (Abernathy, 2020). A recent report argued that many public media organizations across the country “are now ready to step into the role as anchor institutions in their local news ecosystems” (Shapiro, Fuerst, & Porter, 2022, p. 24). Leaders in the public media system agree. In an interview, Kathy Merritt of the Corporation for Public Broadcasting (CPB) said that “public media stations are locally controlled and operated, so they are in the best position to address growing news deserts” (Sandoval-Palos, 2020, para. 15).

The notion that the public media system in the United States should fill the gaps in the country’s largely commercial media system by providing freely accessible, noncommercial sources of news, information, and educational content is rooted in the system’s founding documents and its original universal access mission. The authors of the Public Broadcasting Act of 1967, which established the CPB and served as the basis for the founding of the Public Broadcasting Service (PBS) in 1969 and the National Public Radio (NPR) in 1970,

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Date submitted: 2022-04-15

¹ The author would like to thank Dr. Victor Pickard for his support of this project and generous feedback on earlier versions of the article.

envisioned public media as a resource that would be accessible to all Americans. The Act stated that the system would “make public telecommunications services available to all citizens of the United States” (Public Broadcasting Act of 1967, para. 7) and that it was in the public interest for the government to “ensure that all citizens of the United States have access” to these services (para. 9). In his remarks upon signing the bill, President Lyndon B. Johnson (1967) affirmed that the public broadcasting system “will be free, and it will be independent—and it will belong to all of our people” (para. 14). The legislation also addressed the role that public broadcasting would play as a source for local information. Public telecommunications services, including public radio and television stations, were described as “valuable local community resources” intended to “address national concerns and solve local problems through community programs and outreach” (Public Broadcasting Act of 1967, para. 8). Localism was so core to the development of the early public broadcasting system that the Carnegie Commission report that informed the Public Broadcasting Act of 1967 argued that the system should, in fact, be “built upon a bedrock of localism” (Avery & Pepper, 1980, p. 128).

Indeed, this longstanding emphasis on localism has made the public media system a strong contender as a possible solution to the ongoing crisis in local journalism. With thousands of stations across the country and an on-the-ground presence in hundreds of communities, public media is well-positioned to provide a systemic solution to the decline of local news. The NPR, for example, recently began promoting the “NPR Network,” highlighting the collective value of its many member stations (Falk, 2022). Additionally, the public media system has specifically grown its local reporting capacity. In recent years, as local newspapers across the country have been reduced to a fraction of their former size and as the number of journalists working at newspapers has rapidly declined, the number of journalists working at local public media stations has increased (Shapiro et al., 2022).

Despite the system’s original lofty aims and recent growth in local public media journalism, the American public media system remains largely understudied and insufficiently understood as a source for local news and information. For example, a study by the Center for Innovation and Sustainability in Local Media found that only a fraction of America’s public media outlets produce original content, including local news programming (Abernathy, 2020). The report found that “while 69% of NPR stations report that they offer local news, many of these stations don’t produce original reporting” (Abernathy, 2020, p. 49). Thus, while the system’s potential reach is substantial, this finding calls into question the extent to which the current public media system provides local news coverage to all Americans.

The present study aims to provide a systemic overview of the existing public media system in the United States by examining both the spatial reach of the current system and its capacity to provide local news. Drawing on existing literature on the role of place in local journalism, media ecosystems, and critical information needs, this project uses geospatial mapping techniques to analyze the extent to which the existing public media system serves all Americans. Furthermore, this study uses data on newsroom employment and financial resources to illustrate the existing disparities in journalistic capacity across the system. Finally, this article extends the scholarship on news deserts to encompass the American public media system by introducing the concept of public media news deserts. Altogether, the findings from this exploratory study provide insight into both the approximate geographic reach and local journalism capacity of the U.S. public media system, highlighting the network’s potential as a source for local news and information for millions of Americans.

Literature Review

Space & Place in Local Journalism

The present study contributes to existing literature that considers the role of space and place in journalism. Specifically, this research builds on the work of scholars who have called for a spatial turn in journalism and media studies research (Usher, 2021a). Weiss (2015) brought together the concepts of news and location to develop what she identified as spatial journalism, or “the kinds of information that incorporate a place, space, and/or location (physical, augmented, and virtual) into the process and practice of journalism” (p. 125). Furthermore, she argued that spatial journalism can “identify the holes, gaps, and lack of attention given to communities that are underrepresented or not represented at all” and “expose the issues and faults of a journalism practice that aims to serve a democratic function” (Weiss, 2015, p. 127). Usher (2019) built on the arguments of Weiss (2015) and Reese (2016) for situating the place at the center of journalism research. They defined places of news as “the physical locations where reporting happens, where news–decision making occurs (e.g., newsrooms), or more generally, where journalists go to do their work” (Usher, 2019, p. 86). Importantly, this sense of place is central to what they described as “journalism’s efforts to position itself as a cultural authority,” noting that newspaper names often include the name of a place, “as if to signal allegiance and special knowledge of a location” (Usher, 2019, p. 85). Usher (2019) also articulated a useful framework for understanding how place functions in journalism, which includes three dimensions of place in news production: (1) “place as the geographic and material setting of news,” (2) “place as lived: where action and meaning is made,” and (3) “place as cultural, economic, and symbolic power” (p. 91). This study primarily focuses on the first dimension while recognizing the structural forces at play in the third dimension that inevitably shape media systems, including public media.

Place is essential to understanding the concept of local journalism. As Usher (2019) argued, the “local” in local journalism has been “the single-most central place-based preoccupation in journalism studies research” in recent years (p. 94). Indeed, there has been extensive scholarship on local news and its importance for the health of American democracy (Barthel, Holcomb, Mahone, & Mitchell, 2016; Darr, Hitt, & Dunaway, 2018). Although the definition of local news has been debated (Ali, 2017; Usher, 2019), this study employs an understanding of local news that relies on geographic boundaries. In short, local news outlets are “journalistic sources that reside within, and are oriented around serving” a certain geographic area (Napoli, Stonbely, McCollough, & Renninger, 2017, p. 378). This definition of local news as geographically bounded lends itself to an analysis of media ecosystems and, thus, news deserts.

Critical Information Needs, Media Ecosystems, and News Deserts

Much of the scholarly and policy-oriented work in this area has focused on the role of local journalism in providing essential news and information to communities. A report from the Knight Commission (2009) on the Information Needs of Communities in a Democracy argued that “information is as vital to the healthy functioning of communities as clean air, safe streets, good schools, and public health” (p. xiii). The report defined an informed community as one in which “journalism is abundant in many forms and accessible through many convenient platforms” and where “local media—including print, broadcast, and online media—reflect the issues, events, experiences and ideas of the entire community” (p. xiv). The

Commission's recommendations called for a systematic assessment of the quantity and quality of information available to communities, including local journalism. A subsequent report from the Federal Communications Commission (FCC) echoed this call (Waldman, 2011). A 2012 report, also commissioned by the FCC, identified eight critical information needs that "are *necessary* for citizens and community members to live safe and healthy lives; have full access to educational, employment, and business opportunities; and to fully participate in the civic and democratic lives of their communities should they choose" (Friedland, Napoli, Ognyanova, Weil, & Wilson, 2012, p. v; emphasis in original). These needs included information about emergencies and risks, health and welfare, education, transportation, economic opportunities, the environment, civic information, and political information.

One way of assessing critical information needs, and whether they are met by local journalism outlets, is through the study of media ecosystems or media ecologies. Research on media ecosystems "provides a holistic way to understand information producers, content, and audiences" with the goal of assessing journalism provision at the local, regional, or national level (Stonbely, 2021, p. 5). Much of the established research in this area tends to focus on a specific news ecosystem as a case study for analyzing information flows in a particular community or region (Pew Research Center, 2010, 2015). To assess the robustness of local news provision, Napoli et al. (2017) developed a framework that broke down media ecosystems into three dimensions: (1) journalistic infrastructure, the number of outlets producing and disseminating local news in a community; (2) journalistic output, "the amount of journalism that is produced for and within the community" (p. 381); and (3) journalistic performance, how well the output meets the critical information needs of that community. This study primarily focuses on the first dimension by examining and assessing the journalistic infrastructure of the public media system.

Some media ecosystem studies have taken the form of geospatial analyses, which "describe spatially distributed evidence of the coverage and availability of news" (Usher, 2019, p. 97). One such project maps the existence of news deserts (Abernathy, 2018). Initially called "communications deserts," the concept was first introduced by journalist Laura Washington, who attributed it to a community organizer in Chicago. The term was used to describe cities "parched for information and news coverage with context and quality," or primarily urban communities that do not receive vital news and information (Washington, 2011). In the last 15 years, the concept itself has seen various iterations—including communications deserts and media deserts (Ferrier, Sinha, & Outrich, 2016)—with news deserts emerging as the most widely used term to describe the phenomenon. While there remains some disagreement about what constitutes a news desert (Rafsky, 2020), the most common definition is one used and popularized by Abernathy (2020): "a community, either rural or urban, with limited access to the sort of credible and comprehensive news and information that feeds democracy at the grassroots level" (p. 18). While the concept has recently been the subject of critique (Usher, 2023), scholars have nonetheless used this conceptualization of news deserts to study the impact of the closure of local newspapers on communities (Mathews, 2022) and how nonprofit news organizations have attempted to fill the information void (Ferrucci & Alaimo, 2020).

Notably, in earlier reports on the topic, Abernathy (2018) defined news deserts as communities without a local newspaper (p. 16). Given the previous focus on newspapers as the determinant for communities to be considered news deserts, insufficient attention has been paid to the role that public media outlets play as producers and distributors of local news. Thus, I introduce the concept of public media news

deserts, or news deserts that exist specifically within the public media system. Adapting Abernathy's (2020) definition, public media news deserts can be defined as a community, either rural or urban, that lacks access to a public media station (either radio or television) that provides local news and information. This conceptualization extends scholarly literature on news deserts to incorporate public media, another prominent component of local news ecosystems.

Public Media in the United States

The public media system in the United States consists of more than 1,000 public radio stations affiliated with NPR (NPR, n.d.-a) and 330 public television stations affiliated with PBS (PBS, n.d.). These figures do not account for other noncommercial, listener-supported community radio stations across the country, such as the Pacifica Network or many college- and university-based stations. According to CPB, the public media system now reaches more than 98% of the U.S. population (Corporation for Public Broadcasting, n.d.-b) with its freely accessible content, and NPR claims that "98.5% of the U.S. population is within listening area of a station carrying NPR programming" (NPR, n.d.-a, para. 2). Recent audience data estimated that NPR's total weekly audience across broadcast and digital platforms is approximately 53 million people (Shapiro et al., 2022), while PBS' total monthly audience is nearly 65 million people (PBS, 2022). The public media audience tends to be predominantly White, highly educated, and affluent (Shapiro et al., 2022)—a critique that is further discussed below. However, audiences on public media's digital platforms, such as podcasts, are younger and more racially diverse than the system's broadcast audiences (Izadi, 2021).

Importantly, the public media system in the United States differs from public service media entities around the world in several key ways. First, the American public media system receives public funding through a base annual appropriation from the U.S. Congress, which is allocated two years in advance (Wyllie, 2022). This appropriation is directed to the CPB, a private, nonprofit corporation that acts as an intermediary between Congress and the larger public media system to steward annual funding from the federal government to individual stations (Aufderheide, 1996; Corporation for Public Broadcasting, n.d.-a). This is in contrast to the funding mechanisms of public service media systems around the world (Schweizer & Puppis, 2018), many of which are based on a license fee framework and provide multiyear funding (Neff & Pickard, 2024). The BBC, for instance, has long been funded through a license fee—although the future of the license fee is uncertain (Picard, 2022). Additionally, the American public media system is significantly under-resourced compared with public service media systems in other industrialized nations. In the 2022 fiscal year, the CPB's annual appropriation totaled \$465 million (Corporation for Public Broadcasting, n.d.-d), about \$3 per person. By contrast, countries like Germany and Norway pay more than \$100 per capita (Neff & Pickard, 2024). As a result, the American public media system relies heavily on corporate underwriting, philanthropic funding, and individual membership revenue (Aufderheide, 1996). Recently, corporate sponsorship surpassed station membership fees as the largest component of the NPR's yearly revenues, accounting for more than one-third of its annual budget (Farhi, 2020; NPR, n.d.-b). However, this reliance on corporate sponsorship also makes the system vulnerable to the whims of the market. Like other media entities, NPR (Oxenden, 2023) and some of its member stations (James, 2023) laid off staff in 2023 because of revenue shortfalls attributed to declines in corporate sponsorship.

Finally, because the CPB directly funds local public media stations as opposed to national entities like NPR and PBS, the system itself is decentralized by design. According to Rowland (2016), this leaves the system with “many internally competing interests” (p. 277). A related structural challenge is the extent to which the system is enmeshed with institutions of higher education. Approximately two-thirds of the NPR’s member stations are licensed to or affiliated with a college or university, potentially leaving the system vulnerable to outside influence or hindered by institutional bureaucracy (Usher, 2021b). Given the American system’s dependence on private funding and its highly decentralized structure, it is viewed as a cautionary tale for countries with more established and centralized public service media systems.

Although the Public Broadcasting Act of 1967 set forth ambitious goals for the public media system in the United States, including the universal access mandate, numerous scholars over the years have noted how the existing system falls short of its lofty aims. Avery (2007) outlined the numerous structural problems that have persisted throughout the history of American public media. A key problem, as he described, is “the inherent contradiction of a system of noncommercial education station licensees operating within a capitalistic marketplace without the support of advertising dollars or a dedicated federal appropriation of adequate proportion” (Avery, 2007, p. 360). In other words, the system’s unstable and insufficient funding mechanisms have prevented public radio from living up to the lofty ideals outlined in its founding mandate.

Public media has also been critiqued for its history of racially exclusionary practices in both programming and employment (Berkman, 1980). Garbes (2020) explored how ideas about the public radio audience—a group she described as “white, highly educated, well-off baby boomers” (para. 1)—restrict the perspectives of journalists of color and contribute to a distinct NPR sound that is not representative of much of the country. Similarly, Chávez (2021) argued that NPR’s conceptualization of its audience leaves Latinx listeners underserved by—and underrepresented in—its journalism. While these issues are beyond the scope of the present study, the critiques are essential in recognizing how the existing public media system falls short and would need to be reformed to meaningfully reach all Americans.

Despite these critiques and the relative stature of American public media as compared with its international counterparts, the system is nonetheless relatively well-positioned as a possible strategy to address the ongoing crisis in local journalism (Goodman, 2009; Pickard, 2020; Shapiro et al., 2022). Indeed, public media stations are *already* playing an increasingly prominent role in their local media ecosystems because of the decline in commercial local journalism. As Patterson (2023) argued, “the decline of local news has increased the importance of local public radio” (p. 26). Historically, American public media has been thought of as an alternative or secondary news source when compared with its commercial counterparts, particularly newspapers. However, through mergers with startup digital news sites (Hansen, 2019) and acquisitions of legacy print newspapers (Morell, 2022), public media entities now play a more pronounced role in meeting their communities’ critical information needs. Furthermore, according to a recent survey of public radio member stations, 86% of respondents expressed interest in using additional funding to expand local news and public affairs coverage at their respective stations (Patterson, 2023, p. 13). The same survey showed that, while public media has been slow to respond to the digital transformation, member stations are expanding their digital footprint through their websites, social media, podcasts, and newsletters (Patterson, 2023, p. 11). Additionally, public media organizations tout that they are consistently viewed as highly trusted sources of news and information (PBS, 2021). One recent study argued that PBS,

which the authors described as “a rare, potentially unique space where viewers from across the political spectrum come for news and information,” could play a role in rebuilding public trust in the U.S. media system (Ali, Van den Bulck, & Lee, 2021, para. 4).

Despite the increased attention to the public media model in recent years, there has been insufficient research examining the current extent of the system and its capacity to provide local journalism. Thus, building on existing media ecosystem research and extending the concept of news deserts to include public media, the present study aims to identify areas of the country that are not currently being served by the American public media system. This research focuses on public radio stations and pays special attention to areas that do not receive original local news programming through the public media system. In other words, this study asks:

RQ1: What is the geographic reach of the existing public radio system in the United States?

RQ2: In communities that are served by a public radio station, does that station provide local news programming?

RQ3: Among stations that provide local news programming, how does journalistic capacity vary across the existing public radio system?

Methods

The present study advances the use of mapping techniques as tools for studying media ecosystems and local news coverage. Ferrier et al. (2016) called for the use of “geospatial media analytics” to understand complex and multilayered media ecosystems (p. 219). Through the Media Deserts Project, the researchers aimed to use mapping technologies to “identify communities lacking access to local news and information, as well as measure trends in access to critical news and information needs” (Ferrier et al., 2016, p. 221). Beyond identifying and mapping these communities, geographic information systems allow for “geographic and spatial analyses of the demographic and economic conditions in the media deserts” (Ferrier et al., 2016, p. 221), which situate news deserts as a result of broader systems and structures. Other studies have recently taken on mapping methodology as a way of “spatializing knowledge” (Fisher, 2012) about media ecosystems. These projects include mapping outlets that primarily serve Black communities (Center for Community Media, 2020), New Jersey publications’ self-reported coverage area (Stonbely, 2021), and newsroom cutbacks during the COVID-19 pandemic (Tow Center, 2020). In addition to Abernathy’s work on news deserts described above, these projects advance the use of mapping methodologies as tools for studying and analyzing media ecosystems.

This project proposes an approach that maps public radio stations across the country according to their broadcast areas. Within the public media system, radio stations are the primary source of local news and information compared with their public television counterparts (Shapiro et al., 2022). The broadcast area of a radio station is defined by the protected service contour—or the area “that is generally protected from interference caused by other stations” (Federal Communications Commission, 2019, para. 2). The contour’s radius is calculated using the effective radiated power (ERP) of the station and the antenna’s

height above average terrain (HAAT). Within this area, anyone should be able to receive the station on any radio with moderately good to very good reception (Radio-Locator, n.d.). There are two important limitations to this methodology. First, calculating a station's broadcast area using the procedure described above is only possible for stations on the FM band, not those on the AM band, because of the particular broadcast technology of AM radio and the publicly available data from the FCC. However, thanks to the FCC's 1945 decision to allocate the lower portion of the FM spectrum to noncommercial educational radio stations (Avery & Pepper, 1980), most public radio stations broadcast on the FM band and thus are included in this analysis.² The second limitation is that the broadcast area calculated here approximates the actual broadcast area for each station. Beyond the area of the protected service contour, while reception may be possible, it is not protected from interference by other stations, thus progressively weakening the station's signal. Additionally, directional antenna patterns and geographic features, including mountains and bodies of water, may affect the actual reach of the signal from these stations. Despite these limitations, the approximate broadcast area is a useful mechanism for understanding the estimated coverage area of public radio stations across the entire country.

In addition, what constitutes public media in the United States can be difficult to define. This study follows previous public media research (Shapiro et al., 2022) by defining public radio stations as outlets that qualify for community service grants (CSGs) from the CPB. Although this operationalization excludes some noncommercial radio stations, CSGs are the primary funding mechanism between CPB and the local radio and television stations that constitute the American public media system, making them the most accurate way to define the system's bounds. To be eligible for CSGs, stations must "provide significant public service programming to their communities" and meet certain legal and operational criteria (Corporation for Public Broadcasting, n.d.-c, para. 1). Within this group of CSG-qualified radio stations, CPB distinguishes between stations that provide "news" or "non-news" content. News stations are defined as those that air news and information programming for at least 75% of their weekday broadcast schedule (Corporation for Public Broadcasting, 2021). Non-news stations, on the other hand, include the hundreds of classical, jazz, and alternative music stations within the public radio system. While many public radio stations are members of the NPR and can be described as "NPR member stations," affiliation with the national network is not required for stations to be defined as news stations or to be CSG-eligible. Importantly, many of these CSG-eligible radio stations have secondary stations called repeater and translator stations that extend their broadcast area by simultaneously rebroadcasting programming from a parent station. These stations do not broadcast original content; instead, they extend the signal from a parent station to an area in which it would not otherwise be received.

The data collection process for this study began with compiling a list of public radio stations. Napoli et al. (2017) developed a multistage procedure for identifying journalistic infrastructure, which provided guidance in structuring data collection. The authors recommended starting by consulting relevant media directories that were located through CPB (n.d.-e) and NPR (2013). The second step in the procedure involved a manual search to supplement the data gathered from the directories. This process included cross-

² For the purposes of this analysis, public radio stations that broadcast primarily on the AM band but have an FM counterpart (a repeater, translator, or partner station) are mapped according to the broadcast area of the FM station, thus serving as a proxy for the broadcast reach of the AM station.

referencing information from CPB's Station Finder tool (n.d.-e) and FCC records to confirm that the directory data collected in the first step were accurate and up-to-date. The manual search identified dozens of stations that no longer qualified for CSG funding or that had not been included in the first directory search. This stage of the analysis also involved identifying the repeater and translator stations for each station, which was done using the FCC's FM database (Federal Communications Commission, n.d.).

After a complete list of stations was identified and established, data about each station were gathered from the FCC's database. The data collected here aimed to address the first research question by exploring the extent of coverage in the existing public radio system and identifying areas in the country that were not reached. This included coordinates of each station's antenna, the ERP, HAAT, and calculated radius of the protected service contour, in addition to basic station information like call sign, broadcast branding, frequency, and station ID. A secondary stage of data collection was conducted to address the second research question, which aimed to explore local news coverage among the stations identified here. I examined station websites, including any digital news content and local broadcast schedules, to determine (1) which stations qualified as news versus non-news stations, according to the CPB definition, and (2) which news stations produced original local news for their communities. Specifically, I analyzed the relative proportion of stations' broadcast schedules dedicated to news and information programming, including any locally produced news shows tailored to that particular community. I also analyzed recent digital news content shared on station websites to discern whether news articles (1) covered local issues, (2) were authored and/or produced by a journalist local to that station (as opposed to news articles produced by NPR but republished on the station's website), and (3) published relatively frequently (once a week or more). I also sought out stations' staff pages and employee directories to determine how many journalists were employed by the station—including employees with titles such as news director, reporter, editor, and producer—thus correlating local newsroom staff size with journalism capacity (Shapiro et al., 2022). Finally, using the publicly available financial reports mandated by the CPB, data on stations' annual budgets were collected to compare capacity across the system and illuminate disparities in resources. Together, these combined analyses identified the presence of any news deserts within the existing system.

Findings

This data collection process, which was conducted in 2021 and 2022, identified a total of 2,147 CSG-qualified public radio stations across the country on the FM band. This count included 401 parent stations, 798 repeater stations, and 948 translator stations. The stations are located in the contiguous United States, as well as in Alaska, Hawaii, and Puerto Rico.

RQ1: What is the geographic reach of the existing public radio system in the United States?

To better understand the geographic reach of the existing public radio system in the United States, I mapped the broadcast area of these stations according to the coordinates of the station's antenna and the calculated radius of the protected service contour as provided by the FCC (Figure 1). Greater detail is provided for the contiguous United States (Figure 2).

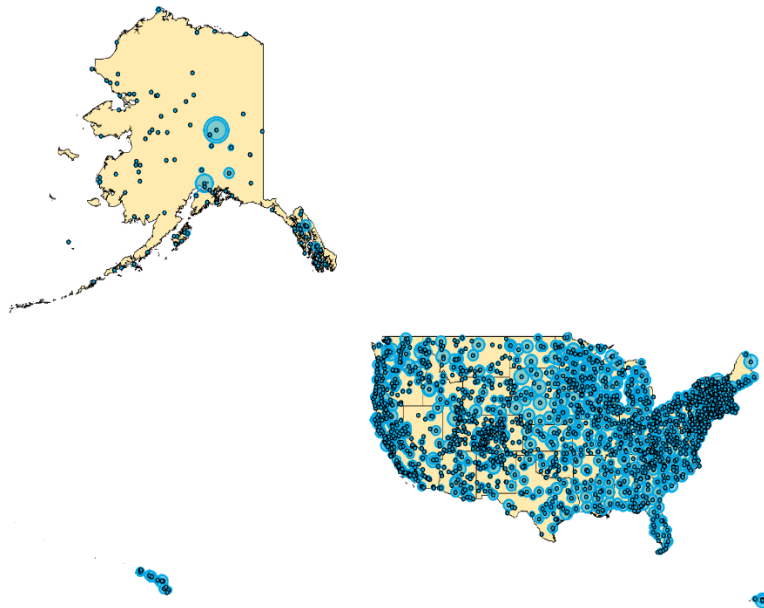


Figure 1. Locations and approximate broadcast areas of all public radio stations in the United States.

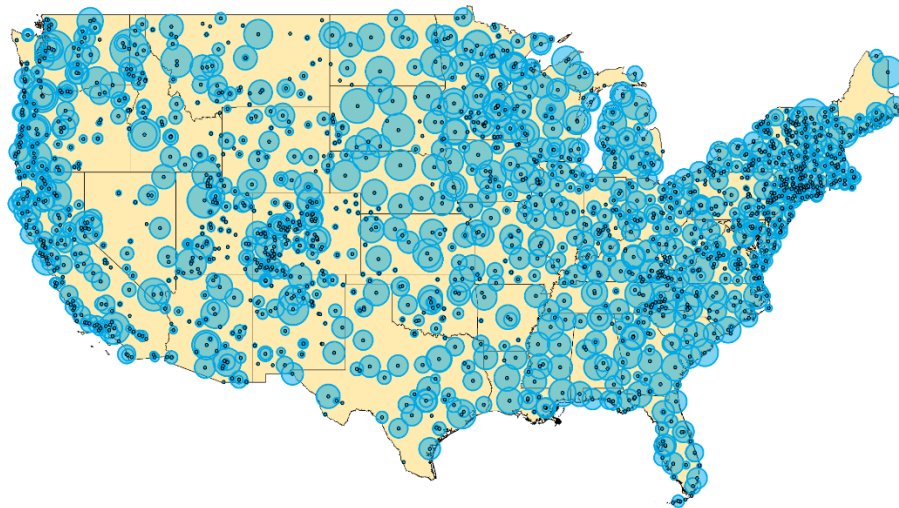


Figure 2. Locations and approximate broadcast areas of all public radio stations in the contiguous United States.

However, as discussed previously, CSG-qualified stations can be classified as either news or non-news stations, depending on their programming. Thus, to better understand the geographic reach of public radio *news* stations, the second stage of analysis sought to exclusively analyze stations that provide news and information programming within their broadcast areas. Following the CPB definition of news and non-news stations, I identified 1,011 news stations within the public radio system. Building on the existing

mapped broadcast areas, I removed any non-news stations to represent the broadcast areas of exclusively news stations (Figure 3). Greater detail is provided for the contiguous United States (Figure 4). Importantly, these maps include parent, repeater, and transmitter stations and are therefore a visual representation of the entirety of the stations' broadcast areas.

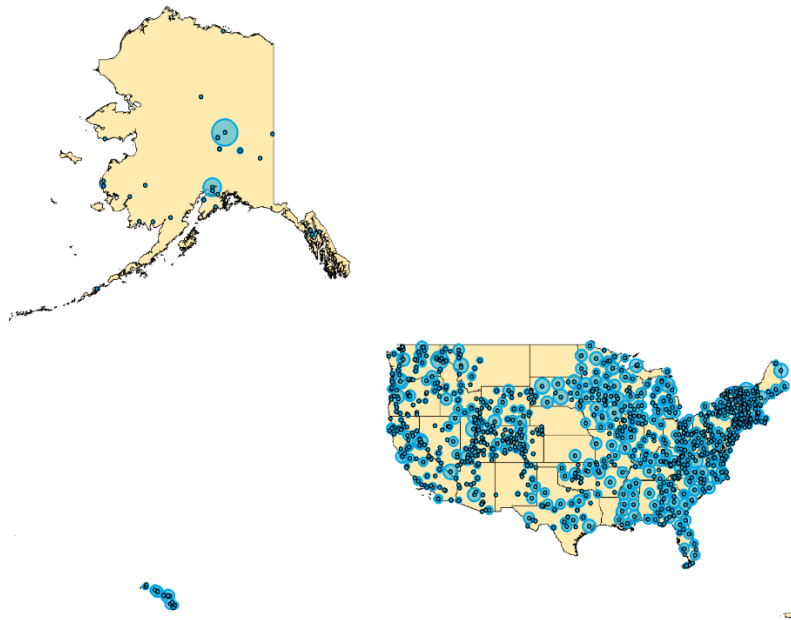


Figure 3. Locations and approximate broadcast areas of public radio news stations in the United States.

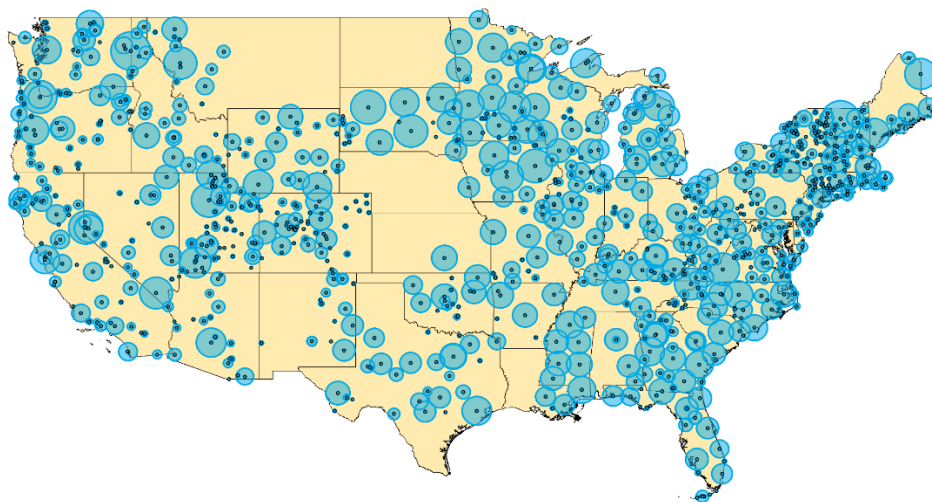


Figure 4. Locations and approximate broadcast areas of public radio news stations in the contiguous United States.

RQ2: In communities that are served by a public radio station, does that station provide local news programming?

Next, to better understand the provision of *local* news within the existing public radio system, I determined which stations provided local news to their respective communities based on an examination of the stations' websites, program schedules, and employee directories. This analysis identified 256 stations. Once again, building on the existing mapped broadcast areas, I updated the maps solely to include stations that provided local news in their respective communities (Figure 5). Greater detail is provided for the contiguous United States (Figure 6). Unlike the maps in Figures 1–4 above, these maps include only parent stations and exclude repeater and translator stations that simply rebroadcast signals to extend a station's broadcast area. This reflects the reality that the majority of public radio stations' news-focused staff tend to be located at the stations' headquarters—often in the largest urban area in the region—and are not typically dispersed throughout the entirety of a station's broadcast area. Thus, while a station may provide regional and state-level journalism to its entire broadcast area, this coverage cannot be considered local news according to the definition applied to this analysis (Napoli et al., 2017).

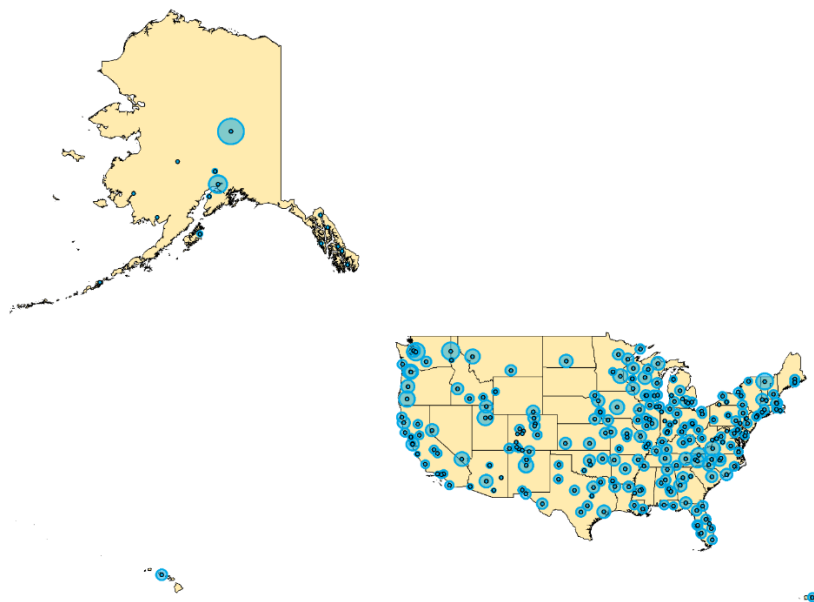


Figure 5. Locations and approximate broadcast areas of public radio news stations that provide original local news in the United States.

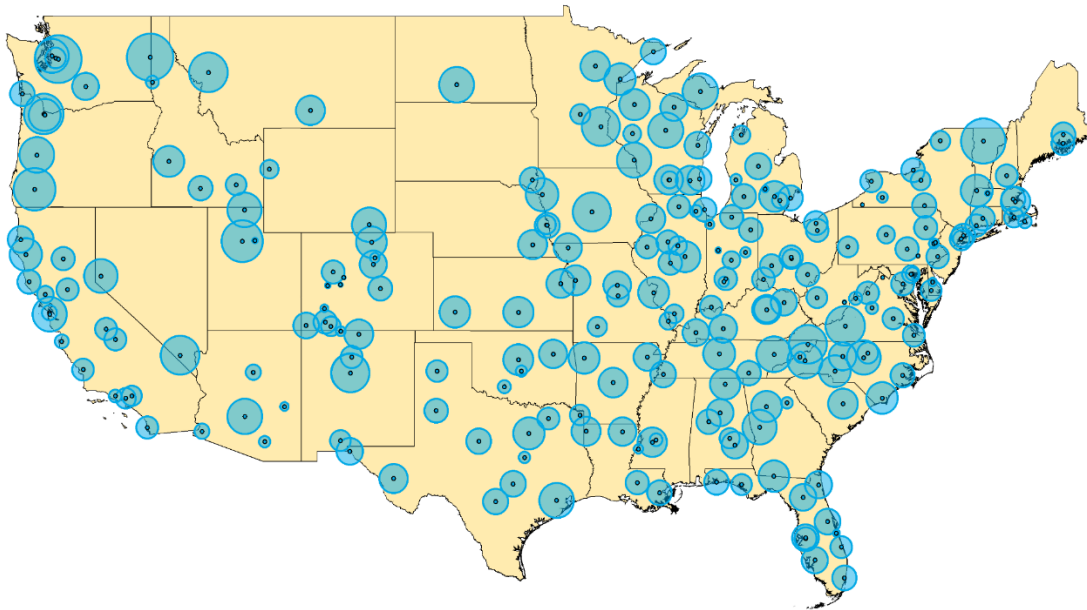


Figure 6. Locations and approximate broadcast areas of public radio news stations that provide original local news in the contiguous United States.

RQ3: Among stations that provide local news programming, how does journalistic capacity vary across the existing public radio system?

Notably, the stations included in this analysis vary widely in terms of their local reporting capacity. Some stations may have only one news director, while others may have dozens of reporters and editors in their newsroom. Thus, to better understand the journalistic capacity of these 256 public radio stations that provide local news and information to their communities—and the disparities in terms of resources and overall capacity across the public media system—additional data on newsroom employment and annual budgets were collected from publicly available employee directories and CPB-required financial reports on stations' websites. Of the 256 public radio stations identified as sources for local news, 219 stations made these data available on their websites—37 stations with unavailable or incomplete data were excluded from this phase of the analysis. The findings from these data are graphed below (Figure 7) and illustrate the vast resource disparities and, thus, disparities in journalistic capacity across stations within the existing public radio system. While some stations have annual budgets nearing or exceeding \$40 million and thus tend to have larger newsrooms, the vast majority of stations in the lower left corner of the graph have less than 20 employees in their newsrooms and annual budgets under \$5 million.

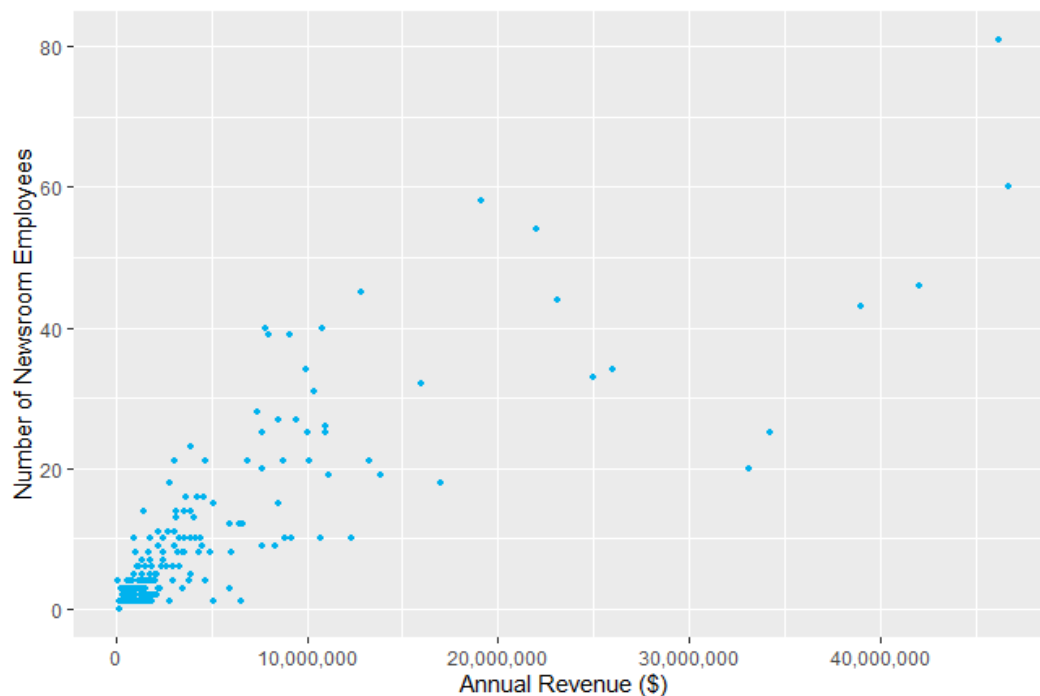


Figure 7. Scatterplot comparing the annual budgets and number of newsroom employees at 219 of the local public radio stations identified in Figures 5 & 6 as providing original local news to their communities.

Discussion

These findings demonstrate that, while the existing public radio system has substantial reach across the country in terms of broadcast area, the provision of local news throughout the system is sparser. When all CSG-eligible, CPB-funded public radio stations are taken into account (Figure 1), many areas of the country are served by at least one station, if not several. Unsurprisingly, the more densely populated regions of the country also enjoy dense concentrations of public radio stations. On the other hand, more rural areas of the country, particularly in the western United States and Alaska, are not currently served by the existing system. Drilling down to the individual state level, we see that those with statewide public radio systems receive more equally distributed coverage across the entire state than states without a dedicated network of public radio stations. These coverage patterns extend to maps that include only public radio *news* stations (Figure 3). However, when the map is limited to stations that specifically provide local news to their communities, the system's reach is more limited (Figure 5). Adding this secondary level of analysis, we see that much of the country is underserved by the existing public radio system in terms of its provision of local news. In short, this analysis confirms the existence of public media news deserts. Finally, an additional analysis of the stations identified as sources of local news illuminates the considerable resource disparities that exist within the system, particularly with journalistic capacity.

There are, of course, limitations to this study. First, this exploratory research is limited to an analysis of the provision of local news through the public media system in the United States alone. Additionally, given the challenge of defining what constitutes the American public media system, this analysis inevitably omits stations that some might consider to be public radio. As stated above, many college radio stations and stations in the Pacifica Network that do not receive funding from the CPB are not included in this project. Additionally, public radio stations on the AM band are not included here because of methodological limitations. Extending this project to include all these stations—as well as those in the public television system—should be the focus of future research in this area to establish a more comprehensive view of the extent of public media coverage across the country and around the world.

Second, one could argue that the proliferation of digital technologies in the public radio space—including podcasts and streaming—that allow listeners to access programming from anywhere in the world makes the broadcast area obsolete as a mapping approach. While these technologies undoubtedly increase the availability of public radio content, they do not affect the centrality of location and place in shaping journalistic content at these stations, as described by Usher (2019) and Weiss (2015). Therefore, while one can listen to a public radio station from across the country, that station may not provide news that meets the critical information needs for meaningful community participation.

Finally, numerous scholars have problematized and critiqued the concept of a news desert. In a recent article, Usher (2023) argued that news desert research can flatten the locally specific context of place, be conceptually unclear, and valorize certain institutions, namely mainstream newspapers, as sources of local news. This study acknowledges the limitations of the exploratory mapping methodology employed here, including its inability to account for underlying population dynamics and locally specific elements of place. Future research that considers these complex dimensions is needed. Other scholars have argued that concepts like news deserts, media ecosystems, and media ecologies use organic terminology to describe decidedly unnatural phenomena. Nadler (2019), for instance, argued that the media ecosystem metaphor “has come to be used in ways that suggest news ecosystems take shape through a spontaneous, self-ordering principle associated with ecological systems” (p. 825). Thus, the metaphor “makes it difficult to think of news systems as dependent upon political choices entailing particular social values” (Nadler, 2019, p. 834). This study recognizes that both media ecosystems and news deserts result from systemic investment—and disinvestment—in certain communities. Acknowledging the shortcomings of naturalizing terminology, this study still employs both terms given their popularity and widely accepted usage. However, terms like the “built news ecosystem” (Nadler, 2019, p. 834), “media redlining” (Williams, 2018), or “public media redlining” would also be appropriate alternatives that acknowledge the structural factors at play in these phenomena.

Despite these limitations, this study provides valuable insight into the infrastructure of the existing public media system and its capacity to provide local journalism. More precisely, this research introduces the concept of a public media news desert, illustrates the approximate geographic reach of the current public radio network, shows the extent to which public radio serves as a source of local news, and illuminates disparities in stations’ capacity to produce and distribute local journalism in their respective regions. Furthermore, this exploratory study contributes to media ecosystem research by incorporating the public

media system into studies of news deserts and outlining both the possibilities and limitations of public media as a source of local news.

Conclusion

More than 50 years ago, the public broadcasting system was established in the United States with the mission of providing universal access to informational, educational, and cultural programming. The current moment calls for an evaluation of the success of that founding mission and the current journalistic capacity within the existing system—the present exploratory study is the first step in that analysis. Using a geospatial mapping methodology, this project identified news deserts in the existing public media system by approximating the geographic reach of the public radio network and assessing the provision of local journalism across the country. Additionally, drawing on publicly available data on newsroom staffing and annual budgets, this study illuminated the resource disparities—and, thus, varying levels of journalistic capacity—among stations that provide local news across the system.

The existence of these public media news deserts calls for further research on several fronts. First, as discussed above, future iterations of this project should be expanded to include a more holistic view of the public media system, including non-CPB-funded public radio stations and public television stations. Second, this study primarily examines journalistic infrastructure, the first dimension of media ecosystem analysis, as described by Napoli et al. (2017). In keeping with their framework, research should be conducted to assess how public media outlets perform on the other two dimensions—journalistic output and journalistic performance—in meeting the critical information needs of their communities. More detailed analyses of the public media employment data collected here, along with surveys of public media practitioners like Patterson (2023), could contribute to research along those dimensions. Additionally, independent research into audience consumption of public media content should be conducted to understand how the system is currently being used. Special attention should be paid to communities of color and other underserved groups to understand patterns of public media usage—or non-usage—and to explore the reasons behind this.

Furthermore, while there is a clear need for historic reinvestment (Pickard, 2020) and larger structural change within the public media system—including proposals discussed by Goodman (2009), Jolly and Goodman (2021), and Ross (2021)—this research also provides actionable findings for industry professionals working in public media to address gaps in local news coverage across the system. This analysis lends support to CPB's focused and ongoing support for rural stations (Corporation for Public Broadcasting, n.d.-f) as well as their efforts to build journalism capacity across disparate stations through regional reporting hubs. One such initiative is the Collaborative Journalism Network, which aims to build partnerships between local stations on a regional basis. Indeed, the chief goal of the hubs is to "strengthen local and regional journalism" to "fill the gap left by the contraction of the newspaper industry" (Jensen, 2020, para. 8). Using the findings from this report, the CPB could expand these efforts to provide direct, targeted funding to public radio news stations identified here as not currently providing *local* news and information in their communities. These grants could be used specifically to cover the salaries for one or two local journalists—a news director/editor and a reporter, for example—and could be made in partnership with funding partners like community foundations or programs like Report for America.

Another opportunity to strengthen the local reporting capacity of the existing system would be to look at statewide public radio networks. Findings from this study showed that states with statewide public radio networks tend to have greater geographic reach than those without dedicated statewide systems. Some statewide systems, for example, use a hub-and-spoke model that employs journalists stationed at regional bureaus across the state, in addition to their headquarters, thus allowing for the production and dissemination of original local reporting in various regions. As part of its journalism capacity-building initiatives, the CPB could provide dedicated funding for statewide public radio networks to emulate this model. Furthermore, replication of the hub-and-spoke model for statewide public radio networks would primarily benefit rural areas most dramatically affected by the declining newspaper industry, which this analysis shows can often be considered public media news deserts.

Ultimately, the findings from this research inform our understanding of the existing public media system and its capacity to provide local news across the country. This study confirms the existence of news deserts within the public media system and illustrates the remarkable reach of the existing local journalism infrastructure. With a profound reinvestment in the current system and a renewed emphasis on the value of localism, public media should be seriously considered as a potential solution to many of the problems facing local journalism today. This analysis offers support for expanded journalism capacity-building initiatives within public media and a potential state-level model for improving local news provision. While this study is an important first step, it is exactly that—a first step in a larger, critically important evaluation of the public media system's universal access mission. Further research is required to provide greater detail about who the current system does—and does not—serve.

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