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# Desert Work: Life and Labor in a News and Broadband Desert

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## Abstract

This study offers a systematic qualitative investigation inside a news and broadband desert. Despite popular attention to the ramifications of limitations of local news and internet access, most recently and acutely during the coronavirus pandemic, there has been no scholarly research into communities where these two deserts overlap. This article confronts this gap. Built on 19 in-depth interviews with residents of a rural East Coast county in the United States, we argue that life in a news and broadband desert requires a substantial amount of labor to obtain the local information and connectivity many take for granted. Our findings demonstrate three areas of increased labor: (1) informational, (2) infrastructural and (3) emotional. Ultimately, this study illuminates how these three aspects of labor and two deserts overlay on one location, highlighting the inequalities faced by those in such a difficult, demanding and, often, disheartening environment.

The coronavirus pandemic prompted renewed urgency for access to local news and information and, more broadly, access to the internet. It is during moments of crisis, such as the pandemic, when people seek information to learn from officials and other citizens, and to gain a “sense of empowerment, which allows an individual to feel control in the situation” (Spence et al., 2015, p. 181). Obtaining such information is ever more problematic for rural Americans who often face both a paucity of local news and a dearth of internet access. This paper investigates a rural county that lacks both a local news source and reliable and affordable broadband connectivity.

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Since 2004, more than 500 rural newspapers have closed or folded into another title (Nicolaou et al., 2019). These closures have resulted in a growing number of “news deserts” (Abernathy, 2020). Concerns also have intensified about what we call “broadband deserts.” While today’s news audiences engage in a “complex interplay of old and new means of accessing” news and information (McCullough et al., 2017, p. 114), 86% of US adults get news from a smartphone or tablet “often” or “sometimes” (Shearer, 2021). This further cements the link between online access and local news.

Despite popular attention to both news and broadband deserts, there has been no scholarly research into communities where these two deserts overlap. This article confronts this gap, offering a qualitative examination of life inside a news and broadband desert. Built on 19 in-depth interviews, we argue that life in a news and broadband desert requires a substantial amount of labor. Our findings demonstrate three areas of increased labor for residents: (1) informational, (2) infrastructural and (3) emotional.

## Literature review

The rural population in the US has declined dramatically in the last century, from 54.4% in 1910 to 19.3% in 2010 (Ratcliffe et al., 2016). This 19% accounts for 60 million Americans who live in rural areas. In addition to population, the rural landscape in the US has changed considerably, highlighted by a migration termed the “brain drain” (Carr & Kefalas, 2009). This is the out-migration of younger and more educated residents, creating a rural America that is older and less educated. In 1980, the median age of people in rural and urban areas almost matched; today, the median age in rural areas is 41 years, 5 years higher than cities (Adamy & Overberg, 2017). A *Wall Street Journal* analysis found that rural areas have worse outcomes in several key measures of life. Compared with people in cities, people in rural areas die younger, are poorer (with a widening wage gap), have less formal education, have higher rates of teenage births and divorces and have less social mobility (Adamy & Overberg, 2017).

There is a rich line of research on the disadvantages faced by those in rural areas, identified by rural sociology and rural economics scholars as the “rural penalty.” The rural penalty describes the literal and figurative cost that rural communities assume for existing at a distance from the centers of culture, commerce, technology, education and healthcare (Hite, 1997; Malecki, 2003). It is a measure of time, of money, and indeed, of labor. As Malecki (2003) explains:

Although there are several dimensions of the rural penalty, principal among them are a low density of population and therefore a low density of most

markets, and greater distance to those markets as well as to information, labor, and most other resources. (p. 201)

Said differently, the rural penalty means that those in rural communities need to work harder to achieve par with their urban counterparts (Townsend et al., 2015).

Scholarship on the rural penalty has focused primarily on its impact on rural economic development (Grubestic & Mack, 2017; Malecki, 2003; Malecki & Moriset, 2008). Indeed, it is expensive and time consuming to live and work in rural areas. As Malecki and Moriset (2008) explain:

Producers in rural regions face two intertwined drawbacks: remoteness and low density. Remoteness means difficult access to markets, to exogenous inputs and production factors, and costly, time-consuming business trips. Low density means scarce local resources—above all human resources, and narrow local markets. This is an actual drawback for the provision of transportation and telecommunication services by private profit-oriented firms. (p. 201)

The rural penalty produces a perception among rural residents that they do not get a fair share economically, politically or socially and that they are ignored by powerful institutions of society (Cramer, 2016; Hochschild, 2018). Cramer identified this belief as “rural consciousness,” an identification that “denotes a multifaceted resentment against cities” (p. 6). This place-based identity is not politically motivated, but steeped in cultural and lifestyle differences with metropolitan areas. Rural consciousness is “infused with a sense of distributive injustice—a sense that rural folks don’t get their fair share” (p. 12).

## **News**

A limited news environment must be considered as part of the “rural penalty.” Rural newspaper closures are part of a larger, dramatic downturn in the industry, which has resulted in a growing number of “news deserts” (Abernathy, 2020) (see, “media deserts,” Ferrier et al., 2016; “black holes,” Harte et al., 2018). News deserts are communities where “residents have very limited access to the sort of credible and comprehensive news and information that feed democracy at a grassroots level” (Abernathy, 2020, p. 18). Of the 3,143 counties in the US, more than 2,000 have no daily newspaper and 225 have no newspaper at all (daily or weekly; Abernathy, 2020). Without a daily newspaper, residents rely on news outlets from surrounding counties or far away metropolitan cities (Abernathy, 2018). Those metro news outlets “provide only sporadic coverage of these counties without a daily paper” (Abernathy, 2018, p. 16).

The deteriorating newspaper environment has prompted scholars to believe that “local journalism is essentially collapsing” (Napoli et al., 2017,

p. 373). This concerns scholars as research has found that local journalism offers “critical information needs” (Waldman, 2011) and an understanding of their community (Kaniss, 1991). Local newspapers have been found to generate and maintain a sense of community Mathews, 2022). In short, researchers find that newspapers are “essential to community” (Stamm et al., 1997, p. 97). While only 17% of Americans rely on a printed newspaper for their local news, 89% get at least some local news digitally (through news websites, apps or social media; Pew, 2019). This suggests the importance of internet connectivity for the modern news consumer.

Access to online news, and the internet more broadly, however, is not universal in the United States, an issue explored below. If citizens have online access, nonprofit news providers might be an option. For the last two decades, these nonprofit newsrooms have sprouted at a high rate, mainly in areas where entrepreneurial journalists believe citizens are not obtaining the local news and information they need (Ferrucci, 2015a). However, these nonprofit news organizations struggle to expand their reach (Weber et al., 2019) and the social media platforms they rely on for distribution have been found to de-incentivize the publication of local news (Toff & Mathews, 2021). An FCC report referred to these nonprofit organizations as “pip-squeaks,” compared with the “giants” of public broadcasters and other commercial media outlets (Waldman, 2011, p. 198).

It has been found that newspapers are the most significant source for local stories in a given market, despite their economic struggles (Mahone et al., 2019). One study analyzed 100 randomly selected communities, with more than 16,000 stories from 663 local media outlets (newspapers, television stations, radio stations and online-only publications). Local newspapers accounted for a quarter of the outlets, but nearly 60% of the local news stories in the sample (Mahone et al., 2019).

## **Broadband**

We define *broadband deserts* as areas that lack readily available and affordable access to *high-performance* broadband (Sallet, 2017), with residents unable to experience *digital inclusion* (National Digital Inclusion Alliance [NDIA], 2017), *digital equity* (NDIA, 2017) and, ultimately, *digital dignity* (Strover et al., 2020). This fresh concept, *broadband desert*, marries the practical limitations of broadband access and, using a critical lens, deeply considers the individual and societal ramifications of those limitations of broadband access.

The definition of broadband is a “moving target” (Grubestic & Mack, 2017). *Broadband* is defined by the Federal Communication Commission (FCC) as an “always on” internet connection of at least 25 megabits per second (mbps) download and 3 mbps upload (Federal Communications Commission, 2020).

Broadband infrastructure is fairly ubiquitous in urban areas, although adoption remains a significant issue (Chao & Park, 2020). In contrast, studies have shown that broadband deployment is unequal in the rural US with broadband deserts throughout the country owing to a lack of infrastructure or affordability (Grubestic & Mack, 2017; Perrin, 2019). The term *digital divide* (Van Dijk, 2020) has been utilized to capture the difference between the haves and have nots of digital technology and internet access. Van Dijk (2020) notes three stages of the digital divide: (1) access to the internet, (2) skill development and digital literacy (often called *digital inclusion*) and (3) positive externalities.

According to the FCC, 22.3% of rural Americans lack access to broadband infrastructure. This amounts to roughly 16 million people. Other studies suggest that this percentage could be off by 50%, with BroadbandNow suggesting that at least 42 million Americans lack access to broadband (Busby & Tanberk, 2020). When it is available, only 63% of rural residents actually subscribe to home broadband (Perrin, 2019). Cost and lack of competition have much to do with this subscription gap. Even when it is available, broadband in rural America often exists as a monopoly, or at best a duopoly. For instance, 36% of rural households do not have a choice in broadband provider (Sallet, 2017). What is more, when broadband is available, rural residents pay upwards of 37% more for a monthly subscription than their urban counterparts (BroadbandNow, 2019).

The discussion of broadband deserts must extend beyond the technical, practical aspects of broadband connection and integrate the concept and practice of *digital inclusion* and the goal of *digital equity*. They connect broadband access, availability and training (the three levels of the digital divide, according to Van Dijk (2020) with larger, normative, social equity and justice goals. Inspired by early research on the digital divide:

[Digital inclusion] refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs). This includes 5 elements: 1) affordable, robust broadband internet service; 2) internet-enabled devices that meet the needs of the user; 3) access to digital literacy training; 4) quality technical support; and 5) applications and online content designed to enable and encourage self-sufficiency, participation and collaboration. (NDIA, 2017)

Paralleling digital inclusion, which offers an activities-based approach, *digital equity* is a normative social justice goal, describing a “condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy and economy” (NDIA, 2017).

Together, digital inclusion and digital equity remind practitioners and researchers that connectivity is but one aspect of the digital divide, and that broadband networks are functionally useless without the other components

noted by the NDIA above (Katz et al., 2018). Taking hold of this idea, communities across the country have begun to develop digital equity plans to complement their broadband deployment plans (Sallet, 2017). Research has demonstrated how, like connectivity, larger issues of digital inclusion and equity parallel the dichotomy between rural and urban areas and between low-income and high-income households (Katz et al., 2018; Strover et al., 2020).

Strover's research on libraries and digital equity is crucial here. In a study of the digital programs of public libraries, notably the loaning out of hotspots, Strover found the digital equity commitments of libraries provide a sense of *digital dignity* to previously unconnected individuals and communities (Strover, 2019). As she notes, "the programme participants were very grateful for having these devices, for the time savings they brought and especially for the opportunity to 'feel like everyone else' a feeling that we labeled digital dignity" (Strover, 2019, p. 200).

Digital inclusion and equity parallel the conversations on the rural penalty and highlight the material disadvantage faced by rural communities simply by living outside the conventional centers of power. They also bring with them strong normative implications for policymakers at both the local and federal levels (Wagg & Simeonova, 2021). Indeed, it is not for naught that the 2021 Infrastructure Bill promised \$2.75 billion for digital equity.

## **Labor**

What we may surmise from the extant (albeit limited) scholarship on the rural penalty is that life in rural communities requires work: Work to connect, work to maintain and work to thrive. Since the early 2000s, critical scholarship on *digital labor*—that is, the exploited work of audiences, users, low-level tech workers, and the cyber-proletariat—has been greatly explored (e.g., Dyer-Witheyford, 2015; Fuchs, 2014; Terranova, 2000). Less understood is the work communities perform to get connected in the first place. Dunbar-Hester (2014), for instance, describes communities building and raising radio towers. Powell (2012) describes the work of connecting to the internet in her studies of Iles-Sans-Fils in Montreal, while others discuss similar strategies for Indigenous connectivity (e.g., McMahan et al., 2011).

As journalism coverage in areas is limited, if not non-existent in news deserts, residents must rely on timeworn tactics, including word of mouth, to obtain local news and information. Residents rely on interpersonal networks, such as church groups, "as a way to stay connected and informed," with "friends and the grapevine" serving as sources of local news (McCullough et al., 2017, p. 111). In many communities, Facebook groups of neighbors have been established as a space for exchange of news and information, similar to the "integrative role of local weekly newspapers

throughout the twentieth century” (Swart et al., 2019, p. 198). Noteworthy, however, research has found community residents trust the content of such Facebook groups less than a community newspaper (Mathews, 2022).

This article builds on these important bodies of work—the challenging rural environment, news deserts, broadband deserts and labor—bridging them together to provide a fuller understanding of a challenging and troubling landscape. To do so, we ask the following research questions:

RQ1: How do residents experience life in a news and broadband desert?

RQ2: What strategies do residents use to combat the obstacles of living in a news and broadband desert?

## **Methods**

To answer these questions, we interviewed 19 residents of Surry County, VA., during August-September 2020. Surry County was selected purposefully for its rural status, its demographics and its lack of a newspaper and widespread internet access. Surry County is in the southeast portion of Virginia. In the 2010 census, Surry County had 7,058 people. Notably, the 2019 estimate was 6,422, a 9.4% decline. In Virginia, there are 95 counties and 38 independent cities, which are not part of a county. Based on the 2010 census, of the 133 counties or independent cities, Surry County had the seventh lowest population per square mile (25.3). That was dramatically less than Virginia overall (202.6) and the US overall (87.4). Also, according to the 2010 census, Surry County was more diverse, older, poorer, and less educated than Virginia and the country.

Surry County is a *news desert*, (Abernathy, 2018), meaning no newspaper (weekly or daily) has a mailing address in Surry County. Two daily newspapers in the region service Surry County. Those newspapers, the *Daily Press* in Newport News and the *Virginian-Pilot* in Norfolk, are Tribune Company partners and share a newsroom. The bi-weekly *Virginia Gazette*, based in nearby Williamsburg, covers Surry County. It is also part of the Tribune Company, meaning much of the *Virginia Gazette* content is shared with the two daily publications. The weekly *Sussex-Surry Dispatch* covers Surry County. However, it is in the independent city of Emporia, 64 miles from Surry.

According to the FCC (n. d.), Surry County has some of the worst internet access of any county in Virginia. As of June 2019, only 3.65% of Surry County had the ability to access fixed terrestrial broadband at the FCC defined speed of 25/3. It is important to note that does not mean all of

those people actually utilize that access at home. Four of our 19 participants had fixed-broadband access. At the time of interviews, Surry County was working on an initiative to improve the fixed-broadband access for residents. This process, as interviewees noted, has been ongoing for years. Without fixed broadband, residents rely on cell phones or separate devices called hotspots to gain internet access. Verizon is the only mobile provider available for Surry County. Mobile broadband and fixed broadband are not interchangeable, especially since mobile broadband often comes with data caps and expensive charges for exceeding those caps (Ali, 2021; Grubestic & Mack, 2017). Hotspots are small devices that use mobile data to connect digital devices in a home or business. Verizon's hotspot product is called Jetpack, to which most of our respondents either presently or previously subscribed.

We identified participants using a Qualtrics screening process, verifying participants were at least 18 years old and residents of Surry County. A link to the initial Qualtrics survey was posted in the Facebook page "It's Happening in Surry County Virginia." That resulted in four interviews, starting a snowball method in which, upon interview completion, participants were asked to recommend other potential interviewees. Snowballing is an acknowledged tool for qualitative interview recruit, and "has the advantage of deploying an already established relationship to make new contacts" (Sender, 2004, p. 245).

At the time, IRB coronavirus protocols did not allow face-to-face interviews or site visits. Given the unreliable internet connections in Surry County, video interviews would have been challenging. Thus, all interviews took place on the phone. The advantage of in-depth interviews is that they provide more detailed information than other types of data collection, like surveys (Boyce & Neale, 2006). Interviews can discover dimensions of social experience, as well as emotional states of participants (Lamont & Swidler, 2014). The goal of the interviews was to have a conversational tone, weaving naturally between points of interest and thus having participants "tell stories rather than just answer questions" (Tracy, 2019, p. 140).

To start the conversations, participants were asked to detail a typical day's news consumption habits, including what devices they use to access news, what news sources they access and how news fits into their daily routines. These discussions include international, national and local news. Later, participants were asked about how they obtain news about Surry County that is relevant to them. They specifically were asked about how they obtained coronavirus-related news about Surry County (number of cases, closures, etc.). Participants were asked to describe their broadband situation at home, detailing how broadband access impacted their news consumption and their everyday lives in general.

The 19 participants included 12 females and seven males. Five of the participants were 55 years or older, with 10 35–54 years old and four 18–34 years old. Fifteen participants were White, and four were nonwhite. Eleven had at least a bachelor's degree. The respondents were compensated for their time, via Amazon gift cards. Interviews lasted between 26 and 72 minutes, averaging 43 minutes. In total, there were 356 pages and 122,000 words of interview transcripts.

We each read the interview transcripts individually, identifying initial themes. We then met, comparing, collapsing, and abstracting the themes to more parsimonious levels of meaning through open coding (Strauss & Corbin, 1990). Key phrases and concepts from interviews generated additional open codes. We clustered codes into categories and compared them across interview transcripts, noting similarities, differences, and general patterns. This process of collecting, coding and analyzing the data resulted in the three themes outlined below: informational labor, infrastructural labor and emotional labor.

## Findings

### *Informational labor*

We define *informational labor* as the work one must do to obtain local information pertinent to one's life, a task residents described as challenging given limited access to fixed broadband services and no news product dedicated to the county. Participants rely on word-of-mouth strategies to obtain and distribute local information and news, with one participant acknowledging the "old-school" nature of this environment and that Surry County was "behind 50 years" (P5). Residents work as reporters and publishers, seeking sources and distributing their own content. If those tactics fail, there is a randomness to information exchange, depending on who you come across at the limited number of businesses, restaurants and gathering places in the county. For instance, without an established news source in the county, one participant called the Dollar General the area's "information hub" (P33).

Just as reporters rely on experts to discuss specific subjects, Surry County residents count on targeted sources for information. "I like having a Rolodex of information," P17 said. "I know that I can't just call Joe Blow and ask him for a resource. I know exactly who I need to call." Without internet access and without a newspaper, "the only thing you can do is call someone" (P5). Participants say the situation sounds like a "Lifetime movie network or Hallmark channel" movie, "where they are making fun of these small towns. But that's genuinely how it is" (P17).

Participants worry about the elder residents who do not have access to the internet or never developed the necessary digital skills. “You’re in areas by yourself, and you don’t know who to reach out to for whatever resource it is. You’re going to continue to struggle,” P5 said.

When news breaks in Surry County—either a new restaurant opens or bad weather approaches—residents drive through the area and work as journalists, interviewing stakeholders or turning to Facebook. Information on a restaurant sounds like easy news to uncover; after all, “there’s only a few spots in Surry that it could open” (P19). But a resident still must have a reporter’s inquisitive instincts. “You’re going to stop, and you’re going, ‘OK, what y’all got going on?’ It’s country nosey,” P19 said. He added, “it’s bad that our news reporters are people around the street.” Residents distribute the news to friends and family via traditional word-of-mouth and more modern word-of-mouth, Facebook. Specifically, residents rely on a private Facebook group, “What’s Happening in Surry County,” for news. “I would get updates about, if a storm washed out a road or something,” P34 said. P34 recently deleted the Facebook app but still gets information secondhand from that private group. “If it was a major event in Surry that was going to affect me, I would hear it through one of my friends or family that is tapped into one of those networks,” P34 said.

Just like reporters, Surry County residents turn to official sources for news and information. Residents can visit “the Surry County government websites” for general information (P19), or the Surry County sheriff’s department’s Facebook page for if the “water’s really high” from storms (P22). During the pandemic, this informational labor became more noticeable as the absence of media reports specifically about Surry County was evident.

If I want to find out the number of COVID cases in Surry County, I go to the Virginia Department of Health website and look at it. Anybody else in this (regional) area, they can look at the paper this morning and see the number of cases. Not me. (P22)

Participants said that Surry County is not identified in reports in regional newspapers and regional television stations. Instead, the county is generically lumped in a regional report. “You’ll hear ‘Hampton Roads,’ but you won’t hear a breakdown (with Surry County). I don’t think I’ve ever heard a breakdown on the news, ever,” P22 said. The dearth of county-specific coronavirus-related news was maddening. “I can’t recall any stories specifically about COVID and Surry County. I would have to kind of gather information on my own,” P37 said. P17 drew the parallel to journalists: “I guess I feel like a reporter. I feel like I’m investigating everything.”

Participants acknowledge uneasiness of relying on the state health department, for instance. “I’m trusting the government? Bleh! Making me throw up!” (P27). This participant was being flippant, but the humor demonstrates discomfort. In Surry County, residents must depend on official sources or on their neighbors, instead of vetted information from an independent news organization. Specific to the private county Facebook group, P3 said: “People just get on (Facebook), and put what’s going on, but you never know what you’re missing.” Residents said the situation could lead to overly counting on your friends. “Why would they lie to me? So I don’t think about it like, ‘Oh, they’re probably not telling the truth.’ I take it for what it is . . . That’s scary sometimes,” P17 said. Participants likened the situation to an age-old kids game. “It filters down,” P13 said of news. “The kids would tell the parents who would tell the grandparents. So, it’s like playing telephone.” The danger of the telephone game is obvious. “You run the risk of information not being 100% accurate by the time it reaches you,” P19 said. P34 said the information you receive also depends on who is delivering the information, citing an area cycling path project of interest.

Depending on who I talk to, I’m probably missing out on a bunch of information. I’m going to get the biases of the people that are providing that information. If a person that I talked to in reference to the bike path hated the bike path, then I’m sure they only told me about all the negative aspects that I had with it. (P34)

Without putting forth additional informational labor, residents obtain news and information by happenstance. It depends on which neighbor they bump into around town. For instance, P13 said she couldn’t find the winner on the night of an election, “but you’ll find out the next day who won when you go to the post office.” Other participants mentioned a NAPA auto parts store—“that’s where you pick up news” (P29)—and the 7-Eleven—“that’s where you found out what was going on in town” (P37)—as locations of information.

The Dollar General was the most frequently cited place to gather and distribute local news. “It’s going to sound crazy, but our local Dollar General, everybody talks,” P33 said. “It’s our information hub about anything going on in Surry County. Anything.” P34 said he avoids the Dollar General because of this. “The clerks talk with too many people for too long, and it slows up the process of checking out,” he said. The convenience store clerks are some of the county’s busiest reporters, gathering and delivering information via word-of-mouth. P19 would rather have professional reporters in the county. He wants to tell them, “I literally want you to be the main word of mouth.”

### **Infrastructure labor**

We define *infrastructure labor* as the work one must do to get digital in the absence of a traditional fixed broadband-to-the-home subscription. Many

participants had tried to use satellite but grew disheartened by its slow speeds, and inconsistent connection. As a result, the only trusted available internet connections to many respondents were either mobile phones (if they could receive service) or hotspots. In Surry County, access requires two types of digital labor: (1) securing a connection through a phone or hotspot and (2) managing one's consumption of data use.

Overwhelmingly, the cell phone emerged as a lifeline in the quest for connectivity. "If it wasn't for Verizon and my cellphone, I would be out of luck, I would have to move," P29 said. Echoing academic concerns for the cost of mobile broadband and the small data caps limiting usage, one respondent described how lucky she felt because she had an unlimited data plan with Verizon, and, as such, did not have to worry about the caps or overage charges. Others were not as fortunate and in order to mitigate the data caps on their phones had to subscribe to a separate device, a hotspot. Like mobile phones, hotspots are expensive and come with restrictive data caps. Nonetheless, multiple respondents commented on having a subscription. As P5 noted: "For years we've had the hotspot wifi . . . which was \$60 a month, just for internet service, but it's slow."

This respondent addresses two issues: cost and speed. Cost and speed (or time and money) define how infrastructure labor in Surry County is measured—the cost of connectivity and the time to wait through delayed connections. Despite the work involved, many must combine hotspots and mobile phones to achieve a semblance of "always on" connectivity, with one respondent noting that she had two jetpacks, a phone, and a satellite internet subscription. Even then, reliable access was not guaranteed:

I'm probably in at least two Zoom meetings a day, or I can attempt, because most of the time it doesn't (work). . . . It's very frustrating, especially when it's a meeting that is pretty important. I have to run around my house with the Jetpack in my hand trying to find at least one bar, so it sucks a lot. (P7)

This respondent said she was paying between \$300 and \$350 a month for internet access—subpar internet access at that. The average monthly broadband subscription in the US is \$68.38 (Chao & Park, 2020). P29 noted that he spent \$400 a month for various broadband plans and still, "I can't stream anything."

A second issue is data caps, which prevent respondents from having an equivalent digital experience with their fixed broadband peers. P29 said he let his grandchild play an online game using his Jetpack "and it took him about five hours, and he blew my whole cap for the month." Another expressed a similar sentiment, describing how hotspot data can add up quickly if one tries to enjoy the trappings of digital life that so many take for granted:

We pretty much use a personal hotspot if we want to use other devices, such as if we want to use a laptop or if we want to use the smart TV, then we'll have to use our hotspots for our phones to make it happen. It kind of runs

the bill up, but there's not many options because Verizon is pretty much the only thing that you can really use constantly out here. (P19)

The digital infrastructure work described here is the work of getting connected, seeking out a hotspot subscription and paying for the service. Once one has performed the labor of connectivity through a phone or hotspot and agreed to spend the astronomical amounts, another type of labor must be performed, that of data management.

Data management was a major cause of infrastructure labor for respondents. This became particularly acute during the pandemic, when respondents were forced to work from home but could not upgrade their internet plans (because there were no plans to be had). Respondents noted that because of the slow speeds available to them via their phone, hotspot, or satellite subscription, they had to strategize when to download large files or perform data intensive work. P35 recalled having to work around the restrictions placed on data by her satellite provider:

We still had a data cap, but we also had a free period. They don't offer it now, but back when we were on metered internet through them, the hours of . . . I think it was midnight to 5 a.m. . . ., you could do whatever you want. The speeds were fast. They claimed it was when bandwidth was not as in demand. If we were going to download something, we tried to set it to download between those hours.

Running applications at night was a common theme among respondents. In addition to having to manage download schedules, there was also the need to monitor and even harvest available data. P17 noted how she had to schedule meetings in advance in order to ration her data availability: "I try to schedule at least a week ahead so if I need to add another gig or whatever I need to do to my data plan, I can." Lastly, P17 lamented that her plan's data caps meant that she was forced to prioritize her work over the leisure activities of her children:

I have to save the data, because it's metered. You don't have unlimited. Especially if I know, 'Hey look, guys, I have like six more meetings before the data starts back up again, you can't have the WiFi password right now,' that's hard for them. . . . It's very frustrating, it's very difficult. (P17)

### ***Emotional labor***

We define *emotional labor* as the work one must do to manage their feelings (Hochschild, 1983). In the news and broadband desert of Surry County, residents felt ignored and expressed feelings of fear and frustration. Not only are there no news workers stationed in Surry County, but residents perceive that Surry County rarely is mentioned in regional newspaper, television and radio reports. "If I've watched the news 100 times,

Surry may have made the news once or twice,” P17 said. For Surry County to make headlines, participants said news needs to be “something tremendous and something terrible” (P22). This absence was noteworthy especially during the pandemic, where county-by-county data was readily available for media outlets to report. “Even COVID data, we’re not in it,” P22 said. “We’re not listed as part of their reading.” In general, participants said “nobody is paying attention” to Surry County (P36). Overall, participants said they feel ignored by news organizations. “No one knows we’re there,” P36 said. “Like nobody cares about our little town,” P5 said. “We don’t get covered, and we’re left out,” P26 said. “Left out, very much so,” P22 said. “Like we don’t matter.”

Without reliable broadband internet service and without news organizations available to promote business endeavors, residents fear for Surry County’s economic future and a resulting decline in population. “I don’t think there’s enough word-of-mouth for businesses to flourish in Surry,” P17 said. P5 works in marketing and said it was “so much easier,” before moving to Surry County. “It’s so hard to get the information out to people. . . . There’s no outlet to publicly publicize whatever business you’re trying to create.” If residents want to work remotely for out-of-county employers, that is obviously difficult without reliable broadband service. “Even if you go to college and stuff, you can’t really do anything from home,” P28 said. P29 makes his at-home business work with high Verizon costs, acknowledging the good fortune he has while showing concern for younger people without the same resources: “These kids down here, I feel so sorry for them. You talk about being behind the eight ball, they’ve got no chance, none.”

The broadband situation forces young residents to leave Surry County for job opportunities. This out-migration was the greatest source of emotional labor for participants. “You have your kids nowadays, once they get 18 or they finish high school, they’re ready to move. It affects the desire to stay here,” P19 said of the lack of broadband. This hit home with P19, whose daughter moved to Florida following graduation from Surry County. “It’s personal to me. . . . I miss my daughter. I don’t think that I can pay her to come back, not to live. She’ll come by and visit for a couple of days, but soon as she gets to missing her WiFi signal, she’s gone.”

P29 believes the number of students who graduate from Surry County’s high school and remain in Surry County is “maybe in the single digit percentages. Now, what does that tell you? There’s no opportunity here, and the Internet is a piece of it. . . . I don’t think I’m over-emphasizing the point or increasing the importance of it.” The out-migration is not limited to recent graduates. “If I left, the internet access, the limited resources, they’re going to be the top reasons, not anything else,” P17 said. P17 worried that if Surry County cannot offer comparable broadband service

as other neighboring communities, “We’re not going to flourish. The numbers in our census are not going to grow, go up.” Participants expressed concern not only about people leaving the community, but about fewer people choosing to move to Surry County. Pointing to limited broadband service, P26 said, “unfortunately, as not as many people moving here because of that issue.” P17 said it took tremendous patience following the family’s move to Surry County from an area with high-speed broadband. “Even though the job opportunity for my husband was (in Surry County), I was just thinking like, ‘Hey, bro, you’re going to have to suck it up and take the drive. We’re going to move back.’”

Without internet access, or with unreliable internet and mobile phone access, participants are forced to manage feelings of frustration. The greatest frustration has been the seemingly endless wait for broadband connection, with residents pointing to both county governmental leaders and broadband companies. “It just seems as if the county just is taking their time progressing, or catching up to the times, nowadays,” P19 said. “We had been promised broadband for at least 12 years,” P31 said. P35 described watching the broadband connection slowly progress in his neighborhood.

Those without broadband connection share frustrations of slow internet service, a result of poor cell phone, hotspot, or satellite signal. “It’s both slow and spotty,” P19 said of satellite service. “It’s pretty much based on the weather, so you can even get satellite internet, and it rains, well, you have no satellite internet.” With unreliable cell signal, “you can’t stream video,” P29 said. “You have to download it and watch it later. . . . That sounds like such a minuscule issue, but it’s a frustration.” P37 described the ordeal to watch a Netflix show.

I turn on the television. I turn on my mobile hotspot. It usually connects pretty quickly to the TV, but then I have to click the Netflix icon, and then my TV just says, ‘Netflix.’ For usually about 10 minutes. Sometimes it says, ‘Netflix is unavailable.’ And sometimes it’ll load. Then I have to wait for Netflix to populate the list of shows. Then I go in and click the show and then that usually takes a couple minutes to load, and then I pick the episode that I want to watch and I start that, and then immediately pause it. It’s going to be at least 10 minutes that I have to wait after pausing it, and then I’ll hit play. Sometimes it just plays, but usually it will end up playing for about 15 minutes and then it’ll start buffering again. At which point I have to pause it for another 10, 15 minutes before I can hit play again.

P37 called the ordeal a “frustration.” “It takes, basically, probably three to five times longer to do any basic task involving the internet than it would with (broadband) connection,” P37 said. This is annoying while seeking entertainment on Netflix. However, it can be detrimental to his income when it impacts his ability to file freelance assignments. The frustrations led

him to “have some words with my computer, which is misdirected because it’s not my computer.”

## Conclusion

This research is among the first to qualitatively explore the lived experiences of those in a news and broadband desert. While this study focuses on 19 in-depth interviews with residents of a rural East Coast county in the United States, it addresses global problems. News and broadband deserts are separate functionally, yet are overlapping, interlinked and, in ways, inseparable critically. As this research demonstrates, news and broadband deserts coalesce on concerns of inequalities faced by those in these difficult, demanding and, often, disheartening environments. To overcome the challenges within a news and broadband desert, this research found residents must put forth more work than others. Ultimately, we illuminate how three aspects of increased labor (informational, infrastructural and emotional) and two deserts (news and broadband) overlay on one location, one set of beleaguered residents.

Power inequality is at the heart of these issues and their intersection: news deserts, broadband deserts and labor. Moreover, the lack of news, broadband and increased labor is a direct result of the failure of the market to provide for necessary social and public goods (Pickard, 2014). Our findings, therefore, open avenues of contemplation around power and market inequality within both local news provision and broadband provision. Freedman (2010), for instance, speaks of media (policy) silences, wherein the absence of discussion is as important as its presence. Applying such ideas of presence and absence, what should rural residents make of it when the market fails to provide such basic services as information and connectivity? As one participant said poignantly, it is “like we don’t matter.”

Where markets do not exist people must work harder to get connected, maintain that connection and get informed. This may lead to a rejection of news products all together or contribute to the ongoing lack of trust in professional journalism (Hanitzsch et al., 2018). On the other hand, the absence of local news may encourage community resiliency, as noted in our research as well. Informal networks of information sharing emerge such as on Facebook or at the Dollar General, as do more formal attempts at hyperlocal news. In the broadband space, the lack of incumbent broadband provider in other areas of the country has encouraged residents to create their own municipal networks (Teters, 2015). Future studies may enquire further into the community response to desert life especially within a dismissal-resiliency scale.

We can also investigate issues of power and markets structurally. Pickard (2014) has written about the market failures endemic within local news provision, while Schradie (2020) writes about how the digital divide is fundamentally about power inequality. As she argues, “Overcoming inequality is not

simply a matter of technical fixes; it requires transforming the structural power imbalances that exist in society. Otherwise, digital technology not only fails to fix class inequalities, it can exacerbate them.” Echoing our tripartite approach to desert work, she also notes how “control, fear and risk are power mechanisms of digital inequality not captured” within extant literature. With such inequality in mind, future research may want to investigate policy solutions to news and broadband deserts, asking whose responsibility is it to connect the unconnected and provide critical information needs of communities.

To be sure, our findings are distinct to this present study of an east coast county in the United States, thus not necessarily generalizable to other areas, even rural areas, in the U.S. and around the world. That said, this environment, as noted throughout, is not distinct. As encouraged throughout this concluding section, we hope this study serves as a catalyst for future research in news and broadband deserts. Ultimately, the labor issues underscored in this study shine a light on the inequalities encountered by those who live in a news and broadband desert. This research paints a clear picture of hardships, headaches, and heartaches. It is also just the beginning—a first volley in to a much larger and impactful failure of public and social goods. Governmental leaders are slow in providing fixed broadband access, and news leaders are fast to overlook residents. None of this is lost on our respondents whose feelings of resentment echo other studies (Cramer, 2016), and who labor daily to connect themselves and their families, manage these connections and worry about the future in their news and broadband deserts.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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