Measuring Metropolitan Newspaper Pullback and its Effects on Political Participation

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Brendan R. Watson, Seth C. Lewis

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This work is dedicated to:

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Abstract

For nearly half a century, mass media research has understood that news content that is conflict-oriented is more likely to appear in news outlets produced in structurally heterogeneous communities than in structurally homogeneous communities. For individuals living in homogeneous communities, their ability to find news about their own communities in regional-level media — especially metropolitan-based newspapers — has meant that they had access to conflict-oriented news. However, decades of financial pressures have weakened regional metros' ability to continue to distribute to and cover non-metropolitan communities, especially the structurally homogeneous communities most reliant on a regional source for conflict-oriented news. When metro newspapers pull back distribution and coverage of non-metro communities, residents are expected to display lower levels of political knowledge, and preliminary studies have suggested lower political participation as well. This dissertation uses computer-assisted content analysis and multilevel statistical modeling to add nuance to the understanding of structural pluralism and metropolitan coverage, as well as specifically support the assumption that news content about specific communities contributes to voter turnout in those communities.

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Chapter 1

Introduction

Over the course of more than 40 years, structural pluralism research has shown how community structure can affect news and information content in a community. While the research line has evolved and grown over that time to address questions such as how community structure affects science coverage (Griffin & Dunwoody, 1997), treatment of social movement groups (McCluskey et al., 2009), and newsroom technology adoption (Hindman et al., 2001), among dozens of other research questions, the theory has its start with the differences between metropolitan and non-metropolitan communities and their news (i.e., Tichenor, Donohue, & Olien, 1980). Boiled down to its consistent finding: Communities with little social complexity, where people are similar and power is concentrated (homogeneous communities), have less conflict in their news than more socially complex cities (heterogeneous communities). Over this time, scholarship has come to understand the mechanisms behind this difference, including what is needed from news in order to maintain social control in a community (Olien, Donohue, & Tichenor, 1995), how heterogeneous communities not only have a need for this type of news, but also how conflict-oriented news needs heterogeneous communities to develop (Demers, 1994). We have also learned that regional metropolitan newspapers, produced in heterogeneous communities, can come to provide conflict-oriented news to homogeneous, non-metropolitan communities (Tichenor, Donohue, & Olien, 1987).

Conflict is believed to be at the core of the types of news needed for social functioning in many different perspectives, including those more focused on normative

theories (e.g., Kovach & Rosenstiel, 2007), systems approaches (e.g., Habermas, 1985), and empirical testing (e.g., Prior, 2007). Conflict is inherent in the investigative "watch dog" journalist who exposes political corruption, or in the in-depth coverage of the factors behind racial tensions in a neighborhood. In the political realm, conflict-oriented news allows informed voters to understand different sides of an issue and form an opinion before casting a vote (Blanchard, 1977). Beyond theoretical concerns, empirical testing has shown that non-metropolitan access to metropolitan-produced news has been instrumental in lowering the knowledge gap between rural and metro populations (Tichenor, et al., 1987), and with advances in technology and methods, has shown in at least one case that a change in access to a metropolitan newspaper has had detrimental effects on political engagement in outlying communities (Schulhofer-Whol & Garrido, 2013).

The "metro pullback" from non-metro communities has been documented for some time (Tichenor et al., 1987), but has accelerated recently with the dramatic changes in the operations of metropolitan newspapers stemming from the advent of digital technologies and their impact on financial resources available (Pew, 2015). Faced with producing a newspaper with an average of half the staff as in 1990 (Edmonds, 2015) and the revenue from advertising at just over 40 percent of 2003 levels (Pew, 2015), many metropolitan newspapers have chosen to cut back on distribution to, and coverage of, distant regions as a cost-saving measure (Downie & Schudson, 2009).

Distant, structurally homogeneous communities will likely be the biggest losers when it comes to reduced resources for coverage. Their distance from a metropolitan

newsroom makes them more expensive to surveil and produce original reporting on. These communities also don't tend to work out their conflicts through shared spaces like news media as in structurally heterogeneous communities (Tichenor, et al., 1980). Newspapers produced in homogeneous communities also can face the significant loss of readers and advertisers when they attempt to emulate a metropolitan newspaper approach to conflict coverage (Lauterer, 2006). In homogenous communities, conflict is dealt with more interpersonally between the few elites, making it harder for metropolitan journalists to find and report. This does not mean that conflict does not exist or that these communities do not need this type of coverage. It is essential both for individual-level political learning and engagement (Tichenor, et al., 1987; Moy et al., 2004; McLeod et al., 1996) and in integrating a region into a functioning system. In a healthy region, communication must be functioning on all levels (Kim & Ball-Rokeach, 2006). Regional elites can put pressure on a homogeneous community threatening the balance of power overall, but only if they have been alerted to the problem, typically through news reports (Donohue, Tichenor, & Olien, 1995).

This dissertation seeks to further test the relationships between structural complexity and news coverage, and the expectation that distant, structurally homogeneous communities are experiencing a greater pullback from their main source of conflict-oriented news, the closest regional metropolitan newspaper. It then seeks to test the relationship between decreasing metropolitan news coverage and political participation in communities, specifically in voter turnout in state and local elections. This dissertation adds the field of societal impacts of media by being the first to directly

measure levels of coverage over time from a metropolitan newspaper and matching specific coverage levels of non-metropolitan communities by a regional source to political participation.

The dissertation proceeds with the following sections: First, a review of the theoretical literature and empirical findings on how structural pluralism predicts conflict levels in news content, and how this variation plays out on the regional level. This will be followed by an exploration of past issues in measuring metro coverage of non-metro communities, and why the pullback has dramatically increased in the last years and how previous changes in metropolitan news distribution have affected non-metropolitan communities. This review will be continued into the proposed effects of news consumption and access on civic engagement in general and political participation in particular, which will lead to the development of six hypotheses and a research question. An explanation of the data analysis follows, including the selection of two studies for analysis. Results are then presented, followed by discussion of the findings, and theoretical and methodological implications for further research.

Chapter 2

Literature Review

Structural Pluralism and Conflict-Oriented News

The research team of George Donohue, Clarice Olien, and Phil Tichenor spent several years developing the idea of knowledge gap, or the demonstrated ability of some social groups to acquire and use news and information more effectively than others (Donohue, Tichenor, & Olien, 1975). They then extended that work into exploring how different social environments may affect the kind of news available in that environment. Based on their previous work, the research group already suspected that news in rural communities was qualitatively different than news in metropolitan communities (Tichenor et al., 1980), and that this difference was involved in differential rates of acquisition of knowledge and education between rural and urban areas (Olien, Tichenor, & Donohue, 1973). They concluded that there was more at play than just a rural/urban divide. To capture the complexity of community types, they borrowed the concept of *structural pluralism* from sociologist Herbert Spencer's *structural differentiation* (Demers, 1994b), defining it as "the degree of differentiation in the social system along institutional and specialized interest group lines, in a way that determines the potential sources of organized social power" (Tichenor et al., 1980, p. 16). More structural differentiation results in a pluralistic community, which "contains a number of interest groups, has increased interdependencies with other communities and external power centers, and requires increased amounts of formalized communication for exchange of information among groups" (Olien, Tichenor, & Donohue, 1988, p. 262).

Communities in which the population shares many characteristics in common are considered less structurally complex. The similarities among people would naturally create fewer groups associated with occupation, religion, ethnicity, class, and other common markers of difference. Fewer groups would also theoretically mean fewer elites to lead those groups, and the lack of division would mean a higher chance of interpersonal connections between those elites. These types of communities are referred to as *homogeneous.* The other type of community, *heterogeneous,* or "pluralistic," is marked by greater amounts of variation in the population, leading to more social groups, more elites, and less of a chance of interpersonal connection between them, and therefore a higher need for another site for the working out of issues (Tichenor et al., 1980).

As originally conceived, news media in a community can play a role in the regulating functions of social control, which is more about balancing power than creating and enforcing a type of hierarchy (Olien, et al., 1995). In general, the more heterogeneous a community is, the more groups are expected to vie for limited resources, or more often power. Unregulated conflict between these groups would lead to chaos and the inability of the community to hold together. This type of social control that is desired is *moderated change:* a relative balance of social control and social change that maintains order but allows for enough change to keep the system from becoming stagnant (Viswanath & Demers, 1999).

The structural pluralism model assumes that journalistic media are actually "guard dogs" for elites rather than "watchdogs" for the public (Donohue, et al., 1995). In a watchdog view, media are conceptualized as a system outside of the rest of democratic

society, an independent source of information and a check on governmental powers. The guard dog view places media as part of the system, dependent on the system for its information, power, and influence, and therefore having an interest in the maintenance of that system (Donohue et al., 1985). In heterogeneous communities, journalism will at times produce content that signals to all when the community is threatened by one power structure attempting to disrupt the overall balance. This type of news is much the same in definition as "watchdog" or "surveillance" journalism (Lasswell, 1948), in that the news either provides a check on the rogue power structure or presents the story of two power structures within the community in conflict. When media help facilitate different parts of the system in regulating each other, it is considered as participating in *feedback control* (Tichenor et al, 1980; Olien et al., 1995).

In homogeneous communities, the elites who make up power structures are in much closer contact with each other and conflict is worked out interpersonally rather than through the media (Vidich & Bensman, 1968). Journalistic media in these communities typically produce consensus-oriented content, which emphasizes community harmony (Tichenor et al., 1980). This kind of behavior is part of *distribution control*, which is the selective dissemination or withholding of information, and occurs in both heterogeneous and homogeneous communities (Olien et al., 1995). Conflict occurs in homogeneous communities, but the assumption is that elites maintain control over decision-making in homogenous communities because these communities lack mechanisms for the challenging of authority (Tichenor et al., 1980; Olien et al., 1995). When the media call attention to conflict in homogenous communities, that conflict is almost always portrayed

as the community pitted against something from outside its boundaries (Tichenor et al., 1980; Donohue et al., 1995), thus alerting readers to a conflict that can't be worked out interpersonally by the community elites. Social control is maintained, which allows these media to continue to benefit from their existing relationships: They maintain elites as sources of information, they maintain the prestige of being a source of the news in the community, and together these allow the media to remain profitable. Therefore, media in homogeneous communities produce less conflict-oriented news; media in heterogeneous communities produce a mix of conflict-oriented and consensus-oriented news; and publications that are produced in heterogeneous communities, but also cover a wide region, become the source for conflict-oriented news about homogeneous communities in the region. This overlapping system of regional tiers is similar to that of the umbrella system of newspaper competition (Rosse, 1975; Lacy & Davenport, 1994), which will be discussed below.

A typical example of this relationship can be seen in the coverage of Steve Cass, an athletic director at the high school in the small town of Wayland, Massachusetts, a community of 13,444 located 30 miles outside of Boston. Wayland's local paper, *The Wayland Town Crier,* initially covered a school committee meeting in which Cass's contract was not renewed for the next school year (Haddadin, 2015, May 29). The coverage included Cass's contention that this firing was due to his speaking up about ethics violations in the department, including foregoing background checks on coaches, under-the-table payments to coaches by player parents, and unfair steering of money away from girls sports to boys sports, which Cass said he believed was a violation of

Title IX. While this is a clear example of a conflict-oriented news story — two parties in opposition to each other over the same goal — and even is an example of coverage of two parties within the same community being in conflict with each other, it was also the only coverage given to the Cass's allegations and firing, which according to metropolitan coverage in the *Boston Globe* (Cullen, 2016, 21 March), was an ongoing issue almost a year later. As the *Globe's* columnist put it, Cass's comments at the school committee meeting were tantamount to "set(ting) off a stink bomb in the middle of town." Following the meeting, Wayland High School reported to police that Cass had stolen computers from the school. This prompted town police to search Cass's home, arrest him, and place his mug shot on the department's Facebook page, a practice that had appeared to be discontinued months before. Cass's lawyer argued that the humiliation continued for more than half a year, until the hearing, at which Cass's lawyer made a case that several institutions in Wayland were seeking to punish Cass for speaking up. The judge agreed, dismissing the case before a jury was seated. None of the events around the arrest, police action afterward, or the trial — or the discussion around the original allegations of impropriety in the school's athletic department — appeared in Wayland's own paper, even after coverage started to appear in the *Boston Globe.*

The relationships between communities and their news goes beyond just avoiding confrontation in a public space. Demers (1994b, 1999), adds to structural pluralism's theory about conflict-oriented news by positing that it is not just that there is a difference in the types of news produced in structurally different communities, but heterogeneity may drive both the need for conflict-oriented news and the raw material to make it. In an

analysis of national advertising expenditures during the 19th and 20th centuries, Demers (1994a) found that increasing pluralism was a better fit than just the advance of time, increasing population, or economic factors for explaining the growth in advertising expenditures, supporting the hypothesis that the need for information and advertising grows with increasing pluralism. Urbanized, industrialized, pluralistic communities not only lack the ability to pass news and information through interpersonal means as in small, homogeneous communities, they also require a place to work out the increasing number of problems and issues that arise with increased complexity. This is more than just a change from interpersonal to mediated communication. Pluralism creates relationships so elaborate they require a systematized, norm-based presentation of information that is regular and dependable. This need has fueled the development of the metropolitan newspaper and the style of journalism associated with it. Concepts like objective reporting ideals and the inclusion of conflict-oriented news are argued to be a direct result of the creation of corporately-organized newspapers as a necessary method for maintaining pluralistic communities.

> Urbanization and industrialization also mean that large numbers of people must cooperate to achieve common goals. Urbanization, for example, requires collective cooperation to deal with a broad number of social problems, including crime, poverty, waste disposal, public health, pollution, and land control. Political elites… depend upon news reports to help generate support from other elites and the public for the decisions they make. Media coverage helps to legitimize such

> actions, while at the same time conveying the notion that the citizenry in general plays a major role in the decision-making process (Demers, 1994b, pp. 18–19).

The need for this type of news shaped how journalism came to see what was "newsworthy" — i.e., public-affairs, conflict-oriented content — and its development coincided with the expansive growth of the metropolitan newspaper, both in terms of increased readership within the city and beyond it. The wider region became part of the coverage area during this time of growth, providing the benefits of news to non-metropolitan communities as a way of cementing their power, legitimacy, and credibility as ultimate arbiters of the news (Schudson, 1981). In the regional system, homogeneous communities are each their own groups vying for resources and control within the larger regional community. Their own news is likely consensus-oriented, but metropolitan newspaper coverage of the region would be conflict-oriented.

News sub-systems, particularly in the United States, have co-evolved with culture, the political subsystem, and the economic sub-system to become the assumed source of information about a region, its events, and its potential needs (Demers, 1994b; Schudson, 1981; Schudson, 2008). The mechanics of how this system functions have been less explored, but work in media economics provides valuable insights. Specifically, intercommunity and intermedia relationships were conceptualized in the umbrella model (Rosse, 1975; Lacy & Davenport, 1994), in which newspaper competition is explained by classifying newspapers into different groups depending on the geographic areas they provided "shade" to through distribution, especially attempts to acquire subscribers or reliable circulation in that area. A weekly rural newspaper would be at the lowest level,

casting the smallest shade, most likely reaching just beyond the geographic confines of its home community. The same community would also exist under newspapers with progressively larger umbrellas, from a regional small city publication on to a metropolitan newspaper at the upper level. Virtually all communities would fall into the shade area of at least one metropolitan newspaper, at least theoretically. Newspapers are expected to only compete on their own level. Low-level county newspapers do not compete with high-level metropolitan newspapers, but instead exist in the same space (Bridges, Litman, & Bridges, 2002), with higher penetration rates likely for the low-level county paper and the members of the community with the highest socioeconomic status also consuming the metropolitan newspaper (Donohue, Tichenor, & Olien, 1986). The ideal balance is access to locally produced consensus-oriented news about the community, as well as conflict-oriented coverage when needed from a metropolitan regional source. From the readership side, relationships may be more dependent: Readership of the metropolitan paper is higher in bedroom communities where the population commutes into the metro for work (Olien et al., 1986), and readers in communities where the metropolitan paper has chosen to limit circulation as a business strategy may substitute a regional daily, going for a source with a better chance of containing conflict-oriented news (Donohue et al., 1986).

While not included in the umbrella theory, this lack of competition between levels mirrors the different types of news expected at different levels: the lowest level of county papers, located in homogeneous communities, being more likely to produce consensus-oriented news, and the metropolitan daily, located in a heterogeneous community and

covering a region, being more likely to produce conflict-oriented news. In a sense, the different levels are not producing the same types of news, and therefore would be less likely to compete. Consider this hypothetical: A chemical spill occurs at a factory in a small, homogeneous, non-metropolitan community. Structural pluralism would predict that coverage of the spill would likely not appear in the local paper, or would be covered in a way that would minimize any conflict between the factory and the general populace. From the vantage point of the elites in the small community, likely all connected in some way to the factory, it might be best to ignore the spill or deal with it at a minimal level that preserves the status quo. From the standpoint of the geographic region — essentially the coverage area of a metropolitan news outlet — the community would be one of many power structures that require occasional "checking" to stay in line. It may be best for the elites in the community if the spill is not thoroughly investigated, but if the laws and regulations of the region are flouted in this respect, they may be flouted in other communities in the region, opening the door to social instability. Calling attention to the spill through conflict coverage, including where blame may be placed or which organizations are not following norms of responsibility, would be possible through the metropolitan media and allow for the system to stay in balance. In the event that the metropolitan media no longer maintain "shade" (i.e., coverage) of certain non-metropolitan communities, these communities would likely lose access to conflict-oriented journalism, and the positive effects it has on lowering the knowledge gap (Tichenor, et al., 1987) and contributing to political engagement (Schulhofer-Wohl &

Garrido, 2013), further discussed below. The entire region would lose a method of maintaining social control over the region.

This regional news integration is very similar to that explained in media systems dependency theory (Chen et al., 2015) and communication infrastructure theory (CIT) (Kim & Ball-Rokeach, 2006). In these related theories, local media rely on local officials as routine news sources, and the government uses the local media to forward common symbolic identities and politics to facilitate order. A multilevel community storytelling network is created by the interplay of individuals, organizations, media, and the overall social system, combining to create a rich narrative of life in the community. This theory forwards the idea that it is communication structures and processes that allow for the healthy community functioning that drives political engagement and other markers of democratic health. The relative strength of this communication infrastructure, determined by the ease of access to available information about the community, is dependent upon integration of the system at the micro- (individual), meso- (organizational) and macro- (system-wide) levels. A missing level or a break in the infrastructure affects the creation of a sense of community, an important factor for individuals to be willing to fully participate. Research in this line typically conceptualizes the community as a single group unified by a common geographic location, often a city or a neighborhood within a city. However, the cohesive qualities theorized by individual and organizational interaction with the communication system is also possible for larger geographic regions. CIT's emphasis on integration of communication levels works well for describing the units that make up the regional level composed of a variety of types of communities and

served by a metropolitan newspaper. By creating this larger symbolic or imagined community, and by setting the symbolic boundaries on that community (Yamamoto & Ran, 2013), the government can create the motivation to undertake large-scale development projects with a wide scope, both in goals and in area affected (Demers, 1994b). All levels must be integrated and functioning together to create the communication infrastructure.

Metro "Pullback" and the Effects on Non-Metro Communities

Of course, nothing guarantees that the system will stay stable forever. The idea that metropolitan newspapers were "pulling back" from distributing and covering non-metropolitan communities was first suggested in the 1980s (Donohue et al., 1986). The likely culprit behind why metro newspapers would reduce their coverage in all areas, not just to more distant communities, is not hard to find: the dramatic contraction of the industry through the 21st century. In 2015, newspaper ad sales fell to an estimated $19.9 billion, less than half the total from just a year ago (Pew, 2015). Advertising money has moved to a variety of media sources, but has yet to follow directly to new avenues of news distribution, with digital methods only accounting for a portion of the revenue newspapers expected in previous decades. Online content may be able to replace print content, but as of yet online advertising has not replaced the lost print advertising as a source of revenue to pay for the production of this content (Pew, 2015). This has resulted in a massive change in the makeup and composition of the bodies of journalists who constitute the core producers of news products. The American Society of Newspaper

Editors estimates there are now nearly half the number of active news professionals as there were in 1990 (Edmonds, 2015).

In many cases, metropolitan newspapers have reacted to cuts in resources and staff by reducing distribution areas, such as when the *Atlanta Journal-Constitution* cut distribution from 74 to 49 counties in Georgia (Associated Press, 2008). In other cases, publishers have publically committed to a plan of producing the same coverage for the same coverage area, but on a lower scale, as when the *New Orleans Times-Picayune* announced a 21 percent news staff reduction meant to "reinforce its core journalistic mission" (NOLA.com, 2015), or through alternative methods, as when the *Chicago Sun-Times* let go of its photojournalism staff with the intent to replace their work by training reporters to take photos on smartphones and increase the use of free, voluntarily submitted images (Beaujon, May 31, 2013).

Demers's (1994a, 1994b) rationale for how pluralism drives news production and news availability was made before the current contraction and is explicitly based on increased access to resources in large corporate newspapers: more specialized personnel, shared costs on research services and human resource management, and other cost-saving aspects of corporatization that free up resources for the production of quality journalism. Others (e.g., Ryfe, 2006) see the contraction of resources as an explanation for a perhaps uneven decline in journalistic coverage. Journalistic organizations, aware of both their traditional social missions as well as their changing economic and professional foundations, modify routine operations to maximize their effectiveness. For instance, knowing that they have fewer resources for travel and fewer journalists to cover stories,

news organizations may choose to focus on issues of concern in the nearby urban environment — therefore potentially helping a larger number of people directly — and supplement their non-metropolitan coverage by relying more on information subsidies like press releases and reports generated by non-profit organizations, or by ceding distant territory and its associated journalistic responsibilities. This is not an ideal solution for non-metropolitan communities, however. As explained in the umbrella model, newspapers at different levels do not compete. Non-metro readers of the metropolitan paper likely also read their hometown paper, as they each provided different types of news. A reliance on news producers in those communities to alert the metropolitan paper to news in the community is also problematic, because structural pluralism predicts journalists in homogeneous communities normally will not produce conflict-oriented news. Lack of surveillance by metropolitan newspapers means that conflict-oriented stories in homogeneous communities will likely go uncovered, and the regional system will not be able to provide feedback to the community to keep it in check.

The clearest picture of the levels of metropolitan newspaper coverage of outlying communities comes from an analysis of the years just prior to the closure of Cincinnati, Ohio's "second" paper, the *Cincinnati Post* (Schulhofer-Whol & Garrido, 2013). By using an computer search string to search digital archives of five years worth of content, the researchers measured changes in the levels of coverage in both the *Post* and the "first" paper, the *Cincinnati Enquirer*, on the farthest Kentucky suburbs of Cincinnati. Average mentions in the newspapers of the 48 communities in the study generally declined from 2003 to 2007, dropping from an average of 37.1 mentions per year to 19.2

in the *Enquirer*, and from 173.3 to 151.9 in the *Post*, which focused on these communities more heavily.

Prior to the availability of computer-assisted methods as used in the Schulhofer-Wohl and Garrido (2013) study, researchers largely relied on using circulation in a community as a proxy for coverage, based on the assumption that if a newspaper were trying to be competitive enough in a community to market itself there, it would also provide content about that community within its pages (e.g., Donohue et al., 1986). Much of the information about metropolitan circulation in these studies was gathered as part of exploring newspaper competition in geographic areas, but two general trends were seen: (a) there appeared to be a general "pullback" from small communities over time in some situations (Donohue et al., 1986) but not in others (Lacy & Dalmia, 1992); and (b) distance from the metropolitan center seemed to be the largest factor in a metropolitan paper's commitment to competing in a community (Lacy, 1985). However, the inconsistent results lead to a possible conclusion that more than population and distance are involved in metro pullbacks, essentially that the umbrella does not contract in a linear fashion.

Who is actually *reading* metropolitan news content in non-metropolitan communities is similarly murky. All readership numbers have declined over time for newspapers (Pew, 2015), but holding that constant, there is no indication that non-metropolitan readers are explicitly rejecting metropolitan news when it is offered. Johnson et al. (2014) found that just prior to the print-schedule reduction at the *New*

Orleans Times-Picayune, there was no relationship between distance from New Orleans and subscribing to the paper when other demographic variables were controlled.

Effects of Loss of Access to Metropolitan News

Structural pluralism research is often focused on content as a dependent variable, something predicted based on community factors. Other areas of research, many following the original knowledge gap work, have sought to explain the effects of access to content, particularly on the levels of political knowledge, which then is connected to political engagement. One traditional area of scholarly exploration centers on the assumption in normative theories that access and consumption of news is essential in democracies because of the need for informed voters. While often measured at the national level, news consumption has been shown to lead to higher levels of political knowledge (Moy et al., 2004; Druckman, 2005), including understanding differences between candidates and where they stand on issues (Chaffee et al., 1994), but also to building individuals' beliefs in their own knowledge (Moy et al., 2004) and political self-efficacy (Scheufele & Nisbet, 2002). News consumption also builds a sense of community integration, which leads to higher levels of political interest, knowledge, and participation (McLeod et al., 1996; Kwak et al., 2005).

When measured at the community level, news consumption has similar effects (Moy et al., 2004). Hayes & Lawless (2015) found that political knowledge was directly related to the amount of news coverage available about local issues and races. Unlike at the national level — where those interested in politics have a variety of choices that have been expanding with time — the origination of local news about politics is often confined

to local newspapers. As discussed in previous sections, only those located in heterogeneous communities are likely to produce conflict-oriented political news, and those newspapers have increasingly been under financial threat. Where metropolitan media provide little coverage for politics-related issues, all readers of the newspaper display lower levels of political knowledge and political participation (Hayes & Lawless, 2015).

This issue is compounded by the well-established phenomenon of the knowledge gap, the original starting point for structural pluralism research (Tichenor et al., 1980). Normative democratic ideals may rely on information being accessible to all citizens, but research has revealed that information tends to be acquired in much the same way as resources. Those already "rich" in knowledge are more likely to acquire more of it than those already "poor," even with all other factors held constant, from all types of mass information, including news content (Prior, 2007; Eveland & Scheufele, 2000; Grabe, Kamhawi, & Yegiyan, 2009; etc.). Because the information poor tend to be those who also lack in other socio-economic categories, any additional barriers to access will compound the issue. Specifically because metropolitan newspapers contained different types of content more useful in developing political knowledge, one study found that they were essential in overcoming knowledge gap between rural and urban residents in a region (Tichenor et al., 1987).

Political knowledge and a sense of a larger community are key precursors to the broad category of civic engagement assumed to be essential in democratic functioning (Kwak et al., 2005). Research has indicated that political knowledge leads to political

participation, particularly voting, through a variety of mechanisms (Galston, 2001). Delli Carpini and Keeter (1996), building on knowledge gap research, described the concept of *enlightened self-interest*, in which individuals with sufficient political knowledge are able to connect their personal interests, and the interests of the groups they belong to, to specific public issues. These individuals then are able to connect those public issues to candidates more likely to advocate for similar positions and actions that would benefit the individuals' interests. Political knowledge also leads to individuals holding consistent beliefs over time (Delli Carpini & Keeter, 1996), and understanding and incorporating new political events and figures into their understanding, which lowers levels of mistrust in government and the system (Popkin & Dimock, 1999), thus supporting the commitment to participating through voting (Delli Carpini & Keeter, 1996). Individuals can only vote effectively on issues they are aware of and understand, and other forms of engagement, such as volunteering for political or advocacy organizations, or organizing to change an outstanding situation, are more likely to occur if individuals believe they can be effective, understand the issues, and perceive the problem situations as taking part in their larger community (Ikeda, Kobayashi, & Hoshimoto, 2008). Consumption of community-level local news builds beliefs in the utility of democracy and the individual's own efficacy in the process, political engagement in the form of voting and volunteering, and even a positive view of the role and importance of news media in democracy (Moy et al., 2004; McLeod et al., 1996; Kwak et al., 2005; Scheufele & Nisbet, 2002; Schmitt-Beck & Mackenrodt, 2010). Galston (2001) summarizes work on the mechanism between political knowledge and political participation by remarking that "political knowledge

makes it more likely that citizens will ask not only 'How am I doing?' but also 'How are we doing?'" (p. 225).

Within the broader category of civic engagement, political engagement is an activity of keen interest to researchers studying the effects of news and information consumption on society (Dahlgren, 2009). While civic engagement includes activities related to behavioral measures of participating in society, such as volunteering, attending religious services, or engaging in public advocacy on issues, political engagement may be more clearly defined as activities directly related to the electoral process, such as voting, attending political rallies, and advocating for candidates, although the terms are often used interchangeably in the literature, often correlate strongly, and have the same sets of predictors (Xenos & Moy, 2007; Campbell & Kwak, 2010).

The dramatic changes in the news industry in recent years have troubled many onlookers and scholars primarily because of the long-standing beliefs about the role of journalism in U.S. society. Shaker (2014) used the closure of "second" papers in Denver and Seattle to study the issue, and found that engagement fell more in the year after those closures than in other cities, and the proportion of the effect was lower in Seattle, where the news content continued to be produced at lower levels online. Denver experienced significant declines in citizens contacting public officials, boycotting products or services, civic group membership, and acting as a group officer. Seattle experienced significant declines in boycotting products and services and acting as a group officer. The results of his study led Shaker to argue that while newspapers may not be important as a

physical product, news content about communities is vital for communities and larger regions.

Shaker (2014), using the framework of the communicative integrated community perspective (Friedland, 2001), presents his evidence from the paper closures as further support for theoretical arguments that local news, and local newspapers in particular, serve as a bridge between increasingly loosely connected societies, and become a leading basis for the formation of public action. Strong local media would theoretically lead to the binding of individuals and groups. This sense then leads them to participate more in their communities and government, extending beyond the immediate confines of the metropolitan area. "Readership of the same metropolitan newspaper — or other interaction with it — may spur many forms of engagement across districts and boundaries as groups of citizens respond to the same local (or regional) news in different manners" (pp. 133–4). Yamamoto and Ran (2013) theorized that the combination of community building and a fostering of civic engagement led communities with more access to community news to be able to achieve large social goals, such as lowering drug abuse violations in an entire region. This argument is a natural extension of the integrated communicative community and communication infrastructure theory, extrapolated out to the regional level.

In the case study around the closure of the *Cincinnati Post*, similar declines occurred in engagement, both from the standpoint of voting rates, but also in the number of candidates running for seats and the amount of money spent on campaigns. The effects were most acute in the more rural southern suburbs of the circulation region (Schulhofer-

Wohl & Garrido, 2013). The results troubled the researchers, working for the Federal Reserve on the issue of the impact of journalism on society, as they appeared to point toward suspicions that newspaper closures could have effects on a variety of aspects of civic life, stretching into the future.

When the community identity building capacity and social control explained in these theories starts to degrade from lack of a unifying force, it can affect other relationships between the public and their democratic structures. Armingeon and Schädel (2015) found that the effects of the decline in social integration in Western European countries could explain the paradox of rising average educational levels and lower voter turnout. The effect was particularly apparent for those with lower socioeconomic status.

Issues Surrounding Types of News Content and Effects

Scholarship on the societal effects of news content, especially effects on political participation, has mainly been concerned with specific types of content. This type is referred to by many terms, including *hard news, public affairs content, serious journalism, civic reporting,* and in this paper, *conflict-oriented news*. Definitions of what constitutes this type of news content vary, as well. For Bell (1991), hard news is defined by brevity and objectivity, including reports of accidents, crimes, announcements, and other events written in a "news style" that have occurred since the last report or publication. This was in comparison to features, which are longer pieces covering events, that sometimes veer off strict objectivity and carry the personality of the writer. This approach is similar to Van Dijk's (1988) definitions for *informative* and *evaluative* news

discourse, with informative being mostly objective and fact-based, while evaluative is subjective and argument-based.

Other definitions, especially those preferred by societal effects scholars, focus more on the content contained within the article, either in conjunction with its writing style or independent of it. Schudson (2008) emphasizes journalism as a practice that incorporates many areas, but also argues that it is the content specifically about politics and political processes that is what is important in ideas about the relationship between news and democratic functioning. This concept developed as journalism professionalized as a group and came to be known as the norm of objective journalism. Zaller (2003) describes what he calls the *full news standard,* which was a normative definition developed during the Progressive period and a guiding force behind 20th century ideals for how journalism and democracy interacted. In this standard, news was called on to "provide citizens with the basic information necessary to form and update opinions on all the major issues of the day, including the performance of top public officials" (p. 110). Zaller suggested that this should be updated to a *burglar alarm news standard*, which would use dramatic and entertaining news to focus the population on acute problems, rather than provide routine coverage of areas with no immediate problems. His suggested types of content that would be important under this standard include stories about close elections, coverage of Congressional ethics investigations, and coverage of key elements of the U.S. President's program. The tone of the coverage is not considered important, but the topic is still firmly focused on political events and happenings.

This definition fits well with the content described as important in early structural pluralism and knowledge gap work: In order to foster political knowledge, news that reports different sides of issues, usually from viewpoints in conflict, and that has the potential of becoming political issues, is important. Individuals use the political knowledge gained from the content to choose how to act and whom to support in elections. Therefore, these researchers have been less concerned with other types of content found in newspapers and other news sources, including sports, lifestyle content about products and services, arts and events coverage, celebrity news, and notices about milestones in ordinary readers' lives, such as engagement notices and obituaries. For most metropolitan newspapers, this content makes up the bulk of the publication, with the more conflict-oriented, public affairs reporting usually appearing in the front section and the other types of content constituting the sections that follow.

There is a clear theoretical justification for focusing on the conflict-oriented news content from the structural pluralism and knowledge gap perspective. However, it is less clear what type of content is important from the community integration perspective. If part of the news media's function is to create a sense of a regional community in which residents understand they are related to one another and events and issues impact them as a region, some of the "other" types of coverage may indeed be important. In particular, sports coverage and coverage of more routine life events are areas where non-metropolitan communities are likely to appear in metropolitan news content. High school and college athletics provide a routine, dramatic, and community-identifiable series of events that often involve various areas of a region in competition. Including familial

connections to people and places is customary in "life event" notices, particularly obituaries, which often recap places the deceased has lived and community organizations he or she has been involved with. In research focusing on integration, there is much less emphasis on politics or political issues as important topic areas, and more attention to the ability of neighborhoods to tell stories about themselves (Ball-Rokeach, Kim, & Matei, 2001), as well as on how media structures existing at multiple levels facilitate the flow of information and ideas through all levels of society (Chen et al., 2012).

A growing body of scholars contend that the importance of "other" types of content may have been underestimated. Carey (1989), in forwarding the ritual view of communication, argued that news content maintains society's sense of itself in time. Repetition of forms and ideas reinforces community norms, rather than transmitting information from one area of the community to another. Hess (2015) follows this idea in contending that notices of life events — births, deaths, and marriages — are part of the ritual creation of communities, especially in non-metropolitan communities. In interviews with small-town community journalists this research revealed that although the journalists found the life event coverage uninteresting and unimportant to the role of journalism in society, they reported that they believed readers consumed this content more than other type. This may be because the connections listed between people in this type of content, combined with their common connections to a physical location, reinforces the network of relationships and ties Hess and Waller (2013) describe as the foundation of *geo-social news.* This reformulation of community, or "small town"

journalism, stresses the importance of news content to create a connection between individuals, a physical space, and the news media that serve it.

Similar arguments have been made for the effects of sports journalism. Rural sociologists have long understood that the school system serves as a focal point of interaction, identification, and interest in rural communities (Hanifan, 1916). Early research and development programs specifically targeted the building of schools and sports programs for students in order to build identification among residents in and around non-metropolitan communities. Later researchers theorized that involvement in school athletics by parents of children formed weak ties among most adults in the community, creating a network in which social capital could be fostered (Beggs, Hurlbert, & Haines, 1996).

As with other types of non-public affairs news content, sports journalism has typically not been seen as one of the important facets of journalism, either by journalists or researchers. However, some have suggested sports coverage may at times serve as a back door to issues concerning the political and social realm. A combination analysis of content analysis and surveys of journalists (Rowe, 2007) found that sports coverage took on a "problem orientation," or covered an issue with a critical journalistic engagement around 30 percent of the time in Australian newspapers. The "problems" addressed could range from player injuries to issues of racism, sexism, or corruption, as in the *Boston Globe* coverage of Steve Cass's allegations of mismanagement of funds at Wayland High School discussed earlier. What's more, editors tended to put problem-oriented sports

stories in more prominent positions in the sports pages, usually a signal of what the editors believe is more important content for the readers.

For the most part, the distinctions between different types of news content and its possible effects on community and political engagement has been held at the level of theory development. Operationally, the different types of content are not usually measured, especially outside experimental settings. Instead, researchers tend to measure consumption of a news product as a whole, which would include all types of content. This is done through self-reporting on surveys (e.g., Moy et al., 2004; McLeod, Scheufele, & Moy 1999; McLeod et al., 1996; Scheufele, Shanahan, & Kim, 2002), measuring overall circulation or production (e.g., Donohue et al., 1986; Shaker, 2014), or assuming certain news products exemplify more public affairs news, while others exemplify softer news (e.g., Prior, 2007). It is understood that readers may read all or only part of the news product, but that any effects seen are attributable to the public affairs content. With advances in computer-assisted content analysis, the chance to more directly measure this relationship becomes increasingly possible.

Chapter 3

Hypotheses

The exploration of the literature thus far has been meant to establish that because of structural reasons, not only are news media in heterogeneous communities more likely to produce conflict-oriented news, but that regional metropolitan newspapers can and have provided this content to homogeneous, non-metropolitan communities. However, the ability of metropolitan newspapers to provide coverage to non-metro communities has been waning over time. Previous research as to the effects of conflict-oriented news on political knowledge and political engagement lead to the general hypothesis that a decline in access to this type of coverage will predict a decline in political engagement.

In his work showing that media grow in relation to plurality, Demers (1994a), was challenging the relative constancy hypothesis (McCombs, 1972), which proposes that the money spent on mass media advertising remains constant over time, because the capacity for consumers' attention stays constant and this attention is what determines the amount of mass media available. Economic recessions and booms have little impact on total advertising, which increases moderately over time and shifts from media waning in popularity to new, more popular options (as when newspaper and radio advertising migrated to television in the 1950s). This emphasis on economic factors is also important in the earliest criticisms of a lack of commitment to non-metropolitan communities in terms of coverage and distribution, which saw the change as centered on maximizing profit by focusing on more affluent audiences (Bagdikian, 2004; McManus, 1994;

McChesney, 1997). The first hypothesis tests the relationship between metro coverage and economic factors.

H1a: Coverage of communities in metropolitan newspapers will increase over time as median household income increases; and H1b: coverage of communities in metropolitan newspapers will decrease over time as the proportion of the population living in poverty increases.

Controlling for these economic factors, we can test whether distance from the newsroom will be an additional factor in predicting news coverage. The relationship between increasing distance and decreasing news coverage is supported in both work that explores how journalists operate in resource-restricted environments (e.g. Ryfe, 2006) and previous analyses of circulation patterns (e.g. Lacy, 1985).

H2: Coverage of communities in metropolitan newspapers will decrease as the distance from the central newsroom increases.

Population has also previously been connected with lower circulation in communities (Blankenburg, 1981). Because community size and social complexity are often correlated, lower levels of social complexity could mean that the conflict usually connected with newsworthiness may be harder to find (Tichenor et al., 1980) and may also lower the need for news created by increased complexity (Demers, 1994b). Being farther from the metro newsroom would conceivably heighten these effects.

H3: Coverage of smaller communities in metropolitan newspapers will decline over time in comparison to other communities.

H4: Coverage of distant, smaller communities will decline more than any other type of community in the region of a metropolitan newspaper over time.

In Demers's (1994b) work on the corporate newspaper, pluralism is the driver of the need for news as a way to work out conflict between groups in a community and the impetus for the creation of newsworthy content. Analyzing coverage trends from the standpoint of structural pluralism also captures the elements of affluence and population forwarded in other perspectives. Distance from a metropolitan center is also somewhat captured, as this is conceived as being correlated to lower levels of pluralism (Nah & Armstrong, 2011).

H5: Metropolitan newspapers' coverage of communities with lower levels of structural pluralism will decline over time in comparison to other communities.

Should any communities see an overall decline in coverage, previous research would indicate that those communities should see a corresponding decline in civic and political engagement. While this can be, and has been, measured in a variety of ways, one fairly clear and theoretically pure method of measurement would be in voter turnout. This fundamental responsibility in a democracy is correlated with other political engagement activities (Moy et al., 2004; McLeod et al., 1996; Kwak et al., 2005; Scheufele & Nisbet, 2002; Schmitt-Beck & Mackenrodt, 2010).

H6: Communities who have a decline of coverage by the regional metropolitan newspaper will experience a corresponding decline in voter turnout.

Most structural pluralism, knowledge gap, and other research into the connection between political knowledge and news consumption has theorized that these relationships

occur through the consumption of public affairs-related content. Some recent critiques have challenged that, especially in terms of building attachment and concern for the community, other types of content may be important.

RQ: Do any of these possible relationships change based on whether "soft" news content is included?

Chapter 4

Method

To test these hypotheses, a longitudinal study of content was employed, using digitally available archives of major metropolitan newspapers, and relying on multilevel modeling for analysis. Only newspapers with full content digital archives stretching back to at least 1990 and those that have had a consistent commitment to cover a region were considered suitable for the hypotheses tests. Further, newspapers that are located in a central metropolitan region that serves a large non-metropolitan area and have little overlap with other competing metropolitan markets would be ideal for controlling the influence on content from competitors. With these criteria in mind, three metropolitan newspapers were chosen: the (Minneapolis) *Star-Tribune*, *Denver Post,* and *The (Portland) Oregonian.*

Study 1 — *Star Tribune*

The *Star Tribune*, with a main newsroom in Minneapolis, Minnesota, is the largest circulation newspaper in the state (*Star Tribune*, 2016). In the early part of the study period, the newspaper was owned by Cowles Media Company, but has gone through several ownership changes since then. It was sold to The McClatchy Company in 1998 (Ellison, 2006). In 2009 the *Star Tribune* filed for Chapter 11 bankruptcy. It was the 15th largest U.S. newspaper at the time (Schmickle, 2009). Wayzata Investment Partners became the majority owners in 2014, and later that year the paper was acquired by local entrepreneur Glen Taylor (Robson, 2014). The *Star Tribune's* rate book (2016), an

advertising sales tool that lists vital facts about market share and distribution, reports that its 2016 circulation is 288,315 daily and 581,063 on Sundays.

The *Star-Tribune's* region would be considered the state of Minnesota. In Minnesota, the state's 5.5 million residents are nearly evenly divided between those who live in the Twin Cities metropolitan area and those who live outside that area (U.S. Census Bureau, 2016). Overall, the state is relatively homogenous in structural variables, including being largely White (86.9%), Christian (81%), educated (91.5% with high school or above), and literate. It also has one of the highest voter turnout rates, with 77% of registered voters casting ballots in the 2012 presidential election (Minnesota Secretary of State Office, 2014).

Study 2 — *Denver Post* and *The Oregonian*

In order to replicate Study 1 and explore the effects of different contexts, two additional newspapers were analyzed, the *Denver Post* and *The Oregonian.* Both publications share similar characteristics in terms of the areas and populations they serve.

The *Denver Post* serves the state of Colorado, and has a main newsroom in Denver. Since 1987, the *Post* has been owned by MediaNews Group Inc. (now called Digital First Media). MediaNews Group is a news conglomerate, owning several daily newspapers, radio stations, and during parts of its history a television station (MediaNews Group, 2016). The *Post* is the flagship publication of the group, which is also headquartered in Denver. For the early part of the study period, the *Post* competed with the E.W. Scripps Company's *Rocky Mountain News,* also based in Denver, which closed in 2009 (DeBruin, 2009).

Similar to the *Star-Tribune*, the *Post* has a regional reach across a state that is mostly dominated by one metropolitan area, centered on Denver. According to the U.S. Census Bureau, the state's population of 5.4 million is nearly evenly split between those who reside in the Denver metro and those who reside in the rest of the state. The population does display slightly more variation than Minnesota, with the dominant group being White (81.3%), followed by Hispanics (20.7%), an ethnic group that can be of any race. Religious affiliation mainly splits between Christians (64%) and the religiously unaffiliated (25%). The population shows more variability in educational markers, as well, with 10% classified as lacking basic literacy skills, although the state has a similar rate for high school graduate status (90.4%). Colorado's voter turnout is generally more variable over time than Minnesota's, but has peaked as high as 54.5% in 2014 (NonProfit Vote, 2014).

The Oregonian, with operations centered on Portland, is the largest newspaper in Oregon (Oregonian Media Group, 2016). Circulation was throughout the state, partially by independent dealers, but was scaled back from far eastern Oregon and the southern Oregon Coast in 2006, and then in 2008 all distribution south of Albany was stopped. Circulation is currently an estimated 320,000 daily and 376,000 for *The Sunday Oregonian.* The paper was owned throughout the study period by Advance Publications, controlled by the descendants of the Newhouse family, which owns a large number of newspapers, magazines, cable television networks, and several associated news web sites (Flamm, 2010).

Oregon is similar in structural characteristics to Minnesota and Colorado. According to the U.S. Census Bureau, the population of 4 million is largely White (83.6%), although that number reflects changing demographics. Similar to Colorado, the two largest religious groups are Christians (69%) and the religiously unaffiliated (24%). Oregon also has a low illiteracy rate (10%) and high high school graduation rate (89.5%).

Sampling

To obtain a sampling frame for any particular publication, every U.S. Census designated place for each of the three states was identified by using the U.S. Census Bureau interface (http://factfinder.census.gov) to download complete lists of "all places" in the state. Then the metropolitan center city and/or the state capital were eliminated (Minneapolis and St. Paul in Minnesota, Denver in Colorado, and Portland in Oregon). The metropolitan center city was eliminated because it is not part of the hypotheses. The state capital was excluded because of the assumption that coverage of that community would be heavily influenced by coverage of the overall state workings in the government, which would be independent of that community's structure.

Having incorporated cities be the sampling unit would be appropriate as journalism research has long held that there is a focus on institutions (Tuchman, 1978), and for communities this often involves city government offices, schools, and other institutions found in incorporated cities rather than townships or unincorporated rural areas. However, the particular contexts of the three study states required further examination of this assumption. In Colorado, unincorporated communities are fairly common, and can be some of the largest communities in the state. In 2010, the

unincorporated Highlands Ranch, population 70,931, was the 13th largest community in the state. An alternative is to use Census designated places rather than a list of incorporated communities. Census designated places are determined by the Census Bureau in consultation with local and tribal officials and are considered "the statistical counterparts of incorporated places, and are delineated to provide data for settled concentration of population that are identifiable by name but are not legally incorporated under the laws of the state in which they are located" (U.S. Census Bureau, 2016). While terminology may vary, these places can function much as incorporated cities with forms of government, services, and the other aspects expected to require an informed citizenry. For instance, Highlands Ranch chooses a seven-member board of directors and a five-member board for one of its districts through a direct election process. This board oversees the construction of major roads and road maintenance, traffic signals, street lights, parks, trails, recreation and sports programs, common land management, water reclamation, community events and festivals, senior outreach, and the operation of a tourist attraction. The board chooses contracts for emergency and fire protection services and water and wastewater services (Highlands Ranch Metro District, 2016). Large, city-like Census designated places are common in Oregon, as well, where, for instance, the unincorporated Aloha, with nearly 50,000 residents in the 2010 survey, was the 12th largest community in the state.

In Minnesota, there are almost no large, unincorporated Census designated places. Instead, the state was originally organized in 1787 into 36-square-mile areas called congressional townships that covered the entire area of the state. With time, the state

moved to the more common U.S. system of city and county governments, but did retain modified townships outside of incorporated city boundaries with very limited governmental powers, mainly the ability to elect a board of supervisors, usually during an annual town hall meeting. That board usually only controls property tax revenue levied by the state and distributed back to townships in order to maintain non-major roads and bridges (Minnesota Association of Townships, 2016). Some townships do support volunteer fire departments and provide maintenance on cemeteries, but this level of rudimentary government is far different than that of the large Census designated places in Colorado and Oregon. More importantly for this study, township residents tend to go to school, work, and vote inside city limits, and rural residents tend to identify with the communities they interact with the most (Vidich & Bensman, 1968). Often, the township even shares the same name as the city it is either adjacent to or surrounds. While news can happen in townships and outside official community limits, it is likely any stories will refer to the associated city as the location (e.g., "In the farm country outside the town of Marksdale"). For this reason, Minnesota townships were eliminated from the study.

From these lists, 60 communities were randomly selected for inclusion in the study by matching pre-assigned identification numbers to a randomly generated list. While stratified sampling might be called for in a study purely focused on population size or distance from the newsroom to ensure representativeness in the naturally skewed distribution of communities on these variables, this study is concerned with a variety of structural variables that are established to test pluralism over time, making it impossible to construct meaningful strata that would not unintentionally over-represent/under-

represent certain characteristics like ethnic pluralism, poverty rates, distance from the newsroom, or community size. For this reason simple random sampling was used to return representative results. Lists of the sampled communities can be found in Appendix A.

Variables

Controls. Frequency of newspaper publication is important both to the umbrella model of newspaper competition (Rosse, 1975; Lacy & Davenport, 1994) and structural pluralism, where it is often used as a proxy for community complexity (Donohue et al., 1986; Tichenor et al., 1980; Tichenor et al., 1987). In the umbrella model, daily newspapers exist at a higher competition level than county weeklies, which means they are not assumed to compete with each other, and, in this paper, are theorized to not provide the same types of content. In structural pluralism work, counties are often assumed to be in structurally homogeneous communities, and therefore tend to be more conflict-news averse. In at least one study (Donohue et al., 1986) non-metropolitan newspaper readers did tend to switch to a more locally based daily when the metro daily made access more difficult. Under both theories, residents in more structurally complex communities with access to a local daily newspaper would receive conflict-oriented news independent of the metropolitan paper, and would also receive any potential positive effects on political knowledge and voting. With this in mind, the presence of a daily newspaper in the sampled communities was recorded and used as a control. Presence of a daily or weekly newspaper in the sampled city was done by consulting newspaper directories (Minnesota Newspapers Directory, 2016: USNPL, 2016; Oregon Newspaper

Publishers Association; 2016). Any newspaper that published two or more times per week was considered daily. The distinction between the "county/country weekly" newspaper and more frequently published types is common in studies of news in non-metropolitan communities (e.g., Donohue et al., 1986; Donohue et al., 1989). In recent years, publication schedules have become less clear, and coding in this way allowed for newspapers that may publish three times a week, or every weekday except Friday, to remain in the category more consistent with the type of news they would be expected to produce with this type of frequency. The variable was coded as dichotomous: 1 for daily present and 0 for non-daily present in the community. Sampled communities with daily newspapers can be found in Table 1.

Table 1
Sampled Communities with Daily Newspapers Located Within the City

Minnesota	Colorado	Oregon
Bemidji	Craig	Brookings
Duluth	Eagle	Medford
Owatonna	Eagle-Vail	Newport
Stillwater	Frisco	Ontario
	Montrose	
	Sterling	

Predictors. Measures for median household income and proportion of the population living in poverty were obtained from the 1990, 2000, and 2010 Decennial Centennial reports and the 2014 American Community Survey (ACS) 5-Year Estimates. Unlike the complete survey of the population for in the decennial Census, the ACS is constructed using questionnaires sent through probability sampling each year. The 1-Year Estimates are also available, but the 5-Year Estimates have several advantages, including

using the most complete data with the largest sample size collected over the previous five years, and being available for communities of all sizes. The Census Bureau recommends this data set when precision is the primary concern (U.S. Census Bureau, 2016). Later Census reports return information on portions of the population living at certain percentages above the officially designated poverty line, but as this information was not available in the 1990 reports, the statistic for those living at or below the official poverty line was used. For communities under 1,000 in population, the statistics for rural portions of the home county were used for 1990. This statistic, found in Table 77, combines all individuals within a county subtracted from those living in places with 1,000 residents or more into an aggregate statistic. The "rural portions" data from Table 77 were used for all variables not reported in the 1990 Census for places with fewer than 1,000 residents. See Table 2 for descriptive statistics.

Community size was measured using U.S. Census decennial figures from each community from the 1990, 1990, and 2000 reports, and 2014 ACS, as well as the more frequent ACS estimates starting after 2000. Because the hypothesis is particularly concerned with coverage of communities based on their population size, and population size varied significantly over the study period for some communities, different measurements of population were taken to best fit the time frame of each model. To improve normality, particularly in terms of variation, all populations were log-transformed for the analysis. See Table 2 for descriptive statistics.

Distance from the newsroom is the fourth predictor of interest. This hypothesis is drawn from the idea that distance becomes important because of the cost of sending

reporters or other staff to distant communities and of delivering print editions (the dominant form of delivery for most of the time period in this study) over the same roads. In light of this, distance was measured by calculating the distance from the newsroom in question to a community by the fastest available route by car. This was determined by entering the newsroom address and the city of interest into Google Maps (http://maps.google.com) and choosing the distance associated with the quickest route offered. Of course, road conditions, automotive technology, and legal limits on speeds varied over the time period, so this measure is not perfect, but a best approximation of the concept. See Table 2 for descriptive statistics.

Pluralism is the key to defining communities in structural pluralism, but recognizing what characteristics mark different groups can be difficult. The arrangement of groups that may contest for resources and power can be determined by any number of different alliances based on different kinds of connections and traits. Researchers therefore turn to group markers that are traditionally perceived as having the potential for conflict, operationalized as different structural elements of the community, leading to the term *structural pluralism* (Tichenor et al., 1980), and often described as an index. Originally, this index included measures such as the share of workers employed outside of agriculture, income, population, distance from a metropolitan area, number of businesses listed in the local phone book, and number of civic groups such as churches and volunteer organizations in a community (Tichenor et al., 1980; Donohue, Olien, & Tichenor, 1989). Measures have largely fallen into twelve categories of community description: workforce, population, income, education, ethnicity, media system, distance

to metropolitan city, poverty, religion, schools, business, and age, but it is largely agreed that these indices have lacked consistency in inclusion and connection to the theoretical concepts they sought to measure (Nah & Armstrong, 2011). Communities that score low on indices are considered homogenous, and high scores reflect the high differentiation expected in heterogeneous communities. The scores reflect an expectation of potential conflict rather than a measure of conflict.

Indices that calculate a measure of social complexity by calculating variance in variables are more reflective of the concept of pluralism than using single measures on their own (e.g., "76% White"), entered separately into models (e.g., a set of variables for employment that include individual variables such as "proportion in agriculture," "proportion in service," etc.) or categorical variables that capture less variation than ideal for complex modeling (e.g., "rural," "urban," "suburban," etc.). Blau's (1975, 1977) index for calculating variance across groups has been employed in a variety of structural pluralism research (e.g., Jeffres et al., 2000; Watson & Riffe, 2011; Watson, 2014a; Watson, 2014b; Watson, 2015). The index is a relatively straightforward calculation of variance, similar to the formula for statistical variance.

$$Diversity = 1 - \left[\frac{category1^2 + category2^2 + category3^2 \ldots}{(category1 + category2 + category3 \ldots)^2}\right]$$

A variety of community measures can be included in the calculation, but following Jeffres et al. (2000), the following data was taken from U.S. Census decennial and ACS data for the four time periods: race/ethnicity, language use, age, household size, education levels, and household income. These variables are relatively consistently defined by the Census Bureau across the time period under study. Statistics were taken

from the U.S. Census report that fell most evenly between the years for any time segment under study. In some of the earlier Census reports, specific measurements of some variables — race/ethnicity, for instance — were not reported directly for some of the smaller places with fewer than 1,000 residents. In that case, the figure reported for the rural residents of the community's home county from Table 77 was used. In a few cases, some Census designated places did not appear in the 1990 Census. In those cases, the averages for the home county were used.

The ethnicity index used the categories consistent across the Census reports: "White," "Black," "American Indian/Native American," "Asian," and "Other," which also included biracial and multiracial numbers in later reports. In addition, the number of residents identifying as "Hispanic," independent of race, was also included. This means that some individuals may have been counted in more than one group for this index, which is not ideal, but also in keeping with the concept of pluralism, which assumes that individuals will align with more than one group in the community. In 1990, for some categories, percentage of the place's population that fell into a certain category was reported. These were converted into raw numbers by multiplying the percentage by the population of the place. The language use variable was constructed using variables from the "language spoken at home" Census statistics from the categories: number of adults 18 and over who speak only English at home, number of adults 18 and over who speak a language other than English at home, and number of adults 18 and over who speak English "less than very well." The education index was constructed through the variables for number of individuals age 25 and over with less than a high school education, those

25 and over with a high school diploma, and those 25 and over with a bachelor's degree or higher. The age index includes the largest number of variables, using the number of individuals who fell into the following divisions: Under 5 years, 5 to 9 years, 10 to 14 years, 15 to 19 years, 20 to 24 years, 25 to 29 years, 30 to 34 years, 35 to 39 years, 40 to 44 years, 45 to 49 years, 50 to 54 years, 55 to 59 years, 60 to 64 years, 65 to 69 years, 70 to 74 years, 75 to 79 years, 80 to 84 years, and 85 years and over. Descriptive statistics for pluralism measures can be found in Table 2.

Table 2

Descriptive Statistics for Communities in Samples (N = 180)

		Minnesota			Colorado			Oregon		
Variable	Time	*M*	*SD*	Range	*M*	*SD*	Range	*M*	*SD*	Range
All Content	92–97	449.82	1078.82	0–6519	223.85	382.33	0–2293	835.22	2492.26	0–16211
	98–03	473.45	1070.45	0–6289	260.92	432.63	0–2398	806.05	2682.02	0–17867
	04–09	546.53	1182.58	1–5484	162.17	274.63	0–1417	516.08	1738.06	0–11520
	10–15	500.53	1131.21	1–5620	127.65	217.12	0–1260	262.02	833.5	0–5403
News Only Content[a]	92–97	198.58	502.7	0–3035	77.37	132.42	0–794	243.98	737.6	0–5479
	98–03	200.80	467.59	0–2969	104.83	169.26	0–865	197.13	626.93	0–4603
	04–09	186.63	439.70	0–2070	55.45	89.98	0–490	108.08	336.18	0–2400
	10–15	200.42	513.24	0–2200	45.03	83.36	0–592	78.97	216.19	0–1453
Median Household Income	92–97	25036.95	10935.11	10208–69541	27385.95	14635.20	10039–81976	25169.13	7096.91	16815–51654
	98–03	37555.62	14475.29	17500–89095	43911.37	21692.01	14213–118196	37481.95	12124.87	15625–93131
	04–09	46532.42	17627.36	23215–99375	56971.07	27364.37	17350–172031	44914.20	17207.40	12256–103633
	10–14	48945.75	18637.98	21250–101607	55766.43	29447.45	21389–171875	46551.30	18365.88	12500–105679
Percent in Poverty[b]	92–97	12.20	8.18	0–40.6	14.97	11.20	0–47.3	14.38	5.78	2.1–29.4
	98–03	10.41	8.39	0.6–58	11.32	7.82	0–34.3	13.27	6.34	1.2–36
	04–09	12.79	9.76	0–52.9	12.57	10.76	0–49.3	14.96	10.62	0–45.9
	10–14	13.09	7.37	2.2–35.5	15.09	10.35	.9–48.7	16.42	10.01	0–45
Distance from Newsroom[c]		129.65	81.95	7–345	138.57	108.19	4.2–382	163.02	118.69	7.5–412

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[a] Content totals from "hard"/A sections of the newspaper [b] Proportion of community living at or below the official poverty line. [c] Determined as "fastest route" between newsroom address and community on Google Maps (maps.google.com)

Table 2 *Continued*

		Minnesota			Colorado			Oregon		
Variable	Time	*M*	*SD*	Range	*M*	*SD*	Range	*M*	*SD*	Range
Population	92–97	4616.78	12357.05	55–85438	2525.40	3688.11	0–16636	3223.02	7474.47	0–46951
	98–03	5267.87	13507.14	65–86918	3358.43	4415.48	42–20905	4357.60	10069.14	0–63154
	04–09	5818.35	14457.72	45–86265	4193.48	5938.91	65–33352	5274.55	11876.52	34–74907
	10–15	5958.55	14674.44	30–86239	4259.33	6121.43	57–35004	5411.40	12202.27	19–76648
Log	92–97	6.78	1.75	4.01–11.36	6.41	2.42	0–9.72	4.78	3.85	0–10.76
Population[d]	98–03	6.87	1.80	4.17–11.37	7.22	1.50	3.74–9.95	5.32	3.78	0–11.05
	04–09	6.91	1.87	3.81–11.37	7.37	1.55	4.17–10.41	7.02	1.89	3.53–11.22
	10–14	6.92	1.90	3.4–11.36	7.37	1.58	4.04–10.46	7.00	1.96	2.94–11.25
Ethnicity	92–97	.05	.05	.01–.21	.26	.17	.07–.64	.15	.11	.05–.5
Index[e]	98–03	.09	.09	0–.32	.30	.20	0–.65	.23	.15	.01–.66
	04–09	.13	.12	0–.45	.34	.18	.06–.64	.30	.16	.05–.67
	10–14	.15	.14	0–.47	.30	.17	0–.61	.22	.16	0–.61
Language	92–97	.17	.13	0–.51	.23	.15	.06–.65	.15	.12	0–.64
Use Index[f]	98–03	.12	.11	0–.38	.28	.18	0–.64	.18	.16	0–.64
	04–09	.13	.12	0–.62	.23	.18	0–.63	.19	.18	0–.6
	10–14	.13	.12	0–.54	.25	.20	0–.63	.17	.18	0–.62
Age Index[g]	92–97	.75	.02	.71–.79	.73	.04	.61–.78	.75	.01	.72–.77
	98–03	.75	.02	.66–.79	.72	.04	.52–.78	.74	.04	.5–.77
	04–09	.76	.02	.71–.79	.73	.03	.61–.77	.74	.03	.55–.78
	10–14	.75	.03	.68–.8	.73	.05	.43–.78	.70	.12	0–.79

continued on next page

[d] Natural log [e] Calculated as Blau's (1975, 1997) Index score using Census data for number of: White, Black, American Indian/Native American, Asian, Other, and Hispanic. [f] Calculated as Blau's (1975, 1997) Index score using Census data for number of adults 18 and over who in their homes: speak only English, speak a language other than English, as well as the number of those who "do not speak English well." [g] Calculated as Blau's (1975, 1977) Index score using Census data for number of adults with ages: under 5, 5 to 9, 10 to 14, 15 to 19, 20 to 24, 25 to 29, 30 to 34, 35 to 39, 40 to 44, 45 to 49, 50 to 54, 55 to 59, 60 to 64, 65 to 69, 70 to 74, 75 to 79, 80 to 84, and 85 and older

Table 2 *Continued*

		Minnesota			Colorado			Oregon		
Variable	Time	*M*	*SD*	Range	*M*	*SD*	Range	*M*	*SD*	Range
Average	92–97	2.68	.20	2.22–3.22	2.64	.30	2.09–3.66	2.66	.23	2.1–3.28
Household	98–03	2.40	.23	2.04–2.98	2.52	.40	1.71–3.6	2.59	.37	1.6–4.39
Size	04–09	2.38	.27	1.74–3.21	2.55	.49	1.87–4.58	2.50	.53	1.51–4.05
	10–14	2.36	.32	1.67–3.23	2.59	.54	1.59–5.02	2.43	.49	1.24–3.99
Education	92–97	.48	.06	.28–.57	.48	.06	.36–.61	.48	.07	0–.55
Index[h]	98–03	.45	.07	.18–.59	.47	.07	.22–.6	.46	.06	.29–.57
	04–10	.40	.09	.08–.55	.47	.06	.3–.6	.40	.11	0–.57
	10–14	.38	.09	0–.52	.45	.06	.24–.59	.41	.09	.12–.64
Average	92–97	2012.32	5219.84	25–34526						
Ballots Cast	98–03	2394.72	6010.22	30.5–36607						
(Off-Cycle	04–09	2568.87	6093.40	24–36246	73.66	6.52	57.75–88.9	71.61	6.53	58.12–82.64
Years)[ij]	10–14	2301.20	5678.65	13.5–32766.5	57.16	6.31	45.14–75.14	71.04	6.21	55.39–81.98
Average	92–97	2521.32	6649.16	30.5–44489.5						
Ballots Cast										
(Presidential	98–03	2724.73	7151.11	30–45234						
Years)[ik]										
	04–09	3232.80	8369.81	31.5–52332.5				84.67	4.61	77.24–100
	10–14	3323.97	8466.79	16–50212	70.28	4.25	59.64–79.32	82.09	5.07	69.74–98.28

[h] Calculated as Blau's (1975, 1977) Index score using Census data for number of: persons with less than high school diploma, persons with high school diploma or more, and persons with bachelor's degree or more. [i] In Minnesota, the total number of ballots cast in all precincts in the community; in Colorado the voter turnout (ballots cast divided by registered voters) in the home county; in Oregon, voter turnout for all precincts covering the community. [j] Off-cycle years in study: 1994, 1998, 2002, 2006, 2010, 2014 [k] Presidential years in study: 1992, 1996, 2000, 2004, 2008, 2012

News Coverage. Hypotheses 1–5 are focused on coverage of a community, which could be measured in a variety of ways. Traditionally, news content coding involves constructing "sample weeks" that include randomly sampled issues from a given year that are then inferred to reflect the entire year's content (Wimmer & Dominick, 2011). In the case of small communities, it is not unusual for communities to get very few mentions per year, so this type of inference would not be likely to produce adequate measures of the phenomenon of interest. However, the increasing trend toward digital archiving of content opens up the possibility for more direct measurement.

For this study, search strings were developed to work within the digital archives of each newspaper located on the ProQuest website (www.proquest.com). ProQuest holds full-text archives of the newspapers under study, including some web-only and blog content for the more recent years. Computer-assisted content analysis is still very much a field in development, with concerns about how replacing human coders with search strings affects the validity of those results (Lacy et al., 2015). Stryker et al. (2006) set up calculation methods for *recall* and *precision* to quantify these issues and give metrics for judging the quality of search string results.

Following Stryker et al.'s (2006) recommendations for computer-assisted content analysis research, extensive protocols were put in place to develop the search strings and test them for validity and reliability. First, random samples of content were pulled using strings that only used the name of the community as a key term. The stories retrieved were analyzed for their relevancy to the community, as well as major trends in content retrieved that was not relevant. From this analysis, a traditional content analysis code

book was constructed with rules for determining whether a mention was relevant to a community. A new random sample was pulled from an "open" string that only limited results to a publication and the name of the community as a key word. Three random results were pulled for each community in the Minnesota and Colorado samples, and one each from the Oregon sample.

The researcher and a graduate student volunteer each coded these mentions for relevancy using the rules outlined in the code book. Following the recommendations in Riffe, Lacy, & Fico (2014), the results were judged successful on the first round of coding, with 94 percent simple agreement and Scott's pi, Cohen's kappa, and Krippendorff's alpha coefficients of .874. With the validity of the coding rules supported, the researcher used this protocol for recall and precision testing on the search strings during development and final testing. The code book can be found in Appendix B.

Development of constructing a suitable search method then began. In terms of isolating mentions of an actual community, four different situations tended to return non-relevant content in the initial tests: (a) Communities that shared the same name as communities in other states, provinces, or countries; (b) Communities that shared a name with a common noun or verb; (c) Communities that shared the same name as many people in the area, including first and last names; and (d) Communities that fell into more than one category, mostly sharing a common person name and a name with other communities.

Initially a string was developed to try to cover all of these issues at once. It was built using several conceptual ideas, the most prominent being only including references

attached to a preposition indicating direction or place (such as "in," "around," and "at"), excluding references that are directly followed by mentions of other states in the three forms likely to appear in newspaper content (e.g., full spelling, Associated Press abbreviation style, and postal code abbreviations), excluding references that are directly followed by any references to common roadway types (e.g., "street," "avenue," etc.), and excluding references directly linked to common American names (e.g., "John," "Mary," "Smith," "Jones," etc.). Strings can return a large number of results from an even larger corpus of texts, but those results run the risk of either containing results that are not actually relevant or excluding those that are. For instance, a string meant to find stories about racial conflict may return some stories about downhill skiing races because the string was built on finding combinations of the stemmed term *rac* and aspects of competition and conflict. On the other hand, strings can be too rigid, eliminating stories that are relevant along with those that are not.

At this point another test sample of stories was pulled using the search string and an "open" string, which only included terms to limit the search to a target publication and any reference of the community of interest's name in the full text of a story. Full text was mainly chosen to eliminate including reporter bylines because the reporters' names could be the same as some town names, but would never be considered relevant. The results of the open string were coded for relevancy according to the same rules described above. Next, the "closed" search string intended to weed out the non-relevant stories was applied for the same community and time period. The closed string's *recall* was calculated by dividing the number of relevant stories returned by the closed string by the number of

relevant stories returned by the open string, giving an indication of whether the string was eliminating relevant stories that should be included. *Precision* was calculated by dividing the number or relevant stories returned by the closed string by the total number of stories returned by that same string, giving an indication of whether the string was including non-relevant stories that should not be included in the measure. Following Styker et al. (2006), a goal of reaching .7 or above for both the recall and precision measures was set.

The first search string tested was fairly successful, but analysis of the results revealed that the string was performing at different efficiencies depending on the type of community name involved. For communities that had completely unique names, the string returned a lower rate of recall. In those situations, it was extremely rare for any story returned to not be relevant, so any stories that were eliminated affected the results. On the opposite end of the spectrum, the string returned good recall statistics for communities that shared common person names, but had low precision. Additionally, some issues were found with more idiosyncratic problems unique to individual communities. For instance, in the test results for the community of Romeo, Colorado, the closed-search non-relevant results were almost completely made of references to the play "Romeo and Juliet," and the community of Rico, Colorado, returned stories that were about Puerto Rico. For each community, these idiosyncratic issues were recorded and kept for the next stage of string development.

Based on these results, a new multi-string method was tested on a new set of sample time periods for the sampled communities. It employed a system for determining first which type of community name each community was likely to fall into, and then

applying a string built specifically for that type of community. First, a search for the community name was done through Wikipedia. Through the results and disambiguation pages, it was determined whether a community: (a) shared its name with any other common concept in the language or was completely unique; (b) shared its name with communities in other states, provinces, or countries; (c) shared its name with people, either in first or last name; (d) shared its name with any other aspect of language, such as nouns, verbs, organizations, other types of geographic features, etc. The criteria guided the application of five different closed search strings. Full text of the strings can be found in Appendix C.

Empty string. In some cases, the sampled community did not share its name with any other place, object, person, or use. In these cases, the open string almost always returned perfect precision. In this case, an empty string equivalent to the open string was used. Examples include the communities of Quamba, Minnesota, and Manzanola, Colorado.

Place string. More commonly, a community would share its name with other communities in other states, or with other geographic/physical features such as bridges, rivers, canyons, streets, and counties. For these communities, the place string was used. This string starts by calling all references to the community name, and then eliminates references to the same community name in the other 49 U.S. states using full spellings of the states, Associated Press (AP) style abbreviations of states, and postal code abbreviations, all of which were found to occur in content. It then goes on to eliminate all references to the town's name followed by all major road types, including full spellings,

AP style abbreviations, and any "house style" abbreviations used by the three newspapers and found through the initial analyses of stories. Finally, this string excludes the idiosyncratic terms found through the initial analyses for the communities that fell into this type. The resulting string has 191 terms overall.

Preposition string. The preposition string was the one most similar to the original test string. This string was applied to town names that were also common nouns, verbs, or common terms used in organizations. Examples include Gully and Lake Shore, Minnesota, and Avon, Colorado. It relies on first calling references to the community as either followed by a direct reference to the state it is located in — for example, "Gypsum, Colo.", "Gypsum, Colorado", and "Gypsum, CO" — and also any references to the town name that are preceded by a preposition indicating direction, relying on the increased chance of directional prepositions occurring in conjunction with a place rather than an object. For example, the phrase "in Black Forest, Colo." being more likely to appear in content about the community than the phrase "in Black Forest ham." This string then also includes the place-based restrictions for the place string and idiosyncratic terms associated with the sample communities for this category. This search contains 228 terms.

Name string. Communities that share a name with common U.S. names were the most difficult case. Examples include Kim, Colorado, and Hines, Oregon. The open searches for these communities tended to return exponentially more non-relevant stories than relevant ones. As these communities were likely named for people in the area, they also tended to be common names for the population still living in the area. Often, these

communities would also share a name with other towns in other geographic locations. Several versions of this string were developed. The most successful string started with the preposition-string rules of inclusion. This was followed by elimination terms for the town name either directly preceded or directly following an initial. (For example "Wiggins G." and "G. Wiggins.") As initials are a common way of specifically identifying individuals in news stories and obituaries, this method was attempted based on the assumption that it would further weed out references to people. Following the initials, a group of terms excluded the name when preceded or followed by terms of family relationships such as "son" and "granddaughter." This tactic was specifically included to further cut down on copy from obituaries and other life event notices that typically include a list of family connections. The next series of terms excluded the top 100 U.S. first names according to the U.S. Census Bureau with the town name following, and then the top 100 U.S. last names with the town name preceding. Nicknames and other common shortenings of the first names were also included. This was followed by the exclusion terms used in the place string and idiosyncratic terms for the communities involved in this category. This string included 788 terms.

Center string. The four-string system returned sufficient values for recall and precision testing overall, but one community was a clear outlier in the tests. Center, Colorado, still had low precision results, even with the strictest string, the name string, applied. "Center" is the 533rd most common word in English (Corpus of Contemporary English, 2016), which greatly increased the number of non-relevant returns. In addition, one meaning of "center" indicates a place, which made the preposition components of the

string less effective in eliminating references. For this community, the name string was applied, and then the relevant texts returned downloaded and re-entered into Microsoft Word, which, unlike Proquest, allows for case sensitive searches. All stories that did not include a capitalized version of "Center" were removed and the remaining results used.

Testing of this method indicated that it appeared to be working at acceptable reliability levels and it was decided to move into the formal testing stage of the string. Stryker et al. (2006) provide guidance on a suitable sample size for the recall and precision testing. At a desired confidence interval of .05 and a desired precision or recall level of .7, the recommended of number of relevant stories is 548. The proportion of relevant stories returned by an open string varied greatly between the different town name category groups. Empty string communities tended to return almost perfectly relevant results, whereas the name string communities could return as little as 1 percent relevant stories for the open string. (The Center string group returned a fraction of a percentage on the open string.) In order to test the full five-string system a sample time period was pulled for every Minnesota community. A year was pulled for communities that averaged fewer than 10 open result returns per month, and a month was pulled for communities that returned an average of 10 or more open returns per month. The time periods were determined through random selection. This resulted in a return of 1,559 articles total, of which 1,013 were relevant. The five-string system proved successful in the tests, resulting in a recall value of .923 and a precision value of .865.

Following this, smaller checks were run on the Colorado and Oregon communities, pulling a random month for all community types. This actually

overrepresented the communities with the more complicated strings that typically had lower recall and precision values. In both cases, the strings still exceeded .8 for all tests.

Eliminating "soft news" content. The research question seeks to answer whether the proposed relationships in the hypotheses will be affected by the inclusion or exclusion of "soft news" content. As discussed previously, there are numerous definitions for the difference between content more traditionally linked to social outcomes and tied to the more important functions of the news press and other types of content that are traditionally seen as having less of a role. This study uses archival metropolitan newspaper databases of content, which provide a fairly simple way of dividing content. Traditionally, editors have chosen to put content deemed as "harder" or as having public affairs implications in the front, or "A," sections of newspapers, and putting sports coverage, lifestyle reporting, arts and entertainment news, and other "softer" content in sections farther back in the paper. ProQuest records both the section and page numbers that stories originally appeared in the print version of newspapers, which can be selected or deselected to include either just the A section coverage or all coverage from the newspaper. Because these designations can change over time, the relevant results from the reliability and precision testing of the search string were analyzed to find different section names and identifiers used for each newspaper during the study period. While it may be more elegant to just eliminate all types of coverage, particularly sports and arts coverage, these stories do at times cross into harder news, for instance debates over public funding of stadiums or labor disputes with large performing groups. To reflect this, these strings set out to capture content found in the front sections of the newspaper,

where harder news is usually placed, and eliminate any mass paid obituary listings in those sections. For the *Star-Tribune*, this involved selecting for stories included in the "News" section and eliminating those with a document type "Obituary" or "Remembering" in the title, the header used for the large paid obituary section in the latter part of the study. For the *Denver Post,* several section name changes occurred across the time period, and sections were not labeled in ProQuest for the first two years (1992–1993). To capture the "A" section news content, the *Post* string was modified to include anything from sections labeled "A," "Denver & The West," "News," and "ASection," as well as anything that appeared on any page labeled 1A through 24A, as well as 1.A through 24.A, another labeling system that was used. The string also excluded any documents labeled as the "obituary" type, as well as anything that included "Obituaries" in the title. *The Oregonian* went through the greatest number of section changes over the time period. This string directed to include mentions that appeared in the "Northwest," "Regional News," "Local News," "Coast Zoner," "The Northwest," "Local Stories," "West Zoner," or "A" sections, and to eliminate any document types labeled "Obituary" as well as the section labeled "Obituaries."

Dependent variable. Political engagement can be measured in a variety of ways, but the challenge of finding a consistent, valid measure for a longitudinal study of non-metro communities currently limits research to a measure that is collected on a regular basis and reported for even the smallest communities — voter turnout. This measure has the added value of being the foundational root of the concept of political engagement.

In brief, voting was the first, and still most consistently used, measure of political participation in research. However, starting with Verba and Nie's (1972) four-fold categorization of participatory acts beyond voting, political and civic engagement research has added a variety of other behaviors as indicators of engagement by individuals.

One common way of measuring participation is to ask respondents of a representative sample on a survey if they have engaged in certain behaviors in the last year, such as contacting or visiting a public official; buying or boycotting a certain product or service because of the social or political values of the company; participating in a school group, neighborhood, or community association; participating in a service or civic organization; or serving as an officer or on a committee of a group or organization. More general civic engagement questions involve asking about participating in service or civic organizations; discussing politics with friends; or attending church services.

Some researchers (e.g., Moy et al., 2004; McLeod, Scheufele, & Moy 1999; McLeod et al., 1996; Scheufele, Shanahan, & Kim, 2002) include these items in surveys they administer themselves or with the assistance of research firms, but many use data from publically available large surveys that include these types of items, such as the General Social Survey, the World Values Survey, and the U.S. Census Bureau's Current Population Survey's Civic Engagement and Voting and Registration Supplements.

While these surveys provide useful ways of measuring political and civic engagement beyond voting, some of them do not extend for the full time period of this study. For instance, the Census Bureau's Civic Engagement Supplement began in 2008,

18 years after the start of the study period. However, the bigger issue with using national survey data for a study of community-specific effects that involve small, non-metropolitan communities is that the number of respondents sampled from the smallest communities is likely to be extremely small or even non-existent in any given year. In reflection of this, the large, publically available national surveys report data broken down by region or state. Some — such as the Civic Engagement and Voting and Registration Supplements — report data down to the level of the larger Metropolitan Statistical Areas, combining all communities around an urban central city or cities together, with a separate category aggregating all non-metropolitan communities. The General Social Survey will on occasion and after a lengthy review process release data broken down by Census tract, but the problem of making inferences about groups based on the very small samples or missing data remains. Administering surveys to residents of the 180 communities in question in this study would be another route, but is economically not feasible for this project, and would likely face a similar issue of statistical validity based on traditionally low response rates, and would not return longitudinal results.

Researchers attempting to perform comparative analyses on rural communities acknowledge the problems with national survey data and argue that it has limited the field (Tolbert et al., 2002). Occasionally, efforts are made to get around the problem by imputing data based on community characteristics, such as when Lee and Bartkowski (2004) used responses about civic engagement by members of religious denominations from a privately controlled census and lists of congregations in small communities to create a presumed religious civic engagement level in those communities. However,

because the intent of this project is to test the relationship between community characteristics, news coverage, and political participation, this type of method would negate the results.

The combination of using small communities and a longitudinal design would therefore seem to necessitate a political engagement measure that is consistent across many types of communities, as well as one that had a reason to be collected, even in the smallest of towns. Every state has a non-partisan system designed to oversee fair elections, and as part of this, tracking and verifying votes are a necessary step. This creates records of the number of ballots cast, which can be used to calculate the proportion of a community who participate in this way, although technological and record-keeping changes make even this basic information difficult to find for small communities. Other information about elections could also be useful, including the number of candidates running or the amount of money donated to campaigns, both of which have been used in previous research connecting news consumption to political engagement (Schulhofer-Whol & Garrido, 2011). Unfortunately, the longitudinal design impacts the ability to find accurate records of candidates in elections stretching back to 1990 at local levels. Campaign contributions are available through the Federal Election Commission and are available at the ZIP code level. However, data are only kept for donations made to federal-level candidates, including those for the U.S. House and Senate, but not for those running for state-level positions or below. Given the hypothesis that coverage about local communities affects local political knowledge and local

political engagement, the lack of local candidate donations makes this choice less than ideal.

Voting is still one of the most commonly used measures of political participation, and is usually included along with other behaviors in national surveys and other methodological designs. Its centrality to the political process is why data are available even for small communities. Given the challenges of a longitudinal design involving community-level data for small communities, voter turnout is the most reliable and comparable measure available for political participation.

For the states in this study, all typically have one election held in every precinct every two years, a general election in November. Primaries elections are held in May in Oregon, June in Colorado, and August in Minnesota every two years, but these are handled by political parties and reporting methods vary. All three states also include special local-level elections that vary as to occurrence by community and year, making them unsuitable for comparative analysis. Because knowledge of national news appears unaffected by changes in metropolitan coverage of non-metropolitan communities (Hindman & Beam, 2014), national elections should not be affected by the content changes. However, most national elections coincide with local and state issue and candidate voting, and they also typically have higher voter turnout, which could confound the analysis because some communities have local elections at the same time as the national election while others do not. Results were divided into two categories: Presidential-year voting and off-cycle-year voting.

In each state, the Secretary of State's office provided precinct-level data going back as far as the state had recorded. In Minnesota, precinct-level data was available for the entire study period, 1992–2015. Oregon provided precinct-level data from 2006–2015, and Colorado provided precinct-level data from 2008–2015. However, the situation in each state and the data available required that different methods of measuring voter turnout be used for each state. In Minnesota, precincts are clearly labeled and match almost perfectly with designated boundaries for communities. Because of this strong match between the Census numbers, perceptions of community boundaries, and election data, which included a variety of measures, the number of ballots cast in all precincts within the community were aggregated and used as the variable for voting in models. Voter turnout could also be calculated, but because of Minnesota's policy of allowing voters to register on-site just before voting through a simple signature process, the registered voter number in precincts likely underestimates the actual number of potential voters in that precinct.

The situations in Colorado and Oregon were not as clear. In Colorado, a new statewide system was implemented in 2008 (Sanchez, R., personal communication, March 24, 2016). Prior to this, each county clerk's office was responsible for collecting and certifying ballots, and each county drew its own precincts and used its own system for labeling those precincts. The statewide system was implemented by State Legislature decree, and dictated that precincts should have unique identification numbers and be redrawn once they contained more than 2,000 voters. This was a dramatic change in the system, with the number of precincts in some counties growing exponentially, and the

numbering system differing greatly from what had been done previously. While this is a state mandate, counties are still responsible for providing information on their own precincts and the Secretary of State's office does not maintain a comprehensive list of precincts matched with communities. Each county's website was searched for precinct maps that were matched to the communities in the sample. However, nearly half of the counties still only included the old county-system names for precincts on their maps. Where possible, these numbers were matched to the 2008 data, purchased from the Secretary of State's office, which included both state and county precinct designations in some cases. Another quarter of the counties included no maps or keys matching precincts to the geographic areas they cover. This situation was somewhat complicated by the number of large, unincorporated communities in Colorado, but Google Maps provides an estimated boundary for these communities that could be compared to precinct maps where available. The Democratic Party of Colorado provides a limited list of communities that actively caucus with the new state-system precinct numbering for many communities, which did resolve some of the remaining unknown precinct numbers. Through this process the majority of communities were matched with either county-designated or state-designated precincts. Unfortunately, when this list was compared to the data from the Colorado Secretary of State's office, nearly half of the precincts were missing in the 2008 data, and almost as many in the 2010 data. In these sets, a great number of precincts were labeled with the county name and "provisional." These did not occur at random, as entire precinct lists for communities were missing from both sets and/or labeled "provisional." Missing precincts also occurred in the 2010 and 2014 sets.

Because this amount of "missingness" in the data made it too unreliable, county aggregated voter turnout numbers were used instead. These were the officially reported number of ballots cast in each county divided by the number of registered voters in those counties. Only the 2010, 2012, and 2014 data were considered reliable and complete enough for analysis, so no longitudinal tests were run.

Similar to Colorado, Oregon places responsibility for elections at the county level. In this case, precinct-level data was supplied by the Oregon Secretary of State's office. Each county website was searched for precinct maps, which were matched to the community boundaries in the sample. In a few cases, precinct maps were not available online. For those, the county clerk was contacted with a request for precinct information. All clerks responded. However, precincts do not align perfectly to community boundaries, in rural areas more than one community can be included in a precinct, and large stretches of rural areas can be included in community precinct boundaries. For this reason, the raw counts of ballots were not used, as they would potentially overinflate the proportion of the population voting in those communities. Instead, the number of ballots cast in the involved precincts were divided by the number of registered voters in those precincts, for an overall turnout number.

While this required testing for Hypothesis 6 to vary from state to state, and run on a different time frame for each state, the results for Oregon are longer than any other known study comparing community-level coverage and voting, and the Minnesota data provides a time period more than four times longer than any previous study. Given that

the work on directly measuring community coverage with political participation is still new, this is a significant contribution to our knowledge of this relationship.

Several variables, including race/ethnicity, age, and education, are predictors of voting, and, in general, voter turnout has declined over time (Fraga, 2016). These variables, used in the models for Hypotheses 1–5 were included in the model for Hypothesis 6 as controls.

Data Analysis

To capture change in time for mentions of a community, a hierarchical repeated-measures model (HLM) was used for all models, other than the models for Hypothesis 6 in Colorado, which used a standard hierarchical linear model without a longitudinal element. HLM is particularly suited to the examination of non-metropolitan coverage and its relationship to structural variables because this type of modeling overcomes the limitation of assuming independence of scores inherent in traditional linear modeling (Raudenbush & Bryk, 2002). Put another way, HLM is for nested data sets, in which some scores are located within larger groups. This type of modeling allows for examination of different changes in variables over time for both the constant of the community's distance from the newsroom and the variable community population over time and voter turnout rates, while eliminating issues with score dependency that results from having four separate measures of the same community, which are extremely likely to be highly related and correlated. Results also allow for the examination of all communities over time and of communities by population size, even though the population sizes changed for each community over the time period under study. This type

of modeling has not been used extensively in geographical analyses of news, but is highly appropriate because of the conceptualization of communities existing in a wider region, both physically and in the imagined sense created by regional news outlets.

The first level of the model contained the population of the community during each of the four time periods, economic variables, structural pluralism indices, and voting participation measure. The second level contained the distance of the community from the newsroom and the control for presence of daily newspapers. Depending on the model and the hypothesis or research question being addressed, the outcome variable was either number of community mentions in all newspaper content, number of mentions in news content, voting in Presidential election years, or voting in off-cycle election years. For the voting models, either all-content mentions or news-content mentions were included at level 1. All variables, excluding the time element, were entered grand-mean centered for better interpretability, allowing results to be interpreted from the reference of an average community (Raudenbush & Bryk, 2002), although this is a theoretical community that does not exist in the data.

Ideally, a third level consisting of the different newspapers would be entered, but as there are fewer than 30 publications with full text availability going back to at least 1992, the assumptions of multilevel modeling would not be reached (Raudenbush & Bryk, 2002). Instead, each publication was considered a separate case, with Bayesian information criterion (BIC) statistics calculated for comparison. The BIC calculates fit while also giving an indication of overfitting models, by penalizing for each new parameter added to the model (Raudenbush & Bryk, 2002).

Because of its use of Bayesian and maximum likelihood estimators, HLM is also more flexible as to sample size. While the general rule of thumb is 30/30, or an average of 30 cases for every level-2 item (in this case communities), of which there are at least 30 (Raudenbush & Bryk, 2002), tests have revealed that HLM provides unbiased standard errors with as few as 50 cases at level 2 (Maas & Hox, 2005). For this study, 60 communities were selected for analysis, doubling the 30/30 rule and adding an extra 10 to the minimum for unbiased results.

Chapter 5

Results

General Results from Descriptive Data

While the newspapers and states included in this study appear somewhat similar at the aggregate level, the descriptive statistics for the variables generated for the model indicate that each provides a different context that influences results. Descriptive statistics can be found in Table 2.

Newspaper content comparisons. How often communities were mentioned in each of the three newspapers followed a different pattern for each. In the first period, 1992–1997, *The Oregonian* averaged 835 community mentions, compared to 450 for the *Star Tribune*, and 234 for the *Denver Post.* The trajectory of the mean amount of mentions varied, though. For the *Star Tribune,* the mean amount of mentions was actually higher in the fourth period (2010–2015) than in the first, at 501. This was down from the peak in the third period (2004–2009), at 547. The standard deviations also remained roughly the same for the four time periods, revealing that while variation in mentions may have been different between communities, within the *Star Tribune*, the aggregate level of community coverage stayed roughly the same. In *The Oregonian*, there appears to be a definite and sharp decline in community mentions, from the high in the first period of 835 to 516 in period three and ending at 262 in period four, around one-third the average number of mentions from the start of the study. Standard deviations were also higher in the *Oregonian* results, indicating that the distribution may be skewed toward some communities getting much higher rates of coverage than others. *The Denver Post*

produced consistently less community coverage than either of the other two papers. Average mentions rose from 224 to 261 from period one to period two, but dropped through period three to end at 128 in period four.

In terms of comparison for the differences between all content and just news content in terms of community mentions, all three papers saw extremely high correlations between the two. See Tables 3–14 for more detail. In all time periods for all three papers, mentions in all content and mentions in news content were above $r = .9$, with the lowest correlation being $r = .923$ for *The Denver Post* in the fourth period. This would seem to indicate that during the periods of general coverage decline, communities consistently appeared in the same proportion between hard and soft news coverage.

Table 3

Intercorrelations for Minnesota Period 1 (1992–1997)

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13
1. All Content	—												
2. News Content	.991***	—											
3. Income	.312*	.304*	—										
4. Poverty	-.083	-.081	-.639***	—									
5. Distance	-.226	-.244	-.625***	.625***	—								
6. Population	.937***	.937***	.242	-.066	-.195	—							
7. Ethnicity Index	.377**	.367**	.273*	.034	-.076	.334**	—						
8. Language Index	-.188	-.191	-.096	-.086	.102	-.189	-.207	—					
9. Age Index	.245	.277*	-.404**	.188	.276*	.285*	.074	-.119	—				
10. Household Size	-.263*	-.277*	.327*	-.231	-.154	-.294*	-.198	.217	-.801***	—			
11. Education Index	.031	.023	-.248	.042	.058	.019	-.044	-.039	.416***	-.462***	—		
12. Off-Cycle Voting[†]	.945***	.938***	.300*	-.108	-.229	.989***	.334**	-.188	.238	-.274*	.176	—	
13. Presidential Voting[†]	.946***	.940***	.239*	-.094	-.221	.993***	.347**	-.189	.236	-.270*	.011	.998***	—

* $p < .05$ ** $p < .01$ *** $p < .001$

[†] Number of ballots cast

Table 4

Intercorrelations for Minnesota Period 2 (1998–2003)

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13
1. All Content	—												
2. News Content	.993***	—											
3. Income	.311*	.315*	—										
4. Poverty	.029	.016	-.509***	—									
5. Distance	-.252	-.274*	-.673***	.442***	—								
6. Population	.933***	.938***	.281*	-.016	-.232	—							
7. Ethnicity Index	-.252	.268*	.028	.242	-.016	.269*	—						
8. Language Index	.201	.203	.070	.030	-.033	.216	.446***	—					
9. Age Index	.117	.125	-.441***	.316*	.252	.089	.012	.148	—				
10. Household Size	.030	.027	.596***	-.289*	-.444***	.056	.229	.016	-.651***	—			
11. Education Index	.123	.122	-.075	.099	.129	.121	.089	.429***	.042	-.125	—		
12. Off-Cycle Voting†	.942***	.950***	.328*	-.057	-.269*	.995***	.271*	.227	.067	.068	.124	—	
13. Presidential Voting†	.940***	.946***	.301*	-.036	-.245	.998***	.262*	.215	.076	.057	.119	.998***	—

* p < .05 ** p < .01 *** p < .001 † Number of ballots cast

Table 5

Intercorrelations for Minnesota Period 3 (2004–2009)

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13
1. All Content	—												
2. News Content	.994***	—											
3. Income	.369**	.369**	—										
4. Poverty	-.076	-.072	-.536***	—									
5. Distance	-.364**	-.346**	-.531***	.333**	—								
6. Population	.889***	.902***	.296*	-.046	-.260*	—							
7. Ethnicity Index	.414**	.394**	.220	.011	-.255*	.361**	—						
8. Language Index	.271*	.257*	.301*	-.114	-.395**	.252	.670***	—					
9. Age Index	.115	.124	-.486***	.094	.307*	.131	.152	.036	—				
10. Household Size	.080	.066	.437***	-.078	-.365**	.085	.252	.308*	-.489***	—			
11. Education Index	.240	.241	.292*	-.282*	-.052	.211	.313*	.344**	.166	.013	—		
12. Off-Cycle Voting†	.905***	.922***	.313*	-.052	-.273*	.996***	.351**	.245	.138	.069	.220	—	
13. Presidential Voting†	.891***	.908***	.283*	-.038	-.248	.996***	.335**	.231	.149	.060	.208	.998***	—

* p < .05 ** p < .01 *** p < .001 † Number of ballots cast

Table 6

Intercorrelations for Minnesota Period 4 (2010–2014)

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13
1. All Content	—												
2. News Content	.978***	—											
3. Income	.381**	.416***	—										
4. Poverty	-.053	-.093	-.695***	—									
5. Distance	-.340**	-.341**	-.568***	.336**	—								
6. Population	.890***	.865***	.313*	-.016	-.266*	—							
7. Ethnicity Index	.319*	.288*	.037	.281*	-.322*	.294*	—						
8. Language Index	.228	.208	.191	-.057	-.304*	.232	.621***	—					
9. Age Index	.171	.134	-.188	.260*	.137	.194	.165	.072	—				
10. Household Size	.095	.111	.356**	-.263*	-.188	.101	.313*	.225	-.006	—			
11. Education Index	.327*	.318*	.275*	-.068	-.044	.295*	.333**	.321*	.392*	.434***	—		
12. Off-Cycle Voting†	.919***	.892***	.339**	-.031	-.282*	.996***	.289*	.230	.188	.098	.306*	—	
13. Presidential Voting†	.907***	.875***	.323*	-.020	-.267*	.998***	.283*	.222	.189	.096	.295*	.999***	—

* p < .05 ** p < .01 *** p < .001 † Number of ballots cast

Table 7

Intercorrelations for Colorado Period 1 (1992–1997)

Measure	1	2	3	4	5	6	7	8	9	10	11
1. All Content	—										
2. News Content	.986***	—									
3. Income	-.073	-.068	—								
4. Poverty	-.045	-.043	-.688***	—							
5. Distance	-.073	-.036	-.421***	.401**	—						
6. Population	.360**	.363**	-.053	-.002	-.008	—					
7. Ethnicity Index	.176	.169	-.416***	.565***	.025	.314*	—				
8. Language Index	-.004	-.005	-.378**	.568***	.162	.092	.763***	—			
9. Age Index	-.061	-.109	-.372**	.447***	.247	.121	.231	.191	—		
10. Household Size	.032	-.018	.293*	-.097	-.284*	.040	.249	.311*	-.327*	—	
11. Education Index	.025	.049	-.186	.402**	.206	.052	.550***	.617***	.364**	.135	—

* p < .05 ** p < .01 *** p < .001

Table 8

Intercorrelations for Colorado Period 2 (1998–2003)

Measure	1	2	3	4	5	6	7	8	9	10	11
1. All Content	—										
2. News Content	.985***	—									
3. Income	-.074	-.063	—								
4. Poverty	-.058	-.066	-.673***	—							
5. Distance	-.063	-.035	-.454***	.458***	—						
6. Population	.412**	.377**	.157	-.133	-.152	—					
7. Ethnicity Index	.135	.105	-.407**	.493***	.052	.318*	—				
8. Language Index	.045	.019	-.290*	.484***	.119	.253*	.899***	—			
9. Age Index	.002	-.003	-.337**	.268*	-.026	.356**	.304*	.112	—		
10. Household Size	.115	.080	.242	-.063	-.370**	.425***	.443***	.379**	-.018	—	
11. Education Index	-.034	-.042	-.001	.401**	.190	.334**	.446***	.568***	.099	.247	—

* p < .05 ** p < .01 *** p < .001

Table 9

Intercorrelations for Colorado Period 3 (2004–2009)

Measure	1	2	3	4	5	6	7	8	9	10	11
1. All Content	—										
2. News Content	.966***	—									
3. Income	.017	.016	—								
4. Poverty	-.071	-.075	-.621***	—							
5. Distance	-.085	-.100	-.398**	.228	—						
6. Population	.376**	.346**	.134	-.055	-.136	—					
7. Ethnicity Index	.093	.082	-.504***	.571***	.109	.315*	—				
8. Language Index	-.041	-.045	-.381**	.462***	.019	.256*	.787***	—			
9. Age Index	-.234	-.188	-.359**	.301*	.128	.235	.333**	.125	—		
10. Household Size	.083	.041	.158	-.042	-.210	.188	.285*	.294*	-.174	—	
11. Education Index	-.120	-.097	-.174	.351**	.051	.209	.379**	.545***	.096	.137	—

* p < .05 ** p < .01 *** p < .001

Table 10

Intercorrelations for Colorado Period 4 (2010–2015)

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13
1. All Content	—												
2. News Content	.923***	—											
3. Income	.020	.011	—										
4. Poverty	-.075	-.077	-.671***	—									
5. Distance	-.085	-.111	-.380**	.234	—								
6. Population	.412**	.383**	.238	-.112	-.137	—							
7. Ethnicity Index	.094	.127	-.437***	.497***	.144	.349**	—						
8. Language Index	.029	.067	-.248	.368**	.103	.375**	.832***	—					
9. Age Index	-.159	-.059	-.143	.067	.176	.036	.099	.213	—				
10. Household Size	.088	.039	.210	.156	-.203	.318*	.412**	.420***	.083	—			
11. Education Index	-.033	-.034	.127	.107	.101	.317*	.359**	.619***	.144	.314*	—		
12. Off-Cycle Voting†	-.152	-.139	-.408**	.346**	.239	-.192	.019	-.052	.229	-.268*	-.279*	—	
13. Presidential Voting†	.041	.065	.149	-.106	-.173	.015	-.016	-.008	-.195	.090	-.109	-.100	—

* p < .05 ** p < .01 *** p < .001 † Voter turnout (ballots divided by registered voters) for home county

Table 11

Intercorrelations for Oregon Period 1 (1992–1997)

Measure	1	2	3	4	5	6	7	8	9	10	11
1. All Content	—										
2. News Content	.934***	—									
3. Income	.366**	.272*	—								
4. Poverty	-.306*	-.262*	-.770***	—							
5. Distance	-.251	-.200	-.521***	.338**	—						
6. Population	.642***	.662***	.223	-.161	-.089	—					
7. Ethnicity Index	.030	.074	-.176	.344**	.207	.129	—				
8. Language Index	.025	.072	-.043	.417***	.035	.091	.726***	—			
9. Age Index	-.220	-.131	-.490***	.294*	.281*	-.053	.009	-.121	—		
10. Household Size	-.126	-.207	.294*	-.115	-.207	-.258*	.146	.159	-.381**	—	
11. Education Index	-.031	-.028	-.148	.260*	-.011	-.004	.338**	.359**	.015	.200	—

* p < .05 ** p < .01 *** p < .001

Table 12

Intercorrelations for Oregon Period 2 (1998–2003)

Measure	1	2	3	4	5	6	7	8	9	10	11
1. All Content	—										
2. News Content	.958***	—									
3. Income	.366**	.269*	—								
4. Poverty	-.245	-.209	-.752***	—							
5. Distance	-.265*	-.241	-.564***	.516***	—						
6. Population	.614***	.646***	.199	-.134	-.088	—					
7. Ethnicity Index	.085	.134	.022	.133	.077	.168	—				
8. Language Index	.201	.243	.166	.011	-.161	.279*	.841***	—			
9. Age Index	.012	.042	.008	-.327*	-.025	.125	.055	.075	—		
10. Household Size	-.012	-.054	.353**	-.173	-.229	-.045	.398**	.430***	.032	—	
11. Education Index	.103	.123	.033	.174	-.070	.142	.377**	.460***	-.192	.173	—

* p < .05 ** p < .01 *** p < .001

Table 13

Intercorrelations for Oregon Period 3 (2004–2010)

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13
1. All Content	—												
2. News Content	.983***	—											
3. Income	.334**	.296*	—										
4. Poverty	-.162	-.138	-.569***	—									
5. Distance	-.275*	-.259*	-.398**	.267*	—								
6. Population	.612***	.651***	.220	-.084	-.101	—							
7. Ethnicity Index	.033	.066	-.114	.142	.156	.122	—						
8. Language Index	.207	.228	.050	.265*	-.148	.265*	.599***	—					
9. Age Index	.073	.099	-.044	.058	-.086	.195	.065	.259*	—				
10. Household Size	.017	.002	.336**	-.048	-.192	.009	.182	.352**	.087	—			
11. Education Index	.161	.168	.223	.118	-.124	.188	.295*	.449***	.314*	.401**	—		
12. Off-Cycle Voting†	.056	.041	.089	-.204	-.217	-.066	-.426***	-.355**	-.243	-.256*	-.107	—	
13. Presidential Voting†	.137	.120	.161	-.185	-.078	.008	-.335**	-.494***	-.278*	-.115	-.045	.645***	—

* p < .05 ** p < .01 *** p < .001 † Voter turnout (ballots divided by registered voters) for precincts covering community

Table 14

Intercorrelations for Oregon Period 4 (2010–2015)

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13
1. All Content	—												
2. News Content	.991***	—											
3. Income	.297*	.254*	—										
4. Poverty	-.145	-.107	-.672***	—									
5. Distance	-.270*	-.248	-.405**	.302*	—								
6. Population	.641***	.689***	.169	-.009	-.107	—							
7. Ethnicity Index	.187	.220	.055	.225	-.149	.276*	—						
8. Language Index	.249	.278*	.083	.239	-.219	.323*	.920***	—					
9. Age Index	.140	.162	.007	.082	-.017	.213	.419***	.336**	—				
10. Household Size	.085	.079	.265*	-.116	-.321*	.129	.568***	.526***	.553***	—			
11. Education Index	.185	.195	.254*	-.124	-.157	.201	.416***	.488***	-.109	.132	—		
12. Off-Cycle Voting†	.018	-.009	-.062	-.096	-.141	-.143	-.601***	-.537***	-.319*	-.399**	-.159	—	
13. Presidential Voting†	.065	.041	.019	-.220	-.042	-.065	-.559***	-.501***	-.294*	-.333**	-.080	.852	—

* p < .05 ** p < .01 *** p < .001 † Voter turnout (ballots divided by registered voters) for precincts covering community

Community characteristics. The descriptive statistics also reveal that the three states have differences in overall makeup between communities, even if they are similar at the state level. Median household income on average rose over time in all four states in a similar way, but there was a difference in distribution. The standard deviations and range statistics for Minnesota reveal a much lower level of income disparity between communities than in Colorado and Oregon. (Although, within communities Minnesota has the greatest levels of disparities between Whites and Blacks (WalletHub, 2016), indicating that between-community comparisons can mask within-community heterogeneity.) Colorado consistently had the communities with the highest and lowest figures for median household income. This homogeneity in income levels can also be seen in comparing descriptive statistics for the average proportion of community population living in poverty. Although Minnesota had generally lower levels on median household income, it also generally had lower levels for those living in poverty than the other two states. Overall, there would appear to be less of a difference between "rich" and "poor" communities in Minnesota than in Colorado and Oregon, where the differences between those types of communities would appear to be growing through the time period. Examination of the correlations between income and poverty would also seem to indicate a similar trend within communities, with Minnesota having generally lower correlations than the other two states, particularly Oregon. Although, all correlations between income and poverty are strongly negatively correlated. See Tables 3–14.

From the sample communities, population sizes and distributions appear to be roughly similar between Minnesota and Oregon, with a sample of slightly smaller communities in Colorado. Distributions for distance from the newsroom are roughly the same for all three states, with Minnesota trending a little closer in toward the newsroom and Oregon trending a little farther away.

The pluralism indices perhaps show the greatest differences between the sampled communities from each state. Minnesota consistently shows lower levels of ethnic pluralism, although this metric rises from an average of .05 to .15 from period 1 to period 4. Colorado has the highest ethnic pluralism averages ranging from .26 in period 1 to .34 in period 3. Oregon falls in between, ranging from .15 in period 1 to .3 in period three. Both Colorado and Oregon's average community ethnic pluralism score falls from period 3 to period 4. In terms of language use indices, the states are roughly similar. Minnesota shows a low *negative* correlation in period 1 between ethnicity and language use pluralism (r = -.207). All other time periods for Minnesota and all time periods for the other states show a strong positive correlation. This reflects a larger number of older, White, Northern European-language speakers in period 1 for Minnesota. Spanish was the largest non-English language spoken in all three states by period 4 (Minnesota = 3.8%; Colorado = 11.9%; Oregon = 8.8%).

Age indices were relatively similar across time periods for all three states. Communities with higher age index values tended to have proportionally more population in the older age brackets. Higher proportions of older residents also played a

factor in average household size, where communities with higher age indices also having smaller household sizes.

While the educational attainment indices appear similar across the states, an increase in the index can indicate different trends. High education index communities in Colorado and Oregon tend to have higher proportions of those with less than a high school education. For instance, San Luis, Colorado, which in 2014 had 40.9 percent without a high school diploma, and Kings Valley, Oregon, which in 2014 had 63.2 percent without a high school diploma. In Minnesota, communities where the education index rises also can be related to lower education levels, but also can reflect a higher proportion of the population with college degrees. For instance, Golden Valley, which had consistently high education pluralism index scores also had a population where 52.4 percent of the population had a bachelor's degree or higher. This trend can also be seen in the correlations. For Minnesota, income and education plurality become positively correlated in later periods. In the other states, these variables are either not related or negatively related. See Tables 3–14 for correlation data.

Model Justifications, Fit, and Evaluation

Intraclass correlations. The first step in hierarchical linear modeling is to determine if adding additional levels of analysis is a necessary step (Raudenbush & Bryk, 2002). This is typically done by calculating the intraclass correlation coefficient (ICC) for each model. The ICC measures the proportion of variance that is between groups measured at the second level or above. Acceptable levels are more a matter of convention and vary by discipline, but .05 or above is generally considered enough second-level

variation to make multilevel modeling useful (Kwok et al., 2009). Intraclass correlation coefficients are not always calculated for repeated measures designs, as adding the element of time is seen as enough justification for multilevel modeling. However, the ICC can be calculated for these types of models by entering the model variables into a standard multilevel design. It should be noted that this practice results in ICC values that are generally inflated due to dependency between scores at different time points (Kwok et al., 2009). Coefficients for all models, excepting the non-longitudinal models for predicting Presidential-year voting in Colorado (ICC = 0), clearly justified a multilevel approach, and are reported with the model results in Tables 15–20.

Model fit. A variety of measures have been used to assess model fit for HLM. For this study, the Bayesian information criterion (BIC) was calculated for all unrestricted models and all full models. The BIC estimates the efficiency of a model in explaining information, while also penalizing for overfitting in adding extraneous variables, thus offering an additional measure of parsimony. Lower values indicate better model fits. In HLM, lowering the BIC by at least 2 is considered a better fit, a reduction of 10 is considered a significantly better fit (Kwok et al., 2009). BIC values are included with model results in Tables 15–20.

Model results and statistical significance. Model results can be found in Tables 15–29. HLM models can be interpreted much like generalized linear model results, with a few differences. In HLM, variables on the first level are interpreted as independent slopes. When the variables are entered as grand mean centered, as in these models, the intercept of the slope is the predicted value for the average community in the model. The

model also includes an overall intercept that represents the average community independent of the variables. Level two variables can impact either the model intercept or level one intercepts in a way similar to interaction effects in a generalized linear model, with the difference being that these effects increase or decrease depending on the distance from the average community value. A positive coefficient for a slope intercept combined with a negative coefficient for a level two variable would mean that as values on the level one variable increase, the slope value decreases. Coefficients of the same sign on both levels act as boosters: Two negative coefficients would mean a negative effect that grows larger, in the same negative direction, as the level one variable increases, and vice versa for two positive coefficients. All models were unrestricted as to variance-covariance structures as this approach consistently produced better fitting models than homogeneous or heterogeneous variance structures. Because the Oregon models for predicting voting were only available for two time points, those models were simplified by eliminating predictors that had little impact in the over-fitted full model (median income, age, and average household size). The model for impact on off-cycle year voting for all content (BIC difference = -20.575) and news content (BIC difference = -19.97) had insufficient fit even after this process. Removing additional predictors until only the variables of interest and significant predictors remained did not improve fit to sufficient levels, with the conclusion that community coverage in *The Oregonian* involved missing predictors, and the selected predictors were not sufficient for explaining variation in this limited data set for the off-cycle years to allow for responsible reporting of those models as results. Given that the other models showed significantly improved fits with the variables

included, it is suspected that this is a factor of only having two time points. The addition of another election year is expected to provide enough data for sufficiently fitting a model. No missing data were allowed for any models.

Beyond general concerns with over-reliance on statistical significance testing for finding meaning in models (Schmidt, 1996), HLM modeling has varied in its approach to setting an appropriate alpha level. While the common .05 level is generally used, it is also not unusual to consider *p* values of .1 or lower as statistically significant in HLM models (Harwell & Gatti, 2001). This analysis uses *p* values as a guide to interpreting results, particularly those with values of .1 or below, but does not consider them the sole factor in analysis.

Table 15
Models for Predicting All-Content Community Mentions

		Minnesota		Colorado		Oregon	
Effect		*B*	*SE*	*B*	*SE*	*B*	*SE*
Model Intercept		446.213***	909.929	6.355	22.327	233.726**	72.978
	Daily	2359.268***	354.510	-21.843	33.317	154.537**	55.318
	Distance	-1.319	1.112	-.011	.226	-.491	.632
Time		-45.450**	14.950	-2.282	4.614	-53.229**	17.630
	Distance	.126	.154	-.023	.045	.161	.153
Income		.003*	.001	.000	.000	.001	.000
	Distance	.000*	.000	.000*	.000	.000	.000
Poverty		.930	1.648	.258	.499	-.504	.619
	Distance	-.020	.015	.008	.005	.005	.006
Population†		117.151**	40.870	-3.375	3.368	.746	3.832
	Distance	-.715	.454	-.039	.030	-.043	.039
Ethnicity		70.375	119.441	-71.805	41.919	-12.530	36.879
	Distance	-1.536	1.799	.085	.403	.063	.301
Language		144.317	88.157	-7.690	37.449	28.914	51.810
	Distance	-3.572**	1.240	.400	.345	-.552	.409
Age		131.822	528.505	285.049**	87.660	-1.801	72.981
	Distance	-16.390*	7.348	-1.100	1.028	.032	.747
Household Size		-19.954	46.224	3.650	11.081	2.992	13.785
	Distance	-.487	.555	-.349**	.126	.166	.141
Education		-273.876	158.585	91.698	70.688	-13.681	51.465
	Distance	1.054	1.932	-.809	.711	-.075	.510
	ICC	.942		.868		.818	
	Deviance	3255.700		2791.614		3234.589	
BIC change over base		374.326		230.478		707.076	

* p < .05 ** p < .01 *** p < .001 † Log transformed

Note. *df* = 57 for model intercept, distance slope of model intercept and daily; *df* = 58 for all other effects. Parameters = 31. *p* value determined using *t*-ratio following Raudenbush & Bryk (2002)

Table 16

Models for Predicting News-Content Community Mentions

		Minnesota		Colorado		Oregon	
Effect		*B*	*SE*	*B*	*SE*	*B*	*SE*
Model Intercept		101.790**	32.749	8.062	9.826	-29.588	30.771
	Daily	451.825***	124.085	-29.595	20.953	73.808 .	42.112
	Distance	-.0372	.447	-.020	.095	-.248	.271
Time		-8.601	13.741	1.134	2.393	9.517	6.288
	Distance	-.114	.162	-.024	.023	.063	.055
Income		.000	.001	.000	.000	.000	.000
	Distance	.000	.000	.000	.000	.000 .	.000
Poverty		-.441	.950	-.132	.330	-.084	.369
	Distance	-.001	.009	.004	.003	-.001	.003
Population†		83.829***	19.016	.035	1.953	5.123 .	2.970
	Distance	-.805***	.195	-.013	.017	-.041	.030
Ethnicity		37.507	85.615	-3.550	25.846	-9.030	20.951
	Distance	-1.510	1.210	-.108	.269	.254	.164
Language		37.723	65.247	-23.158	23.506	10.921	30.587
	Distance	-.392	.860	.256	.219	-.124	.244
Age		158.167	436.634	145.993*	61.399	-11.279	44.167
	Distance	-10.296*	4.990	-1.104	.758	-.190	.446
Household Size		-41.023	36.625	1.294	6.648	2.870	7.684
	Distance	-.031	.452	-.146	.075	-.013	.086
Education		88.641	98.979	45.992	42.443	-7.370	31.106
	Distance	-1.985	1.271	-.308	.403	-.007	.310
	ICC	.943		.791		.753	
	Deviance	2998.005		2522.883		2836.731	
BIC change over base		42.329		101.234		500.239	

* p < .05 ** p < .01 *** p < .001 . < .1 † Log transformed

Note. *df* = 57 for model intercept, distance slope of model intercept and daily; *df* = 58 for all other effects. Parameters = 31. *p* value determined using *t*-ratio following Raudenbush & Bryk (2002)

Table 17

Models Predicting Off-cycle-year Voting Using All-Content Mentions

		Minnesota		Colorado (Not Longitudinal)	
		B	*SE*	*B*	*SE*
Model Intercept		811.862**	293.635	66.004***	.664
	Daily	1936.564*	762.293	-1.812	2.351
	Distance	-4.791	3.941	.006	.007
Time		-35.278	52.386		
	Distance	.703	.645		
Mentions		.587***	.116	-.003	.004
	Distance	.006***	.001		
Income		.001	.002	.000	.000
	Distance	.000 .	.000		
Poverty		-1.430	2.794	.206*	.097
	Distance	-.002	.032		
Population†		197.795*	94.604	.408	.581
	Distance	-3.632**	1.092		
Ethnicity		24.519	220.612	-6.255	9.050
	Distance	5.550	4.026		
Language		-150.410	222.675	5.376	7.887
	Distance	-5.116 .	2.931		
Age		866.188	1178.117	23.023	13.964
	Distance	-21.684	15.806		
Household Size		-86.292	136.722	-2.282*	1.634
	Distance	2.526	1.985		
Education		-311.890	305.027	-32.977	15.665
	Distance	-3.543	4.118		
	ICC	.978		.192	
	Deviance	3833.901		362.423	
BIC change over base		214.871		16.118	

* p < .05 ** p < .01 *** p < .001 . < .1 † Log transformed. *Note.* Minnesota *df* = 57 for model intercept, distance slope of model intercept and daily, *df* = 58 for all other effects. Parameters = 33. Colorado *df* = 57 for model intercept, distance slope of model intercept and daily, *df* = 51 for all other effects. Parameters = 2. *p* value determined using *t*-ratio following Raudenbush & Bryk (2002). Oregon model not shown do to insufficient fit.

Table 18

Models Predicting Presidential-year Voting Using All-Content Mentions

		Minnesota		Oregon	
		B	*SE*	*B*	*SE*
Model Intercept		684.672*	275.139	84.692***	.510
	Daily	136.181	1027.532	3.430	2.202
	Distance	-7.626 .	4.004	.010*	.005
Time		212.046**	67.631	-2.615***	.453
	Distance	-1.973*	.864		
Mentions		.329*	.141	.001*	.000
	Distance	.006***	.001		
Income		-.003	.003		
	Distance	.000	.000		
Poverty		-3.500	3.566	.017	.035
	Distance	.014	.042		
Population†		269.966*	130.241	-.876*	.339
	Distance	-6.248***	1.583		
Ethnicity		-293.724	282.253	2.104	2.343
	Distance	.526	4.910		
Language		-192.668	266.433	-11.444***	3.235
	Distance	-3.752	3.499		
Age		5022.535**	1452.424		
	Distance	-51.904**	18.361		
Household Size		140.642	160.984		
	Distance	1.316	2.122		
Education		-589.202	373.956	4.993	3.464
	Distance	3.168	4.858		
	ICC	.968		.855	
	Deviance	3824.050		627.409	
BIC change over base		294.601		6.302	

* p < .05 ** p < .01 *** p < .001 . < .1 † Log transformed. *Note.* Minnesota *df* = 57 for model intercept, distance slope of model intercept and daily, *df* = 58 for all other effects. Parameters = 33. Oregon *df* = 57 for model intercept, distance slope of model intercept and daily, *df* = 59 for all other effects. Parameters = 13. *p* value determined using *t*-ratio following Raudenbush & Bryk (2002). Colorado model not shown because of low ICC value (no between-community variation indicated).

Table 19

Models Predicting Off-cycle-year Voting Using News-Only Content Mentions

	Minnesota		Colorado (Not Longitudinal)		Oregon	
	B	*SE*	*B*	*SE*	*B*	*SE*
Model Intercept	805.650**	263.997	66.004***	.664	84.692***	.510
Daily	827.746	663.858	-1.890	2.351	3.430	2.202
Distance	-3.945	3.507	.005	.007	-.010*	.005
Time	-35.659	46.565			-2.615***	.453
Distance	.754	.566				
Mentions	1.804***	.202	.008 .	.004	.001*	.000
Distance	.011***	.002				
Income	.000	.002	.000	.000		
Distance	.000 .	.000				
Poverty	-.786	2.713	.206**	.097	.017	.035
Distance	-.009	.033				
Population†	218.477*	84.754	.432	.581	-.876**	.339
Distance	-3.894***	1.017				
Ethnicity	-42.425	201.210	-5.771	9.050	2.104	2.343
Distance	6.587 .	3.771				
Language	-68.813	220.494	5.396	7.887	-11.444***	3.235
Distance	-2.933	2.863				
Age	1553.760	1060.962	24.221 .	13.964		
Distance	-26.864 .	14.938				
Household Size	-119.763	126.616	-2.432 .	1.634		
Distance	2.460	1.843				
Education	-454.713	294.626	-33.459*	15.665	4.993	3.464
Distance	-.566	3.815				
ICC	.978		.192		.855	
Deviance	4299.645		360.205		627.409	
BIC change over base	224.712		18.336		6.302	

* p < .05 ** p < .01 *** p < .001 . < .1 † Log transformed. *Note.* Minnesota *df* = 57 for model intercept, distance slope of model intercept and daily, *df* = 58 for all other effects. Parameters = 33. Colorado *df* = 57 for model intercept, distance slope of model intercept and daily, *df* = 51 for all other effects. Parameters = 2. Oregon *df* = 57 for model intercept, distance slope of model intercept and daily, *df* = 59 for all other effects. Parameters = 13. *p* value determined using *t*-ratio following Raudenbush & Bryk (2002).

Table 20

Models Predicting Presidential-year Voting Using News-Only Content Mentions

		Minnesota		Oregon	
		B	*SE*	*B*	*SE*
Model Intercept		800.848**	283.747	71.210***	.623
	Daily	-901.184	1132.220	6.124*	2.783
	Distance	-9.409*	4.063	-.018**	.006
Time		232.047**	67.126	-.081	.442
	Distance	-1.983*	.853		
Mentions		1.311***	.296	.002	.002
	Distance	.008*	.003		
Income		-.002	.003		
	Distance	.000	.000		
Poverty		-2.692	4.114	-.066 .	.038
	Distance	.008	.046		
Population†		338.193*	140.479	-1.367**	.429
	Distance	-8.020***	1.707		
Ethnicity		538.604	323.194	-6.076**	2.468
	Distance	4.676	5.316		
Language		-50.227	297.688	-3.456	3.747
	Distance	-3.986	3.831		
Age		5244.633**	1596.366		
	Distance	-47.611*	19.725		
Household Size		84.039	175.082		
	Distance	2.390	2.198		
Education		-739.769 .	418.570	-.261	3.846
	Distance	6.756	5.454		
	ICC	.968		.855	
	Deviance	3961.197		688.920	
BIC change over base		287.771		7.023	

* p < .05 ** p < .01 *** p < .001 . < .1 † Log transformed. *Note.* Minnesota *df* = 57 for model intercept, distance slope of model intercept and daily, *df* = 58 for all other effects. Parameters = 33. Oregon *df* = 57 for model intercept, distance slope of model intercept and daily, *df* = 59 for all other effects. Parameters = 13. *p* value determined using *t*-ratio following Raudenbush & Bryk (2002). Colorado model not shown because of low ICC value (no between-community variation indicated).

Study 1 Results

The first study uses the Minneapolis *Star Tribune* and data from Minnesota for analysis. This includes full data for the voting measure across the all four time periods.

H1 — Role of income and poverty levels. The first hypothesis draws from suggestions that journalistic organizations would increase coverage in areas with the potential to improve their own profitability. The hypothesis predicted that communities with (a) higher median incomes and/or (b) lower proportions of the population in poverty would receive larger amounts of coverage when other factors are held constant.

In Minnesota, which saw an overall decline in all content over time (B = -45.45, p = .004) for every $.003 rise in median income, the average community could expect one additional mention in content for the time period in question. An increase of one standard deviation in the first time period would therefore result in 3.645 additional mentions during the time period. Because of the combined effect of time, a community that increased its median income would have seen less of a reduction in all-content community mentions than communities that were relatively static or declined in income. Although, because the general trend for income in Minnesota over time was up (period 1 M = 25,037, minimum = 10,280; period 4 M = 48,946, minimum = 21,250) this would not appear to be the case for communities in this sample. No effect of poverty on the model was seen.

Hypothesis 1a was supported. Hypothesis 1b was not supported.

For the research question, impact of median income and poverty were not supported when examining news-only content community mentions. Income would

appear to be related to softer news content, and not a factor in determining news-only content.

H2 — Distance from newsroom. The second hypothesis predicted that distance from the newsroom would negatively impact community coverage over time. In a multilevel model, this can be addressed in two ways: The impact of distance on its own, and its impact on other predictors.

In terms of individual impact on the overall model, distance does not appear important. However, it is significant as a modifier of certain relationships. Distance lowers the non-significant effect of language use pluralism and the non-significant effect of age pluralism. This can be interpreted as communities that are above average in language use pluralism receiving fewer mentions as distance increases, as well as communities that are above average in age pluralism receiving fewer mentions as distance increases. Time is also a significant effect in the model, meaning that these types of communities would also be expected to have fewer mentions on top of the losses from the other effects.

H2 is partially supported.

For the research question, distance is an important modifier of other effects, but different ones than the all-content model. For news-only, distance has a negative effect on the positive effect of population. For news, communities can expect to see more coverage as a their size increases, but the strength of that effect diminishes as distance from the newsroom increases. (This is predicted in H4.) As in the all-content model, though, there is also a negative effect for distance on the non-significant predictor of age

pluralism. Communities with above-average age pluralism scores would see fewer mentions as distance from the newsroom increases.

H3 — Population. The third hypothesis predicted that an increase in population would result in an increase in coverage for a community. H3 was supported. A 1 percent change in community population results in an additional 11.7 all-content mentions. At an increase of just over 4 percent, this effect would overtake the significant negative effect of time, meaning that communities that increased by 5 percent or more over the time period would halt and then start to reverse the negative effects of time on coverage. Communities that did not grow or lost population would be predicted to lose coverage over time, with reductions in population increasing that loss.

In terms of the research question, population was an important predictor for news content ($B = 83.829$, $p < .001$). The effect of population is weaker than for the all-content model, but still noteworthy, with 8.4 additional mentions for every 1 percent change in population. Time was not a significant predictor in the Minnesota news-content model, indicating that the impact of population on news coverage was a direct relationship, with any community growth resulting in positive effects and any community shrinkage resulting in negative effects.

H4 — Population and distance. The fourth hypothesis predicted that population and distance would interact in coverage, with smaller, more distant communities experiencing greater effects than other types of communities. In terms of the all-content model, this effect was not apparent.

H4 was not supported.

In terms of news-only content in the research question the interaction of population and distance was a significant factor. Distance had a significant effect (B = -.805, p < .001) on the significant positive impact of population. This can be interpreted as a "braking effect" on the role of population change at a distance, in that as distance from the newsroom decreases the accelerating effect of population growth on coverage. This effect is independent of time in the model, and therefore is about a differential effect of community growth or decline as related to geography. Communities at a distance that grow can expect increases in coverage, but not at the same rate as communities growing at the same rate closer to the newsroom. On the inverse, communities that decline in population farther from the newsroom are more severely penalized in coverage than communities that decline at the same rate but are located nearer the newsroom.

H5 — Structural pluralism. The fifth hypothesis posited that complexity in the community — which can be related to size and distance — would be better predictors of the interest of metropolitan journalists in terms of coverage, as well as the need for the type of journalism they are presumed to produce. This hypothesis can be addressed through a variety of observations in these models.

The first step is to consider the effect of having a daily newspaper within the community being covered. The need for daily production of newspaper in a community can be seen as an indicator of both the material for conflict-oriented journalism and the need for it in the community. In Minnesota the presence of a daily newspaper in the community is a significant positive influence on all-content mentions in the regional metropolitan newspaper (B = 2359.268, p < .001), controlling for factors such as

population and economic factors. These communities not only have their own local source of daily-produced news content, they receive disproportionately more coverage from the regional metro. However, the presence of a daily does not guarantee a community has increased complexity, so this is not a particularly strong piece of evidence.

For the next step, a variety of measures meant to capture community complexity were included in the model. In Minnesota, higher complexity scores in the educational attainment index led to fewer all-content mentions (B = -273.876, p = .089). Combined with the negative effect of time in this model, communities where the educational index increased would be affected more strongly over time than others as the effect compounded. In the states in this study, a larger educational index score typically reflected more of the population falling into either the less-than-high-school or less-than-bachelor's groups.

H5 is not supported.

In the research question, for news content in Minnesota, indications of an effect of pluralism show in two places. The presence of a daily newspaper in the community has a significant positive effect (B = 451.825, p < .001) and communities that are above average in the age index experience a negative effect as a factor of distance (B = -10.296, p = .044). This can be interpreted as communities with greater complexity between age categories, typically because of higher proportions of older residents, are predicted to receive fewer news-content mentions as distance from the newsroom increases. Time is not a significant predictor in this model.

H6 — Impact of coverage on voting. The last hypothesis addresses the impact of metro news coverage on voting rates in specific communities. Contextual elements influence the available data in this case, and therefore also impact interpretation of the models. In Minnesota, data were available for all years of the study. Ballot counts are also matched with more precise geographic areas and voter registration laws make voter turnout less precise. For these reasons, ballots cast in a community were chosen as the outcome variable and results should be interpreted with that in mind. In the replication study, the states had different contexts to the voting variable, so results are not directly comparable.

In Minnesota, controlling for other factors such as income, population and community complexity, all-content mentions in the *Star Tribune* were significant predictors of ballots cast in both off-cycle ($B = .587$, $p < .001$) and Presidential ($B = .329$, $p = .023$) elections for the average community. This translates to an increase of 633 votes for a 1 standard deviation increase in full-content mentions in period 1 for off-cycle elections and 355 votes for the same increase at the same time in a Presidential election, holding other factors constant.

In the off-cycle year model, distance from the newsroom ($B = .006$, $p < .001$) has a positive effect on the overall effect of all-content mentions, meaning that the benefits of metro newspaper coverage on voting increases as distance from the newsroom increases. Population ($B = 197.795$, $p = .048$) is also a strong positive predictor, with distance ($B = -3.632$, $p = .002$) reducing the effect. Distance also has a negative effect on language use complexity as a predictor ($B = -5.116$, $p = .086$), which can be interpreted as communities

with below-average scores on the language index that are also below-average in distance from the newsroom having slightly smaller rates of voting.

In the Presidential-year model, time is a significant positive predictor (B = 212.046, p = .002), although distance has a negative effect on time (B = 1.973, p = .026), which combines with an overall effect of distance on the model (B = -7.626, p = .062). Together, this indicates that as distance from the newsroom increases, communities cast fewer ballots in Presidential years, although this is attenuated by a positive effect of distance on the positive effect of mentions (B = .006, p < .001). Population (B = 269.966, p = .043) is again a positive predictor, although this should be expected as the outcome variable is number of ballots cast and larger communities would naturally have more ballots cast. Distance has a significant negative effect on population (B = -6.248, p < .001), meaning gains in population have lower positive impact as distance from the newsroom increases. Age index (B = 5022.535, p = .001) is also a positive predictor, but it is slowed as distance increases (B = -51.904, p = .006).

H6 is supported.

In the research question, differences in effects between all-content community mentions and news-only community mentions may provide insight into the role of these different types of content on political engagement through voting.

In Minnesota, all-content mentions were significant positive predictors for ballots cast in both Presidential and off-cycle elections, and the same is true for news-only mentions. In off-cycle elections a single standard deviation increase in news mentions is predicted to result in 907 additional ballots cast in an average community, in comparison

to 633 ballots for all-content. In Presidential elections a 1 standard deviation increase in news mentions is predicted to result in 659 additional ballots cast, holding other factors constant, compared to 355 ballots for the same change for all-content.

Mentions in news content are more effective in raising voting rates than general content mentions.

Study 2 Results

The second study sought to replicate the results of the first study. It used the *Denver Post* and Colorado data as well as *The Oregonian* and Oregon data. Because elections data were not as complete, Colorado was not modeled longitudinally, and Oregon was only modeled for the voting models for periods 3 and 4.

H1 — Role of income and poverty levels. In Colorado, income is a statistically significant predictor, but such a small one that it would require an increase of 2.5 standard deviations in median income in period 1 (*SD* = 14635.2) to predict a rise of 1 mention for the time period. There is no expected independent effect of time to affect this relationship.

Median income was not a significant predictor for all mentions in Oregon.

For the second part of the hypothesis, the proportion of the population living at or below the poverty level was not apparent in either case.

H1a and H1b were not supported.

For the research question, there was also no effect of income or poverty on news-only mentions.

H2 — Distance from newsroom. In Oregon, as in Minnesota, all communities saw declines in coverage over time, but this was not disproportionately determined by distance from the newsroom as an independent factor. There were no interactions of distance with other factors in Oregon. In Colorado, there was a significant negative effect of distance (B = -.349, p = .007) on the non-significant effect of household size. This indicates that communities with larger values for average household size would be expected to see declines in coverage as distance increases.

H2 is partially supported.

For the research question, as in the all-content models, neither distance nor time, nor the interaction between them, were significant predictors as independent effects or modifiers of effects in Colorado or Oregon.

H3 — Population. Population was not a significant independent predictor in Colorado or Oregon, but time (B = -53.229, p = .04) was in Oregon. Communities lost all-content coverage regardless of changes in population.

H3 was not supported.

For news content in the research question, population was an important predictor in Oregon (B = 5.123, p = .09), but not in Colorado. Time was not a significant predictor in Oregon, where the effect of population was roughly a change of .5 news-content mentions for every 1 percent change in population, with no added effect of time.

H4 — Population and distance. There was no indication of an interaction between population and distance in either the Colorado or Oregon all-content models.

Communities may have experienced changes in coverage due to population changes, but their proximity to the newsroom had no significant effects on this relationship.

H4 was not supported.

No significant effects were found in the news-only content models for either state, for the research question.

H5 — Structural pluralism. In Oregon (B = 154.537) the presence of a daily newspaper in the community is a significant positive influence on all-content mentions in the regional metropolitan newspaper, controlling for factors such as population and economic factors. This is not directly a sign of structural pluralism, but it is an indication that there is increased news production for these communities, which is expected in some theories for more complex communities.

The age index was a significant factor in all-content mentions in Colorado (B = 285.049, p = .002), with rises in the age index increasing all-content mentions. In these cases, higher age indexes typically reflect larger proportions of the population in the older age categories and fewer in the younger categories. There is no effect of time in this model.

Beyond the presence of a daily newspaper, no indicators of pluralism were significant for all-content mentions in Oregon, although time is a significant negative predictor in this model.

H5 is partially supported.

For the research question, as in the all-content model, increases in the age index also increase the number of news-content mentions in the Colorado model ($B = 145.993$, $p = .021$). No other effects of pluralism or time are predicted in this model.

In Oregon, the only pluralism-related significant predictor for news content is the presence of a daily newspaper ($B = 73.808$, $p = .085$). Time is also not an independent factor in this model.

H6 — Impact of coverage on voting. As mentioned previously contextual elements influence the available data in this case, and therefore also impact interpretation of the models. The significant difference between voting in Presidential and off-cycle general elections made them not directly comparable, and they were therefore modeled separately. The limited availability of data over time in the different states means that the Minnesota models cover the full extent of the study, 1992–2015, while the Oregon models cover the last two time periods, 2004–2015, and the Colorado models are not longitudinal. Coefficients in the models should also be interpreted based on the context of the data. In Minnesota, where ballot counts were matched with more precise geographic areas and voter registration laws make voter turnout less precise, coefficients reflect the number of ballots cast. In Colorado, the lack of full data sets for precincts and less precise matches between precincts and communities means that coefficients reflect proportions of voter turnout for the home county of the community. In Oregon, where precincts can be matched to communities well, but also include voters from outside the community in question, coefficients relate to voter turnout for all precincts covering the community.

In Colorado, the intraclass correlation coefficient indicated that multilevel modeling would not be an appropriate method for Presidential years. For the all-content model of the off-year election cycle, mentions were not a significant predictor. Significant variables in this model were poverty (B = .206, p = .038) and education index (B = -32.977, p = .04). This model was not longitudinal and only reflects period 4.

In Oregon, a sufficient model could not be fit for the all-content model for off-cycle elections. However, all-content mentions (B = .001, p = .015) were a significant predictor for Presidential-year elections. Every all-content mention is predicted to increase voter turnout by .001. In period 3, this means a 1 standard deviation increase in all-content mentions would indicate an increase of 1.74 percentage points in the voter turnout. This effect is negatively affected by distance (B = -.01, p = .042), time (B = -2.615, p < .001), population (B = -.876, p = .012), and language use index (B = -11.444, p < .001).

H6 is partially supported.

For the research question, in Colorado, where only the off-cycle model was examined for period 4, news mentions (B = .008, p = .071) are a significant predictor of voter turnout in the home county, with an expected increase of .67 percentage points in turnout for a 1 standard deviation increase in news mentions.

In Oregon, there was no effect for news mentions in Presidential years, but the corresponding model indicates news mentions (B = .002, p = .015) are a significant predictor of voter turnout in communities in off-cycle years, with an expected rise of .34 percentage points for a 1 standard deviation increase in news mentions.

Chapter 6

Discussion

This project examined two aspects of the relationship between metropolitan news coverage and communities. The first was to test different approaches to determining what types of community characteristics were predictors of coverage by the metro newspaper. The second aspect was measuring one presumed effect of community coverage: that it would lead to increased political participation in the form of voting in communities. Additionally, an investigation into whether different types of content — specifically hard news versus soft news — would change any of these relationships was produced. Two studies were conducted, one in Minnesota, and a confirmatory study in Oregon and Colorado. In the end, there is support that certain community characteristics lead to more coverage by a metro, and even clearer evidence that there is a positive relationship between metro newspaper coverage of specific communities and voting in those communities. Finally, it also appears that the type of content does matter in these relationships, with different patterns and effects for hard news content versus looking at all the content in the newspaper. However, the two-study design also makes one other aspect clear: Context matters. Different newspapers in different states with different overall characteristics exhibit different patterns in these relationships.

Generally speaking, Minnesota's population matches the educated, literate, civically engaged public journalists envision as their audience and democratic theory envisions as the electorate. In this sense, Colorado and Oregon are more complex locations, particularly when it comes to the ideal public for the relationship between

journalism and democracy. As a whole state, Colorado's population looks similar to the overall population in Minnesota, but this masks between-community differences. In Colorado, communities are more sorted by demographic characteristics — wealthy communities and poor communities, educated communities and non-educated communities, and English-speaking communities and Spanish-speaking communities. These particular traits put wrinkles in assumptions. A population that has lower overall levels of education would be assumed to perhaps not have the capacity to fully participate in consuming complex news information and incorporating it into the political process. (This is not to say that these communities are uniformed or politically docile, but mass media may not be the method for them to acquire information.) Language complexity could also be problematic, especially when the newspaper in question is written in English and the presumed audience speaks Spanish, or, on the reverse, the sources who have the information for news coverage speak Spanish and the journalists who would synthesize that information into news speak English. Oregon falls somewhere in between Minnesota's homogeneity and Colorado's heterogeneity. It also tends to fall in between the two when it comes to the models in this study. We see stronger and more effects in Minnesota, weaker and fewer effects in Colorado, and a state roughly between in Oregon.

This study looked at pluralism as a route to creating news, and universal effects across contexts were not found. Future studies may choose to include variables that control for population complexity and those that capture the limitations of the audience's access to the news product or the journalist's access to news sources. The sticky situation of what a community is and where it actually exists may also be complicating data in

Colorado and Oregon. Both of the states have large, somewhat amorphous unincorporated communities, as well as large areas of land with low population density referred to as "places" by the population and the Census. This does not necessarily mean that references to those places are always consistent in news copy. Many are suburbs on the fringes of metropolitan areas, and could conceivably be lumped in with other areas in coverage. Fewer official institutions of government in these areas may also mean there's less news, given journalism's reliance on official sources (Tuchman, 1978). This situation creates a dilemma for analyses of this type: These places could be eliminated from analyses, thus perhaps providing a "cleaner" set of data, but their elimination would mean assumptions were being made about a state without including a significant portion of its population. If life and coverage in these communities is different because of the nature of their unofficial formation, this would impact results in a way that would reduce their validity. Finally, it should be noted that Minnesota does not lack issues with inequality, educational systems, or other elements that go into the prescriptions for an ideal democratic state, or with shifting conceptions of community, but in terms of finding an environment where the ingredients for good functioning of news and good functioning of journalism would be found, it is perhaps one of the more likely choices.

Beyond its natural context, Minnesota also provided a clearer set of data for political participation. The length of the voting records available and the precision with which those precincts align with community boundaries meant that there was less assumed statistical noise in the Minnesota models. It is perhaps not surprising then that those models provide a clearer picture of the relationships involved in this study. In

hierarchical linear modeling, because of its estimation methods, it is possible to add more data to a sample to combat statistical noise while not creating false significance because of a large number of cases in the study (Raudenbush & Bryk, 2002). It is therefore possible, particularly given the limited amount of voting data available in Colorado and Oregon, and some of the statistical noise created by their particular contexts, that modeling more communities in these states might lead to results more typical of Minnesota's without risking invalidating those results by swamping the model with data.

To return to what is apparent in this data and what is probably the most socially negative prediction about communities and news, money does matter in Minnesota, but perhaps not in a socially negative way. It is true that a rise in median household income in a community predicts more overall coverage of that community in the *Star Tribune,* but the same does not hold true for news-only content. From the perspective of non-metropolitan communities, this is somewhat good news. According to the ideas and work done regarding political participation and knowledge gap, individuals need information about issues and events that impact them. When individuals are aware of conflicts in their community, they are not only more informed voters, they are more likely to have the self-efficacy and confidence in the system to motivate them to vote (Moy et al., 2004; McLeod et al., 1996; Kwak et al., 2005; Scheufele & Nisbet, 2002; Schmitt-Beck & Mackenrodt, 2010; Galston, 2001). The expectation is the type of news that can support this mechanism is the conflict-oriented, public affairs-oriented content found in the news sections of the metropolitan newspaper. In Minnesota, there's no effect of income on the production of this type of news for communities, which means that while less affluent

communities may be disappearing in general from the newspaper, they are still being covered in the way that counts the most for societal outcomes.

This is a finding supported in the other states, as well. Other than an almost negligible effect of income in Oregon, none of the states seem to direct news content to more affluent communities. In fact, all of the hypotheses about what types of communities will receive greater attention from the metro newspaper are not supported or more weakly supported when only news is considered. Population size matters in Minnesota and Oregon, age pluralism matters in Colorado, and distance in that state means that some of the communities farther out experience smaller effects on certain relationships than they might have expected had they been nearer. The all-content models show more of the patterns predicted by the hypotheses: Income, population, the presence of a daily newspaper and distance in Minnesota, pluralism and distance in Colorado, and the presence of a daily in Oregon. Most importantly, there is a negative effect of time when it comes to all-content in Minnesota and Oregon that doesn't appear in the news content models. There can be no doubt that these newspapers were working with smaller staffs and budgets as the study time progressed. *The Oregonian* also cut back its distribution reach twice during the study. It would appear, though, that this affected the types of content traditionally less associated with the social impact of journalism on society and democracy. Even in Colorado, where the predicted variables had the least impact overall, those that were found in overall coverage mattered less when it came to the production of news-only community coverage. It appears that in this time of cutbacks, these news organizations put their efforts into preserving hard news coverage for

communities. These newspapers produced less content overall, but levels of news community coverage stayed relatively stable throughout the process. There was some pullback for a few types of communities at the far edges of the regions, but, surprisingly, these news organizations continued to participate in their end of the social bargain.

This brings up an interesting new facet to ideas about pluralism and news production and the growth of news organizations. In Demers's (1991, 1994a, 1994b) work showing the relationships between community complexity and the growth of news organizations, the measures were largely managerial aspects of the news organizations, such as number of employees, how much education those employees had, ownership structure, profitability, and the attention to profits and revenue from different areas. The news quality measures were linked to these resource measures, either directly in assuming more and better-educated staff produced better products, or indirectly by surveying managerial staff or community members about the levels and types of coverage the newspaper provided. Assuming that production inputs and staffing levels lead to better journalistic quality, and that journalistic quality is tantamount to fulfilling the democratic needs of audiences is a typical belief in news organizations. As just one example, a book-length Federal Communication Commission report into the information needs of communities (Waldman, 2011) was based on the assumption that prior employment levels in traditional journalism were a proxy for adequate community coverage, and therefore, measuring reductions in journalistic staffs in different outlets would reveal where unmet information needs were growing.

The evidence in this project does not contradict that assumption, but it does provide nuance. Pluralism may very well be connected to the overall functioning of a metropolitan newspaper, but perhaps more to the side of its more entertaining and advertiser-friendly content. Some of the "soft news" sections, particularly those that descended from the "women's pages" such as those devoted to "lifestyle," home, or fashion, were concerted efforts to attract more advertisers to the newspaper (Yang, 1996). One of the foundational works in the relationship between communities and their news sources (Janowitz, 1967) concludes that growing complexity in communities leads to growing complexity in businesses, particularly retail, and that media in those communities create softer content to best serve those advertisers. Demers (1994a, 1994b) may be right about this relationship between pluralism and newspapers, in that community complexity leads to more market segments, which lead to more targeted businesses, which lead to more content that complements those businesses, perhaps driven by the "business-side" in newspapers, or the advertising and operations management. What may be underestimated in this theory are the strong normative beliefs about what is important in news production inherent in the "news-side" of newspapers, or the rank-and-file journalists, editors, and news management staff producing content. Throughout cutbacks, it appears decisions were made, likely from both sides, that when it came to expending resources to cover regional communities that the hard news coverage considered more important in normative journalistic beliefs would be privileged. Soft content was cut, while it appears that news content was less affected not only by time, but by considerations about what type of community was involved. In summary, there is

some indication here that pluralism may require news media to serve as a site for information flow between groups, but that (hard) news may not need pluralism.

In terms of the types of communities of most concern in this study — those that are homogeneous, small, and distant-from-the metro — the drawback of all content except for news content by metro newspapers is qualified good news, or at worst, not as bad as it may initially sound. Soft news, particularly that which strengthens connections in communities like sports and obituaries, is likely important to the community. However, homogenous and/or small communities would not be assumed to be reliant on metropolitan news to provide this type of content. This type of coverage is emblematic of what is expected in locally produced small media located within these communities. If the metropolitan newspaper continues to provide conflict-oriented public affairs coverage in the community, which is not likely appear in their own local sources, and the local sources continue to provide soft news that integrates the community, little would theoretically change for these communities.

In Colorado and Oregon, this might be assumed to be the case. None of the predictors proposed in these models really changes *The Oregonian's* production of news-only content about communities, although increasing age pluralism in Colorado is a fairly strong, significant source. This likely means that more coverage is going to communities with more older residents, which isn't ideal, but perhaps not as concerning as other relationships might be, for instance steering content away from higher-poverty communities. The situation is different in Minnesota, where the metro daily pullback was first measured and proposed (Donohue et al., 1986). Population is a strong predictor in

amount of *Star Tribune* coverage of communities, meaning that smaller communities see less coverage than they might expect based on other characteristics. Distance is at play in Minnesota, as well, limiting the positive effect of population for larger communities farther away as well as those with more age pluralism, and likely older residents. When it comes to news coverage, the pullback predicted in Donohue et al.'s (1986) original study has appeared to have occurred.

This would be less troubling of a finding if the second part of this project had been less successful in producing its predicted results. While state context does influence results, metropolitan newspaper coverage of communities matters when it comes to how many people in those communities show up to vote in all three states. Even when controlling for well-known contributors to voting, the number of times a community is mentioned in news content in all of the papers in this study has an influence on voting in that community. While just appearing in the newspaper has a positive influence in Minnesota, the effect is larger and apparent in all three states for inclusion in hard news content. This data supports the proposed mechanism of metropolitan media providing conflict-oriented news that informs individuals about issues within their environment, as well as fostering the belief that political participation is a way to influence these issues, which altogether forge the link between knowledge and becoming involved in the political process. The overall trend in *Star Tribune* coverage of communities — decreasing amounts as a function of distance — is mirrored in results modeling numbers of ballots cast. As towns get smaller and farther away, they cast fewer ballots than similar communities closer to the newsroom. What the Donohue et al. (1986) predicted for these

communities going into the 1990s has occurred: Conflict-oriented metropolitan news coverage has diminished, presumably leading to a political knowledge gap in those communities that manifests in their participation at the polls.

Coverage has an even greater impact when it comes to hard news reporting and in off-cycle elections, when voter turnout is typically lower. This supports the overall knowledge gap-political participation hypothesis in a variety of ways. First, the larger importance of hard news coverage is consistent with the argument that conflict-oriented, public affairs-related news content is involved in informing residents about issues that need their involvement in their communities. While just including communities in coverage leads to higher participation, consistent with work in community communication integration theories, coverage has more impact when it falls in the hard news category. Second, news coverage is more important in years where national coverage is likely not as much of a factor. Off-cycle elections very rarely involve national-level issues and instead are made up of questions and elections that affect the state, county, and community. This aligns with the argument that non-metropolitan news consumers have multiple choices for national-level news, but are reliant on more local sources for information on local topics (Hindman & Beam, 2014). In communities without their own source of conflict-oriented news production, this would likely fall to the regional metropolitan newspaper, and in communities where the metro paper covers more hard news, more individuals turn up to vote.

Another unexpected result in modeling was the significant positive impact the presence of a local daily had on metropolitan coverage in Minnesota and Colorado. While

this might seem reasonable from a structural pluralism standpoint — community complexity requires more news organizations producing more news to facilitate functioning — the relative weakness of pluralism predictors in the models seems to undercut this view. There is also the problem of the umbrella model of newspaper competition (Rosse, 1975; Lacy & Davenport, 1994), which holds that news organizations at different levels do not compete with each other for readers. This model was modified in this project to also explain content production, theorizing that different levels also produce different content, based on the assumed added pluralism of going up levels in the system. Metropolitan newspapers are a level above regional dailies, but in Minnesota and Oregon, those communities received significantly more metro coverage than similar communities without a daily. When it comes to coverage, the *Star Tribune* and *Oregonian* do not avoid those communities in coverage because they already have a daily, they are more attracted to them.

This result could mean a variety of things. First, it may be an indication, along with those previously discussed, that the models may need more data for clearer results. There were relatively few communities in the samples with daily newspapers and adding more may change coefficients in the model. This is somewhat unlikely given that effects were found, and those effects were quite large. This would seem to indicate they are not the result of noise in the data, but rather something distinct about these communities. A more likely possibility is that these communities have increased pluralism, thus attracting more news coverage, but that the measure of this is not included in this data set. Likely places to look would be the inclusion of a measure of occupational complexity — not

included in this analysis because of lack of data for small communities throughout time — or a composite index of pluralism that captures overall complexity rather than through aspect-by-aspect measures. This finding also does not mean that the umbrella model theory of content production is necessarily wrong. If these communities with dailies are structurally pluralistic, the news organizations that cover them would likely be attracted to that content and also produce the same type of conflict-oriented reporting on them. What is perhaps interesting in this relationship is that while news coverage by the metro in Minnesota and Oregon almost always has a positive effect on voting, the presence of a daily is only significant in one state under one condition: off-cycle voting in Minnesota when all-content is in the model. When news-only content from the *Star Tribune* is modeled, the effect of the daily disappears. This could possibly be a sign of the local dailies and the metro covering the same news in the same way, or intermedia agenda-setting (Roberts & McCombs, 1994), with one following the coverage of the other. In both cases, the news content needed to spur voting gets to the public, resulting in the same effect. The mechanism behind the influence of regional dailies on metro coverage and voting behaviors clearly deserves further investigation.

Overall, the findings in this study paint a rosier picture than was expected at its outset. While it is encouraging that the newspapers in this study were able to maintain levels of coverage mostly consistently across communities, it is important to note that in almost all cases this was in the midst of an overall decline in coverage. Even if metro newspapers remain "fair" in cutbacks, trying to minimize the impact for any one type of community or region, the entire region is still getting less coverage than it had in the past.

Following the conclusions of these models, if this trend continues, the lack of journalistic coverage in communities could contribute to declining numbers of voters. Given that the metropolitan newspaper has been one of most financially effected types of journalism in recent decades, this would seem to be the most likely conclusion.

This study would appear to be the first to include a way of measuring the differences in news content from other types of content when it comes to direct comparisons of communities in metro newspaper content over time. However, it cannot address other aspects of journalistic tone, framing, or quality. The measures in this study merely capture that a community was mentioned in content or in content placed in the areas traditionally reserved for harder news. What these stories were about, how well they were written in a journalistically normative sense, whether they challenged or supported authority, and their complexity are not included. Given that this study looks at news production in a time of financial stress on the organizations in question, knowing who originated the community mentions is important. Information subsidies (also known as *press releases* and *media kits*) are information written in a journalistic style meant to mimic journalistic forms and typically provide information from the point of view of the creator, rather than the objective stance called for in journalistic practice. Information subsidies are more likely to be used by news organizations with budgetary restrictions who want to include news about an issue in their content, but not go to the expense of assigning journalists to gather information (Griffin & Dunwoody, 1995). In light of previous work, it could be expected that metros facing budget restrictions would be more likely to include information subsidies as content, and the methods in this study would

not detect this difference. However, if this is happening it does not seem to undo the effects of news content on voting. Under the operational theory in this paper, individuals would still understand there is an issue in their area and go out to vote as part of the process of dealing with it. The real question with information subsidies would be whether this would influence how they choose to vote and how well they understand the issue at hand.

One possible confounding factor should be addressed: It is possible that events may be driving both news coverage and voting behaviors. Communities that experience controversial issues of debate or events that drive individuals to act may draw both the attention of journalists and motivate residents to go to the polls. This potential variable would be difficult to incorporate into cross-sectional longitudinal analysis designs, but could become possible as technology and methods continue to evolve. This limitation, as well as those already addressed, should be incorporated into future lines of research.

This project supports previous ideas in some ways and contradicts them in others. In both respects, it can be seen as extending this theoretical work. Because these are relatively new methods that more precisely measure concepts than was possible in the past, this precision could be expected to add complexity to established theoretical relationships. When Donohue et al. (1986) suggested that metropolitan newspapers were pulling back from non-metropolitan communities and that this would have an impact on civic life in those communities, it was not feasible to actually measure journalistic content across time. Large-scale comparisons of smaller communities have been similarly limited by the sheer amount of data needed to provide results with the statistical power to

show impacts across more than a handful of communities at one time. The search string method developed for this study to isolate references to specific communities worked consistently well across the states involved. Conceivably, it should be able to do the same for a variety of contexts in analyzing mentions of geographic communities in large corpuses of texts, although its lack of parsimony and its tailoring to journalistic writing conventions may limit it for wider use. Even so, it should always be kept in mind that this is an analysis of three states, using a newer method, and demands further replication and model extensions before these modifications of relationships should be accepted. The success of combining this method with multilevel statistical modeling in this project provides evidence that this path could be beneficial for measuring journalism's production and impacts in the future. In an age where journalism must increasingly justify its existence in terms of the role it plays in society, these methods may become increasingly important to quantifying the benefits society receives from journalistic output.

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Appendix A

Sampled Communities and Search String Applied

Minnesota
Afton (Name)
Alden (Name)
Beaver Creek (Place)
Belle Plaine (Place)
Bemidji (Empty)
Bigelow (Name)
Brandon (Name)
Caledonia (Place)
Campbell (Name)
Clarkfield (Empty)
Comfrey (Empty)
Dalton (Name)
Deer River (Place)
Duluth (Place)
Eden Valley (Empty)
Erskine (Name)
Evan (Name)
Fridley (Empty)
Golden Valley (Place)
Gully (Preposition)
Hector (Name)
Hitterdal (Name)
Isanti (Place)
Ivanhoe (Name)
Jasper (Name)
La Crescent (Empty)
Lake Shore (Preposition)
Lexington (Name)
Litchfield (Name)
Marine on St. Croix (Empty)
Melrose (Name)
Menahga (Empty)
Miesville (Place)
Minneota (Empty)
Morgan (Name)
Morristown (Place)
New Brighton (Place)
New York Mills (Place)
Newport (Name)

Nimrod (Preposition)
Owatonna (Empty)
Quamba (Empty)
Richmond (Name)
Rogers (Name)
Rose Creek (Place)
Russell (Name)
Seaforth (Empty)
Sedan (Preposition)
Sleepy Eye (Place)
Solway (Place)
St. Hilaire (Preposition)
Stillwater (Place)
Strandquist (Name)
Vernon Center (Empty)
Wabasha (Place)
Wahkon (Place)
Warroad (Place)
Woodbury (Place)
Woodstock (Preposition)
Zemple (Name)

Colorado
Air Force Academy (Empty)
Ault (Name)
Avon (Preposition)
Battlement Mesa (Empty)
Berthoud (Name)
Black Forest (Preposition)
Black Hawk (Preposition)
Bow Mar (Empty)
Brighton (Place)
Center (Center method)
Cheyenne Wells (Empty)
Coal Creek (Place)
Cokedale (Place)
Collbran (Empty)
Columbine Valley (Empty)
Craig (Name)
Crested Butte (Empty)
Delta (Name)
Derby (Preposition)
Eagle (Name)
Eagle-Vail (Place)

Edgewater (Place)
Eldora (Place)
Eldorado Springs (Place)
Fowler (Name)
Frisco (Place)
Fruita (Place)
Gilcrest (Place)
Gleneagle (Place)
Gypsum (Preposition)
Jamestown (Place)
Kim (Name)
La Junta (Place)
Lyons (Name)
Mancos (Place)
Manitou Springs (Empty)
Manzanola (Empty)
Montezuma (Place)
Montrose (Place)
Mountain Village (Preposition)
Olney Springs (Empty)
Ophir (Place)
Otis (Name)
Palisade (Preposition)
Perry Park (Place)
Ponderosa Park (Place)
Redlands (Place)
Rico (Name)
Romeo (Name)
San Luis (Place)
Severance (Preposition)
Sherrelwood (Empty)
Silverton (Place)
Sterling (Name)
Victor (Name)
Walsh (Name)
Ward (Name)
West Pleasant View (Place)
Westcliffe (Place)
Wiggins (Name)

Oregon
Alsea (Name)
Aurora (Name)
Bayside Gardens (Empty)

Brookings (Name)
Brownsville (Place)
Cedar Hills (Place)
Chenoweth (Name)
Creswell (Name)
Culver (Name)
Days Creek (Empty)
Deer Island (Place)
Deschutes River Woods (Empty)
Eagle Point (Place)
Fair Oaks (Place)
Foots Creek (Empty)
Garibaldi (Name)
Gervais (Name)
Granite (Preposition)
Haines (Name)
Happy Valley (Place)
Harper (Name)
Hermiston (Place)
Hines (Name)
Idaville (Place)
Kings Valley (Empty)
La Pine (Empty)
Lincoln City (Place)
Lookingglass (Empty)
Lowell (Name)
Maywood Park (Place)
Medford (Name)
Merrill (Name)
Metzger (Name)
Mill City (Place)
Monmouth (Name)
Monument (Preposition)
New Hope (Name)
Newport (Name)
North Powder (Place)
O'Brien (Name)
Oak Hills (Place)
Ontario (Place)
Plush (Preposition)
Pronghorn (Preposition)
Riverside (Preposition)
Rowena (Name)
Sandy (Name)

Scotts Mills (Name)
Selma (Name)
Seneca (Name)
Sodaville (Empty)
Stayton (Empty)
Summit (Name)
Tetherow (Empty)
Tigard (Empty)
Tutilla (Place)
Unity (Name)
Vale (Preposition)
Warrenton (Place)
West Linn (Place)

Appendix B

Coding Procedure for Determining Relevancy of Mentions to Communities

Introduction

This protocol addresses the coverage of different communities by metropolitan newspapers over time. Most of this analysis will be done through computer-assisted content analysis. This specific sub-protocol addresses establishing reliability for determining whether a sample story is about the targeted community or about another topic that shares the same name. For instance, whether a story includes mention of the town of Russell, Minnesota, or was pulled because it includes mention of the basketball player Russell Westbrook. This protocol addresses coding for relevancy for sample returns for a completely open search string, which means that any story that includes a term that matches the town name will be included. Reliability establishing when stories are or are not about target communities is part of the process of creating closed search strings that accurately capture just the content needed. Therefore, at this stage coders are asked to only judge whether or not a story includes mention of the target community.

Procedure for Story Eligibility for Study

Because this is from an open search string, any story will a mention of the target community's name — whether or not it is actually a story about the target community — is eligible. To help with this, every time a search term appears in the story it will be highlighted in the text version provided for coding. If you can't find a highlighted term in the story, please contact Sarah Cavanah, primary researcher.

Coding Procedure

The coding spreadsheet is ordered in the same order as the document with the texts for coding. Each target community has three randomly selected stories. The target community name can be identified from the spreadsheet or from the highlighting of target community name in the copy.

Read headlines, decks and copy for mentions of the community name. (The name will be highlighted for easy scanning.) Check the headline, deck and first paragraph for clues to the state and country location of the story. In the paragraph where the town name first appears, look again for cues to general state and country location. Any mention of the target community, even if it is the second or fifth mention, that fits the relevancy rules means that that story should be considered relevant.

In some of the early years, our access to full text is limited. In some cases the automatic capture does not get the portion of the story that references the community. In those cases, a screen capture of the relevant portion will be included after the automatically captured text. Screen captures should also be coded. In some cases where the name of the community is more than one word, some words may be cut off in the screen capture. It is safe to assume that the rest of the town name follows or precedes the captured section.

Very rarely, a segment will be captured that has no reference to the community. Code that as an irrelevant story.

For communities with a large amount of results in more recent years, ProQuest only downloads a portion of the story. In that case, the screen capture is included, but the full text can also be accessed by clicking on the links in the story if necessary for deciding whether the story is about the target community.

The reference does not have to be about an ongoing event to be considered relevant and can be a reference to something in history.

The reference does not have to be about an ongoing event to be considered relevant and can be a reference to something in history.

Variable Operational Definitions
V1: **Relevant**
A story is considered relevant if it contains at least one mention that indicates that the story is referring to the target geographic community.
Code 1 for relevant, 0 for not relevant

The following are general guidelines to help if it is not entirely clear if the story should be considered relevant. For the most part, cues in the full text should obviate the need for these guidelines, but they are useful for older stories with more limited text available. Please remember: stories should be coded as relevant if *any* mention meets the relevancy rules, even if other mentions do not.

Not relevant if the town name is adjacent to another state or country name in the common form of TownName, State/Country.

Example: “Sleepy Eye, Conn.” would not be relevant

However, following common Associated Press style, “Minn.” or a variation *does not* have to be included for the town to be considered in Minnesota. Lack of a state is the AP style for signaling that the community is within the same state as the paper.

Not relevant if the town name is attached to the name of a waterway and no reference to a community is made. In selections with limited context and a town name that is also a waterway, use the preposition as a cue. If the name is proceeded by “in” and the town name, it is relevant, if it is proceeded by “at” or “on” and nothing follows, consider it referring to the waterway and mark it irrelevant.

Example: “Sleepy Eye Creek” would not be relevant for Sleepy Eye

Example: “in Beaver Creek” would be relevant

Example: "at Beaver Creek High School" would be relevant

Example: "…took place at Beaver Creek. The next day…" would not be relevant

However, businesses and institutions that are connected to the town name and included in stories should be considered as relevant references, as they are most likely located in the town that is being sampled, *unless the copy specifically states that the institution is located in a different community.*

Example: "Sleepy Eye Auction Market" would be relevant

Example: "Sleepy Eye Auction Market in Beaver Creek" would be not relevant

Count as relevant references to people if they are identified as "from" the community.

Example: "A family from Sleepy Eye" would be relevant

Datelines should be considered as relevant as they place the location of the story in the community. A dateline can be identified usually as the town name listed in all-caps, followed by punctuation, usually an em dash

Example:" SLEEPY EYE — A fireworks demonstration… " would be relevant.

References to titles associated with the community should be coded as relevant, including governmental and honorific titles.

Example: "Miss Sleepy Eye" and "mayor of Sleepy Eye" are both relevant.

A reference to the area around a community, if it uses the community's name, is relevant.

Example: "In the area around Sleepy Eye"

Appendix C
Search String Examples

Open String
Pub(Star Tribune) "CityName"

Empty String
Pub(Star Tribune) FT("CityName")

Place String
Pub(Oregonian) FT(“Fair Oaks”) NOT(“Fair Oaks, Alabama” OR “Fair Oaks, Alaska” OR “Fair Oaks, Arizona” OR “Fair Oaks, Arkansas” OR “Fair Oaks, California” OR “Fair Oaks, Minnesota” OR “Fair Oaks, Connecticut” OR “Fair Oaks, Delaware” OR “Fair Oaks, Florida” OR “Fair Oaks, Georgia” OR “Fair Oaks, Hawaii” OR “Fair Oaks, Idaho” OR “Fair Oaks, Illinois” OR “Fair Oaks, Indiana” OR “Fair Oaks, Iowa” OR “Fair Oaks, Kansas” OR “Fair Oaks, Kentucky” OR “Fair Oaks, Louisiana” OR “Fair Oaks, Maine” OR “Fair Oaks, Maryland” OR “Fair Oaks, Massachusetts” OR “Fair Oaks, Michigan” OR “Fair Oaks, Mississippi” OR “Fair Oaks, Missouri” OR “Fair Oaks, Montana” OR “Fair Oaks, Nebraska” OR “Fair Oaks, Nevada” OR “Fair Oaks New Hampshire” OR “Fair Oaks, New Jersey” OR “Fair Oaks, New Mexico” OR “Fair Oaks, New York” OR “Fair Oaks, North Carolina” OR “Fair Oaks, North Dakota” OR “Fair Oaks, Ohio” OR “Fair Oaks, Oklahoma” OR “Fair Oaks, Colorado” OR “Fair Oaks, Pennsylvania” OR “Fair Oaks, Rhode Island” OR “Fair Oaks, South Carolina” OR “Fair Oaks, South Dakota” OR “Fair Oaks, Tennessee” OR “Fair Oaks, Texas” OR “Fair Oaks, Utah” OR “Fair Oaks, Vermont” OR “Fair Oaks, Virginia” OR “Fair Oaks, Washington” OR “Fair Oaks, West Virginia” OR “Fair Oaks, Wisconsin” OR “Fair Oaks, Wyoming” OR “Fair Oaks, AL” OR “Fair Oaks, AK” OR “Fair Oaks, AZ” OR “Fair Oaks, AR” OR “Fair Oaks, CA” OR “Fair Oaks, CO” OR “Fair Oaks, CT” OR “Fair Oaks, DE” OR “Fair Oaks, FL” OR “Fair Oaks, GA” OR “Fair Oaks, HI” OR “Fair Oaks, ID” OR “Fair Oaks, IL” OR “Fair Oaks, IN” OR “Fair Oaks, IA” OR “Fair Oaks, KS” OR “Fair Oaks, KY” OR “Fair Oaks, LA” OR “Fair Oaks, ME” OR “Fair Oaks, MD” OR “Fair Oaks, MA” OR “Fair Oaks, MA” OR “Fair Oaks, MI” OR “Fair Oaks, MS” OR “Fair Oaks, MO” OR “Fair Oaks, MT” OR “Fair Oaks, NE” OR “Fair Oaks, NV” OR “Fair Oaks, NH” OR “Fair Oaks, NJ” OR “Fair Oaks, NM” OR “Fair Oaks, NY” OR “Fair Oaks, NC” OR “Fair Oaks, ND” OR “Fair Oaks, OH” OR “Fair Oaks, OK” OR “Fair Oaks, CO” OR “Fair Oaks, PA” OR “Fair Oaks, RI” OR “Fair Oaks, SC” OR “Fair Oaks, SD” OR “Fair Oaks, TN” OR “Fair Oaks, TX” OR “Fair Oaks, UT” OR “Fair Oaks, VT” OR “Fair Oaks, VA” OR “Fair Oaks, WA” OR “Fair Oaks, WV” OR “Fair Oaks, WI” OR “Fair Oaks, WY” OR “Fair Oaks, Ala.” OR “Fair Oaks, Ariz.” OR “Fair Oaks, Ark.” OR “Fair Oaks, Calif.” OR “Fair Oaks, Minn.” OR “Fair Oaks, Conn.” OR “Fair Oaks, Del.” OR “Fair Oaks, Fla.” OR “Fair Oaks, Ga.” OR “Fair Oaks, Ill.” OR “Fair Oaks, Ind.” OR “Fair Oaks, Kan.” OR “Fair Oaks, Ky.” OR “Fair Oaks, La.” OR “Fair Oaks, Md.” OR “Fair Oaks, Mass.” OR “Fair Oaks, Mich.” OR “Fair Oaks, Miss.” OR “Fair Oaks, Mo.” OR “Fair Oaks, Mont.” OR “Fair Oaks, Neb.” OR “Fair Oaks,

Nev." OR "Fair Oaks, N.H." OR "Fair Oaks, N.J." OR "Fair Oaks, N.M." OR "Fair Oaks, N.Y." OR "Fair Oaks, N.C." OR "Fair Oaks, N.D." OR "Fair Oaks, Okla." OR "Fair Oaks, Colo." OR "Fair Oaks, Pa." OR "Fair Oaks, R.I." OR "Fair Oaks, S.C." OR "Fair Oaks, S.D." OR "Fair Oaks, Tenn." OR "Fair Oaks, Vt." OR "Fair Oaks, Va." OR "Fair Oaks, Wash." OR "Fair Oaks, W.Va." OR "Fair Oaks, Wis." OR "Fair Oaks, Wyo." OR "Fair Oaks Driveway" OR "Fair Oaks Alley" OR "Fair Oaks, Avenue" OR "Fair Oaks, Ave." OR "Fair Oaks Backroad" OR "Fair Oaks Boulevard" OR "Fair Oaks Blvd." OR "Fair Oaks Byway" OR "Fair Oaks Court" OR "Fair Oaks Ct." OR "Fair Oaks Drive" OR "Fair Oaks Dr." OR "Fair Oaks Frontage" OR "Fair Oaks Highway" OR "Fair Oaks Hwy." OR "Fair Oaks Lane" OR "Fair Oaks Road" OR "Fair Oaks Ln." OR "Fair Oaks, Rd." OR "Fair Oaks Street" OR "Fair Oaks St." OR "Fair Oaks Expressway" OR "Fair Oaks Parkway" OR "Fair Oaks Pkwy" OR "Fair Oaks Turnpike" OR "Fair Oaks Freeway" OR "Fair Oaks Motorway" OR "Fair Oaks Lake" OR "Fair Oaks Mountain" OR "Fair Oaks family" OR "Fair Oaks Place" OR "Fair Oaks Park" OR "Fair Oaks County" OR "Fort Fair Oaks" OR "Fair Oaks Estates" OR "Fair Oaks Circle" OR "Fair Oaks Club" OR "Fair Oaks Group" OR "Fair Oaks Sts." OR "Fair Oaks Creek" OR "Fair Oaks streets" OR "Fair Oaks Bridge" OR "Fair Oaks counties" OR "Fair Oaks Square" OR "Fair Oaks Rds." OR "Fair Oaks Av." OR "Fair Oaks Avs." OR "Fair Oaks Beach" OR "Fair Oaks Island" OR "Fair Oaks Valley" OR "Fair Oaks, Canada" OR "Fair Oaks Hockey League")

Preposition String

Pub(Denver Post) FT("Palisade, Colo." OR "Palisade, CO" OR "Palisade, Colorado" OR "of Palisade" OR "at Palisade" OR "across Palisade" OR "along Palisade" OR "amid Palisade" OR "around Palisade" OR "behind Palisade" OR "below Palisade" OR "beneath Palisade" OR "beside Palisade" OR "between Palisade" OR "inside Palisade" OR "beyond Palisade" OR "down Palisade" OR "in Palisade" OR "into Palisade" OR "near Palisade" OR "of Palisade" OR "off Palisade" OR "on Palisade" OR "onto Palisade" OR "opposite Palisade" OR "outside Palisade" OR "over Palisade" OR "past Palisade" OR "round Palisade" OR "through Palisade" OR "to Palisade" OR "toward Palisade" OR "towards Palisade" OR "under Palisade" OR "underneath Palisade" OR "up Palisade" OR "upon Palisade" OR "via Palisade" OR "within Palisade") NOT("Palisade Community Church" OR "Palisade, Alabama" OR "Palisade, Alaska" OR "Palisade, Arizona" OR "Palisade, Arkansas" OR "Palisade, California" OR "Palisade, Oregon" OR "Palisade, Connecticut" OR "Palisade, Delaware" OR "Palisade, Florida" OR "Palisade, Georgia" OR "Palisade, Hawaii" OR "Palisade, Idaho" OR "Palisade, Illinois" OR "Palisade, Indiana" OR "Palisade, Iowa" OR "Palisade, Kansas" OR "Palisade, Kentucky" OR "Palisade, Louisiana" OR "Palisade, Maine" OR "Palisade, Maryland" OR "Palisade, Massachusetts" OR "Palisade, Michigan" OR "Palisade, Mississippi" OR "Palisade, Missouri" OR "Palisade, Montana" OR "Palisade, Nebraska" OR "Palisade, Nevada" OR "Palisade New Hampshire" OR "Palisade, New Jersey" OR "Palisade, New Mexico" OR "Palisade, New York" OR "Palisade, North Carolina" OR "Palisade, North Dakota" OR "Palisade, Ohio" OR "Palisade, Oklahoma" OR "Palisade, Minnesota" OR "Palisade, Pennsylvania" OR "Palisade, Rhode Island" OR "Palisade,

South Carolina" OR "Palisade, South Dakota" OR "Palisade, Tennessee" OR "Palisade, Texas" OR "Palisade, Utah" OR "Palisade, Vermont" OR "Palisade, Virginia" OR "Palisade, Washington" OR "Palisade, West Virginia" OR "Palisade, Wisconsin" OR "Palisade, Wyoming" OR "Palisade, AL" OR "Palisade, AK" OR "Palisade, AZ" OR "Palisade, AR" OR "Palisade, CA" OR "Palisade, OR" OR "Palisade, CT" OR "Palisade, DE" OR "Palisade, FL" OR "Palisade, GA" OR "Palisade, HI" OR "Palisade, ID" OR "Palisade, IL" OR "Palisade, IN" OR "Palisade, IA" OR "Palisade, KS" OR "Palisade, KY" OR "Palisade, LA" OR "Palisade, ME" OR "Palisade, MD" OR "Palisade, MA" OR "Palisade, MA" OR "Palisade, MI" OR "Palisade, MS" OR "Palisade, MO" OR "Palisade, MT" OR "Palisade, NE" OR "Palisade, NV" OR "Palisade, NH" OR "Palisade, NJ" OR "Palisade, NM" OR "Palisade, NY" OR "Palisade, NC" OR "Palisade, ND" OR "Palisade, OH" OR "Palisade, OK" OR "Palisade, MN" OR "Palisade, PA" OR "Palisade, RI" OR "Palisade, SC" OR "Palisade, SD" OR "Palisade, TN" OR "Palisade, TX" OR "Palisade, UT" OR "Palisade, VT" OR "Palisade, VA" OR "Palisade, WA" OR "Palisade, WV" OR "Palisade, WI" OR "Palisade, WY" OR "Palisade, Ala." OR "Palisade, Ariz." OR "Palisade, Ark." OR "Palisade, Calif." OR "Palisade, Ore." OR "Palisade, Conn." OR "Palisade, Del." OR "Palisade, Fla." OR "Palisade, Ga." OR "Palisade, Ill." OR "Palisade, Ind." OR "Palisade, Kan." OR "Palisade, Ky." OR "Palisade, La." OR "Palisade, Md." OR "Palisade, Mass." OR "Palisade, Mich." OR "Palisade, Miss." OR "Palisade, Mo." OR "Palisade, Mont." OR "Palisade, Neb." OR "Palisade, Nev." OR "Palisade, N.H." OR "Palisade, N.J." OR "Palisade, N.M." OR "Palisade, N.Y." OR "Palisade, N.C." OR "Palisade, N.D." OR "Palisade, Okla." OR "Palisade, Minn." OR "Palisade, Pa." OR "Palisade, R.I." OR "Palisade, S.C." OR "Palisade, S.D." OR "Palisade, Tenn." OR "Palisade, Vt." OR "Palisade, Va." OR "Palisade, Wash." OR "Palisade, W.Va." OR "Palisade, Wis." OR "Palisade, Wyo." OR "Palisade Driveway" OR "Palisade Alley" OR "Palisade, Avenue" OR "Palisade, Ave." OR "Palisade Backroad" OR "Palisade Boulevard" OR "Palisade Blvd." OR "Palisade Byway" OR "Palisade Court" OR "Palisade Ct." OR "Palisade Drive" OR "Palisade Dr." OR "Palisade Frontage" OR "Palisade Highway" OR "Palisade Hwy." OR "Palisade Lane" OR "Palisade Road" OR "Palisade Ln." OR "Palisade, Rd." OR "Palisade Street" OR "Palisade St." OR "Palisade Expressway" OR "Palisade Parkway" OR "CityRoad Turnpike" OR "Palisade Freeway" OR "Palisade Motorway" OR "Palisade Lake" OR "Palisade Mountain" OR "Palisade family" OR "Palisade Place" OR "Palisade Park" OR "Palisade County" OR "Fort Palisade" OR "Palisade Estates" OR "Palisade Circle" OR "Palisade Club" OR "Palisade Group" OR "Palisade Sts." OR "Palisade Creek" OR "Palisade streets" OR "Palisade Bridge" OR "Palisade counties" OR "Palisade Square" OR "Palisade Rds." OR "Palisade Av." OR "Palisade Avs." OR "Palisade Beach" OR "Palisade Island" OR "Palisade Day" OR "Palisade, England" OR "display of Palisade" OR "sense of Palisade" OR "spirit of Palisade" OR "show of Palisade" OR "Hispanics in Palisade" OR "declaration of Palisade" OR "feeling of Palisade" OR "lack of Palisade" OR "Palisade antelope" OR "Palisade Equities" OR "chunks of Palisade" OR "pieces of Palisade" OR "tons of Palisade" OR "blocks of Palisade" OR "slabs of Palisade" OR "carved into Palisade" OR "piece of Palisade" OR "carved in Palisade")

Name String

Pub(Star Tribune) FT("Afton, Minn." OR "Afton, MN" OR "Afton, Minnesota" OR "of Afton" OR "at Afton" OR "across Afton" OR "along Afton" OR "amid Afton" OR "around Afton" OR "behind Afton" OR "below Afton" OR "beneath Afton" OR "beside Afton" OR "between Afton" OR "inside Afton" OR "beyond Afton" OR "down Afton" OR "in Afton" OR "into Afton" OR "near Afton" OR "of Afton" OR "off Afton" OR "on Afton" OR "onto Afton" OR "opposite Afton" OR "outside Afton" OR "over Afton" OR "past Afton" OR "round Afton" OR "through Afton" OR "to Afton" OR "toward Afton" OR "towards Afton" OR "under Afton" OR "underneath Afton" OR "up Afton" OR "upon Afton" OR "via Afton" OR "within Afton") NOT("Afton B." OR "Afton C." OR "Afton D." OR "Afton E." OR "Afton F." OR "Afton G." OR "Afton H." OR "Afton I." OR "Afton J." OR "Afton K." OR "Afton L." OR "Afton M." OR "Afton N." OR "Afton O." OR "Afton P." OR "Afton Q." OR "Afton R." OR "Afton S." OR "Afton T." OR "Afton U." OR "Afton V." OR "Afton W." OR "Afton X." OR "Afton Y." OR "Afton Z." OR "B. Afton" OR "C. Afton" OR "D. Afton" OR "E. Afton" OR "F. Afton" OR "G. Afton" OR "H. Afton" OR "I. Afton" OR "J. Afton" OR "K. Afton" OR "L. Afton" OR "M. Afton" OR "N. Afton" OR "O. Afton" OR "P. Afton" OR "Q. Afton" OR "R. Afton" OR "S. Afton" OR "T. Afton" OR "U. Afton" OR "V. Afton" OR "W. Afton" OR "X. Afton" OR "Y. Afton" OR "Z. Afton" OR "daughter Afton" OR "daughters Afton" OR "granddaughter Afton" OR "granddaughters Afton" OR "grandson Afton" OR "grandsons Afton" OR "brother Afton" OR "brothers Afton" OR "sister Afton" OR "sisters Afton" OR "son Afton" OR "sons Afton" OR "mother Afton" OR "father Afton" OR "mother-in-law Afton" OR "father-in-law Afton" OR "cousin Afton" OR "cousins Afton" OR "niece Afton" OR "nieces Afton" OR "nephew Afton" OR "nephews Afton" OR "great-granddaughter Afton" OR "great-granddaughters Afton" OR "great-grandson Afton" OR "great-grandsons Afton" OR "wife Afton" OR "wives Afton" OR "husband Afton" OR "husbands Afton" OR "Afton daughter" OR "Afton daughters" OR "Afton granddaughter" OR "Afton granddaughters" OR "Afton grandson" OR "grandsons Afton" OR "Afton grandchildren" OR "Afton grandchild" OR "Afton brother" OR "Afton brothers" OR "Afton son" OR "Afton sons" OR "Afton sister" OR "Afton sisters" OR "Afton mother-in-law" OR "Afton father-in-law" OR "Afton cousin" OR "Afton cousins" OR "Afton niece" OR "Afton nieces" OR "Afton nephew" OR "Afton nephews" OR "Afton great-grandaughter" OR "Afton great-granddaugthers" OR "Afton great-grandson" OR "Afton great-grandsons" OR "grandchild Afton" OR "grandchildren Afton" OR "Afton wife" OR "Afton husband" OR "late Afton" OR "James Afton" OR "Jim Afton" OR "Jimmy Afton" OR "Jamie Afton" OR "John Afton" OR "Jon Afton" OR "Jonathan Afton" OR "Johnathan Afton" OR "Robert Afton" OR "Bob Afton" OR "Rob Afton" OR "Robbie Afton" OR "Bobby Afton" OR "Bert Afton" OR "Michael Afton" OR "Mike Afton" OR "Mikey Afton" OR "Mickey Afton" OR "William Afton" OR "Bill Afton" OR "Will Afton" OR "Liam Afton" OR "Willie Afton" OR "Billy Afton" OR "David Afton" OR "Dave Afton" OR "Davey Afton" OR "Richard Afton" OR "Rich Afton" OR "Richie Afton" OR "Dick Afton" OR "Joseph Afton" OR "Joe Afton" OR "Joey Afton" OR "Charles Afton" OR "Charlie Afton" OR "Chuck Afton"

OR “Thomas Afton” OR “Thom Afton” OR “Tom Afton” OR “Tommy Afton” OR “Christopher Afton” OR “Chris Afton” OR “Daniel Afton” OR “Dan Afton” OR “Danny Afton” OR “Matthew Afton” OR “Matt Afton” OR “Mathew Afton” OR “Donald Afton” OR “Don Afton” OR “Donnie Afton” OR “Anthony Afton” OR “Tony Afton” OR “Mark Afton” OR “Marc Afton” OR “Paul Afton” OR “Steve Afton” OR “Steve Afton” OR “George Afton” OR “Kenneth Afton” OR “Ken Afton” OR “Andrew Afton” OR “Andy Afton” OR “Drew Afton” OR “Edward Afton” OR “Ed Afton” OR “Eddie Afton” OR “Joshua Afton” OR “Josh Afton” OR “Brian Afton” OR “Kevin Afton” OR “Ronald Afton” OR “Ron Afton” OR “Ronnie Afton” OR “Timothy Afton” OR “Tim Afton” OR “Timmy Afton” OR “Jason Afton” OR “Jeffrey Afton” OR “Jeff Afton” OR “Ryan Afton” OR “Gary Afton” OR “Nicholas Afton” OR “Nick Afton” OR “Eric Afton” OR “Jacob Afton” OR “Jake Afton” OR “Stephen Afton” OR “Larry Afton” OR “Frank Afton” OR “Scott Afton” OR “Justin Afton” OR “Brandon Afton” OR “Raymond Afton” OR “Ray Afton” OR “Gregory Afton” OR “Greg Afton” OR “Samuel Afton” OR “Sam Afton” OR “Benjamin Afton” OR “Ben Afton” OR “Patrick Afton” OR “Pat Afton” OR “Jack Afton” OR “Dennis Afton” OR “Alexander Afton” OR “Alex Afton” OR “Jerry Afton” OR “Tyler Afton” OR “Henry Afton” OR “Douglas Afton” OR “Doug Afton” OR “Aaron Afton” OR “Peter Afton” OR “Pete Afton” OR “Jose Afton” OR “Walter Afton” OR “Walt Afton” OR “Adam Afton” OR “Zachary Afton” OR “Zach Afton” OR “Zac Afton” OR “Nathan Afton” OR “Nate Afton” OR “Nat Afton” OR “Harold Afton” OR “Kyle Afton” OR “Carl Afton” OR “Arthur Afton” OR “Art Afton” OR “Gerald Afton” OR “Roger Afton” OR “Keith Afton” OR “Lawrence Afton” OR “Jeremy Afton” OR “Terry Afton” OR “Albert Afton” OR “Al Afton” OR “Sean Afton” OR “Christian Afton” OR “Jesse Afton” OR “Austin Afton” OR “Bruce Afton” OR “Ralph Afton” OR “Bryan Afton” OR “Ethan Afton” OR “Roy Afton” OR “Eugene Afton” OR “Gene Afton” OR “Jordan Afton” OR “Louis Afton” OR “Lou Afton” OR “Wayne Afton” OR “Alan Afton” OR “Harry Afton” OR “Russell Afton” OR “Russ Afton” OR “Juan Afton” OR “Dylan Afton” OR “Randall Afton” OR “Randy Afton” OR “Philip Afton” OR “Phillip Afton” OR “Phil Afton” OR “Vincent Afton” OR “Vince Afton” OR “Noah Afton” OR “Howard Afton” OR “Howie Afton” OR “Gabriel Afton” OR “Gabe Afton” OR “Johnny Afton” OR “Mary Afton” OR “Patricia Afton” OR “Patty Afton” OR “Tricia Afton” OR “Trish Afton” OR “Trisha Afton” OR “Jennifer Afton” OR “Jen Afton” OR “Jenny Afton” OR “Elizabeth Afton” OR “Beth Afton” OR “Lizzy Afton” OR “Liz Afton” OR “Eliza Afton” OR “Linda Afton” OR “Barbara Afton” OR “Barb Afton” OR “Susan Afton” OR “Susie Afton” OR “Margaret Afton” OR “Peg Afton” OR “Peggy Afton” OR “Marge Afton” OR “Maggie Afton” OR “Jessica Afton” OR “Jess Afton” OR “Jessie Afton” OR “Sarah Afton” OR “Dorothy Afton” OR “Dot Afton” OR “Dottie Afton” OR “Karen Afton” OR “Nancy Afton” OR “Betty Afton” OR “Lisa Afton” OR “Sandra Afton” OR “Sandy Afton” OR “Ashley Afton” OR “Kimberly Afton” OR “Kim Afton” OR “Donna Afton” OR “Helen Afton” OR “Carol Afton” OR “Michelle Afton” OR “Emily Afton” OR “Amanda Afton” OR “Mandy Afton” OR “Melissa Afton” OR “Missy Afton” OR “Deborah Afton” OR “Deb Afton” OR “Debbie Afton” OR “Laura Afton” OR “Stephanie Afton” OR “Rebecca Afton” OR “Becky Afton” OR “Becca Afton” OR “Sharon Afton” OR “Cynthia Afton” OR “Cindy Afton”

OR “Kathleen Afton” OR “Kathy Afton” OR “Anna Afton” OR “Ann Afton” OR “Shirley Afton” OR “Ruth Afton” OR “Amy Afton” OR “Angela Afton” OR “Angie Afton” OR “Brenda Afton” OR “Virginia Afton” OR “Pamela Afton” OR “Pam Afton” OR “Catherine Afton” OR “Cathy Afton” OR “Katherine Afton” OR “Kathy Afton” OR “Nicole Afton” OR “Nicki Afton” OR “Nicky Afton” OR “Christine Afton” OR “Christy Afton” OR “Chrissy Afton” OR “Samantha Afton” OR “Sammie Afton” OR “Sammy Afton” OR “Janet Afton” OR “Jane Afton” OR “Debra Afton” OR “Carolyn Afton” OR “Carrie Afton” OR “Rachel Afton” OR “Rachael Afton” OR “Heather Afton” OR “Maria Afton” OR “Diane Afton” OR “Julie Afton” OR “Joyce Afton” OR “Joy Afton” OR “Emma Afton” OR “Frances Afton” OR “Fanny Afton” OR “Frannie Afton” OR “Evelyn Afton” OR “Evie Afton” OR “Joan Afton” OR “Martha Afton” OR “Christina Afton” OR “Kelly Afton” OR “Lauren Afton” OR “Berthoudia Afton” OR “Vicki Afton” OR “Vicky Afton” OR “Judith Afton” OR “Judy Afton” OR “Alice Afton” OR “Cheryl Afton” OR “Jean Afton” OR “Doris Afton” OR “Megan Afton” OR “Marie Afton” OR “Andrea Afton” OR “Kathryn Afton” OR “Jacqueline Afton” OR “Jackie Afton” OR “Gloria Afton” OR “Teresa Afton” OR “Sara Afton” OR “Janice Afton” OR “Hannah Afton” OR “Julia Afton” OR “Julie Afton” OR “Rose Afton” OR “Theresa Afton” OR “Grace Afton” OR “Beverly Afton” OR “Bev Afton” OR “Olivia Afton” OR “Denise Afton” OR “Marilyn Afton” OR “Amber Afton” OR “Danielle Afton” OR “Brittany Afton” OR “Diana Afton” OR “Mildred Afton” OR “Madison Afton” OR “Lori Afton” OR “Tiffany Afton” OR “Tammy Afton” OR “Kayla Afton” OR “Richmonds” OR “Afton Mithun” OR “Afton Soup” OR “Afton, Alabama” OR “Afton, Alaska” OR “Afton, Arizona” OR “Afton, Arkansas” OR “Afton, California” OR “Afton, Oregon” OR “Afton, Connecticut” OR “Afton, Delaware” OR “Afton, Florida” OR “Afton, Georgia” OR “Afton, Hawaii” OR “Afton, Idaho” OR “Afton, Illinois” OR “Afton, Indiana” OR “Afton, Iowa” OR “Afton, Kansas” OR “Afton, Kentucky” OR “Afton, Louisiana” OR “Afton, Maine” OR “Afton, Maryland” OR “Afton, Massachusetts” OR “Afton, Michigan” OR “Afton, Mississippi” OR “Afton, Missouri” OR “Afton, Montana” OR “Afton, Nebraska” OR “Afton, Nevada” OR “Afton New Hampshire” OR “Afton, New Jersey” OR “Afton, New Mexico” OR “Afton, New York” OR “Afton, North Carolina” OR “Afton, North Dakota” OR “Afton, Ohio” OR “Afton, Oklahoma” OR “Afton, Colorado” OR “Afton, Pennsylvania” OR “Afton, Rhode Island” OR “Afton, South Carolina” OR “Afton, South Dakota” OR “Afton, Tennessee” OR “Afton, Texas” OR “Afton, Utah” OR “Afton, Vermont” OR “Afton, Virginia” OR “Afton, Washington” OR “Afton, West Virginia” OR “Afton, Wisconsin” OR “Afton, Wyoming” OR “Afton, AL” OR “Afton, AK” OR “Afton, AZ” OR “Afton, AR” OR “Afton, CA” OR “Afton, CT” OR “Afton, OR” OR “Afton, DE” OR “Afton, FL” OR “Afton, GA” OR “Afton, HI” OR “Afton, ID” OR “Afton, IL” OR “Afton, IN” OR “Afton, IA” OR “Afton, KS” OR “Afton, KY” OR “Afton, LA” OR “Afton, ME” OR “Afton, MD” OR “Afton, MA” OR “Afton, MA” OR “Afton, MI” OR “Afton, MS” OR “Afton, MO” OR “Afton, MT” OR “Afton, NE” OR “Afton, NV” OR “Afton, NH” OR “Afton, NJ” OR “Afton, NM” OR “Afton, NY” OR “Afton, NC” OR “Afton, ND” OR “Afton, OH” OR “Afton, OK” OR “Afton, CO” OR “Afton, PA” OR “Afton, RI” OR “Afton, SC” OR “Afton, SD” OR “Afton, TN” OR “Afton, TX” OR “Afton, UT” OR “Afton, VT” OR “Afton, VA” OR

"Afton, WA" OR "Afton, WV" OR "Afton, WI" OR "Afton, WY" OR "Afton, Ala." OR "Afton, Ariz." OR "Afton, Ark." OR "Afton, Calif." OR "Afton, Ore." OR "Afton, Conn." OR "Afton, Del." OR "Afton, Fla." OR "Afton, Ga." OR "Afton, Ill." OR "Afton, Ind." OR "Afton, Kan." OR "Afton, Ky." OR "Afton, La." OR "Afton, Md." OR "Afton, Mass." OR "Afton, Mich." OR "Afton, Miss." OR "Afton, Mo." OR "Afton, Mont." OR "Afton, Neb." OR "Afton, Nev." OR "Afton, N.H." OR "Afton, N.J." OR "Afton, N.M." OR "Afton, N.Y." OR "Afton, N.C." OR "Afton, N.D." OR "Afton, Okla." OR "Afton, Colo." OR "Afton, Pa." OR "Afton, R.I." OR "Afton, S.C." OR "Afton, S.D." OR "Afton, Tenn." OR "Afton, Vt." OR "Afton, Va." OR "Afton, Wash." OR "Afton, W.Va." OR "Afton, Wis." OR "Afton, Wyo." OR "Afton Driveway" OR "Afton Alley" OR "Afton, Avenue" OR "Afton, Ave." OR "Afton Av." OR "Afton Avs." OR "Afton Backroad" OR "Afton Boulevard" OR "Afton Blvd." OR "Afton Byway" OR "Afton Court" OR "Afton Ct." OR "Afton Drive" OR "Afton Dr." OR "Afton Frontage" OR "Afton Highway" OR "Afton Hwy." OR "Afton Lane" OR "Afton Road" OR "Afton Ln." OR "Afton Rd." OR "Afton Street" OR "Afton St." OR "Afton Expressway" OR "Afton Parkway" OR "Afton Pkwy" OR "Afton Turnpike" OR "Afton Freeway" OR "Afton Motorway" OR "Afton Lake" OR "Afton Mountain" OR "Afton family" OR "Afton Place" OR "Afton Park" OR "Afton County" OR "Fort Afton" OR "Afton Smith" OR "Afton Johnson" OR "Afton Williams" OR "Afton Brown" OR "Afton Jones" OR "Afton Miller" OR "Afton Davis" OR "Afton Garcia" OR "Afton Rodriguez" OR "Afton Wilson" OR "Afton Martinez" OR "Afton Anderson" OR "Afton Taylor" OR "Afton Thomas" OR "Afton Hernandez" OR "Afton Moore" OR "Afton Martin" OR "Afton Jackson" OR "Afton Thompson" OR "Afton White" OR "Afton Lopez" OR "Afton Lee" OR "Afton Gonzalez" OR "Afton Harris" OR "Afton Clark" OR "Afton Lewis" OR "Afton Robinson" OR "Afton Walker" OR "Afton Perez" OR "Afton Hall" OR "Afton Young" OR "Afton Allen" OR "Afton Sanchez" OR "Afton Wright" OR "Afton King" OR "Afton Scott" OR "Afton Green" OR "Afton Baker" OR "Afton Adams" OR "Afton Nelson" OR "Afton Hill" OR "Afton Ramirez" OR "Afton Campbell" OR "Afton Mitchell" OR "Afton Roberts" OR "Afton Carter" OR "Afton Phillips" OR "Afton Richmonds" OR "Afton Turner" OR "Afton Torres" OR "Afton Parker" OR "Afton Collins" OR "Afton Edwards" OR "Afton Stewart" OR "Afton Flores" OR "Afton Morris" OR "Afton Nguyen" OR "Afton Murphy" OR "Afton Rivera" OR "Afton Cook" OR "Afton Rogers" OR "Afton Morgan" OR "Afton Peterson" OR "Afton Cooper" OR "Afton Reed" OR "Afton Bailey" OR "Afton Bell" OR "Afton Gomez" OR "Afton Kelly" OR "Afton Howard" OR "Afton Ward" OR "Afton Cox" OR "Afton Diaz" OR "Afton Richardson" OR "Afton Wood" OR "Afton Watson" OR "Afton Brooks" OR "Afton Bennett" OR "Afton Gray" OR "Afton James" OR "Afton Reyes" OR "Afton Cruz" OR "Afton Hughes" OR "Afton Price" OR "Afton Myers" OR "Afton Long" OR "Afton Foster" OR "Afton Sanders" OR "Afton Ross" OR "Afton Morales" OR "Afton Powell" OR "Afton Sullivan" OR "Afton Russell" OR "Afton Ortiz" OR "Afton Jenkins" OR "Afton Gutierrez" OR "Afton Perry" OR "Afton Butler" OR "Afton Barnes" OR "Afton Fisher" OR "Afton Estates" OR "Afton Circle" OR "Afton Club" OR "Dr. Afton" OR "Professor Afton" OR "Dean Afton" OR "Prof. Afton" OR "Afton Group" OR "Afton Sts." OR "Afton Creek" OR "Afton streets" OR "Afton Bridge" OR "Afton

counties” OR “Afton Square” OR “Afton Rds.” OR “Afton Beach” OR “Judge Afton” OR “Afton Island” OR “Afton Stanley” OR “Afton Redding” OR “Afton Nixon” OR “Afton Air Force Base” OR “Afton Thorpe” OR “Afton Rush” OR “Afton Hospital” OR “Puerto Afton” OR “Afton Air” OR “Afton Pass” OR “to Afton off” OR “Afton River” OR “Afton Valley” OR “Afton Scouts” OR “Afton Lodge” OR “Afton and Juliet” OR “Afton & Juliet” OR “Conan Afton” OR “Afton Conferenc*” OR “Afton Lumber” OR “Afton Development” OR “Afton Prairie” OR “Afton Lynch”)