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## Less of the Same: Online Local News

In newspapers, the basic rule was survival of the fittest. And the trick was to be bigger than the other guy because at that point you had more help-wanted ads, you had more automobiles for sale, you had more people if you lost your dog who might find it if you ran a classified ad. And you got more dominant because to many people—this kills people in the news business—the most important news in the newspaper are the ads.

—Warren Buffett

One Saturday morning in 2007, with his kids in the car, Google executive Tim Armstrong had an idea.<sup>1</sup> Stopped at a traffic signal, Armstrong saw cardboard road signs advertising events in his affluent Greenwich, Connecticut, neighborhood. But once home, Armstrong could not find a similar digital listing of neighborhood news.

So Armstrong co-founded a neighborhood-focused news site of his own. Called Patch.com, the site was soon synonymous with so-called hyperlocal news. Patch's neighborhood sites were usually run by a single full-time editor, who might produce five or six content items daily.

Patch was acquired by AOL in 2009, not long after Armstrong was hired to be AOL's new CEO. Patch became a centerpiece of AOL's bid to refashion itself as a content provider rather than a dial-up ISP. Patch expanded feverishly, and at its zenith it had nine hundred neighborhood sites and approximately 1,400 employees.<sup>2</sup> The price tag for the effort was three hundred million dollars, comparable to AOL's high-profile purchase of the Huffington Post.

But throughout, Patch encountered skepticism from the business media and AOL's own shareholders. Traffic lagged badly, and ad revenue was dismal. In 2012, in an effort to fight off an activist investor group, Armstrong promised that Patch would be profitable by the end of 2013. But even with a brief traffic surge from Hurricane Sandy, profitability remained far out of reach. In August 2013, Armstrong announced that a third of Patch sites would be closed. Armstrong even tacitly admitted that some of Patch's own editors did not use the site, telling all of his employees that "if you don't use Patch as a product and you're not invested in Patch, you owe it to everybody else at Patch to leave."<sup>3</sup> In January 2014, AOL finally sold majority ownership of Patch to Hale Global company for undisclosed terms. Overnight, the company went from 540 full time employees to ninety-eight.<sup>4</sup>

Despite the high-profile failure of Patch, Armstrong and a legion of hyperlocal evangelists still believe in a bright future for hyperlocal media. In an unrepentant interview in December 2013, Armstrong insisted that the Patch model would have worked if it had been given more time.<sup>5</sup> Jeff Jarvis, a prominent hyperlocal advocate, declared that "execution problems" and unfounded fears of "hyperlocal cooties" had doomed an otherwise sound idea.<sup>6</sup>

Armstrong and Jarvis and other hyperlocal news boosters are wrong. The problems with hyperlocal news—and even not-so-small local news sites—are far worse than they let on. Patch is a limiting case, the most extreme version of the problems that old-fashioned local news faces on the web. And while not everyone will mourn the decline of Patch, we should all worry about what its failures tell us about the local news that democracy depends on.

No part of the American media environment is as little understood as internet-based local news. The relative importance of internet news overall has grown steadily; Pew studies have found that nearly twice as many Americans regularly get news from the internet as they do from print newspapers.<sup>7</sup> But even as the web is a larger slice of the American news diet, systematic data on digital local news has been scarce.

Even very basic questions have remained unanswered. How many online local news outlets are there in a typical media market? Are successful local news sites new, or just online versions of traditional media? How

much competition is there in online local news? Just how much attention do local news websites receive?

Online local news is also a crucial test case for the theories and models that are at the heart of this book. Hopes for hyperlocal news are founded on the idea that internet audiences will inevitably diffuse toward smaller and smaller niche sites, including niche sites defined by locality. In contrast, this book has argued that size matters greatly online. As we have seen in chapters 3 and 4, the largest sites earn far more per visitor than small niche sites. Our theories suggest that newspaper and television sites should have substantial advantages over upstarts: they have established brands and habits of readership, more usable websites, and larger and more attractive bundles of content. A poor showing by local digital news sites would be worrying for democracy, but consistent with this book's hypotheses. By contrast, if most media markets have diverse, thriving networks of local digital news sites, that would challenge this book's central claims.

The internet's potential to expand local news voices matters, too, for public policy. Online media diversity has featured prominently in FCC and congressional debates about broadcast ownership regulation.<sup>8</sup> The federal courts have similarly focused on the disputed ability of the internet to provide greater viewpoint diversity for local news.<sup>9</sup> In addition to the FCC, policymakers in Congress and at the Federal Trade Commission have studied the internet's ability to sustain local journalism even as newspapers struggle financially.<sup>10</sup> This chapter began life as a commissioned report by the FCC, as part of their quadrennial review of media ownership regulation.

Despite the importance of online local news, there has been little systematic evidence about the local news environment on the web. This chapter aims to change that. Using comScore panel data that track a quarter of a million internet users across more than a million www domains, this chapter examines online local news within the top one hundred U.S. television markets. It identifies and analyzes 1,074 local online news and information sources across these one hundred markets, studying their audience reach, traffic, and affiliation (or lack thereof) with traditional media. The chapter also looks at concentration in local online news markets, and conducts a census of internet-only local news sites that reach more than a minimum threshold of traffic.

The breadth and the market-level granularity of the comScore data makes this study the most comprehensive look to date at internet-based local news. The portrait that emerges contradicts claims that new online outlets are adding significantly to local news diversity. New, digital-native news organizations are nearly absent from this traffic data. Local news on the web is fundamentally about consuming *less* news from the *same* old-media sources. Understanding the local news landscape online has profound implications for policymakers, journalists, and local self-governance in the twenty-first century.

### DATA ON LOCAL NEWS ONLINE

This chapter relies centrally on data provided by comScore, a large U.S. web measurement firm. comScore tracks the browsing behavior of a large panel of internet users with user-installed software, and its coverage is exceptionally broad: as of July 2010, the firm reported tracking traffic to 1,049,453 web domains. Research prior to this study overwhelmingly used aggregate U.S. web-usage data, in which only the largest local sites in the largest local markets could be studied. For this study, full data from February, March, and April 2010 were purchased by the FCC for the one hundred largest U.S. broadcast market areas, and provided to the author as government-furnished information.

These one hundred markets contained a monthly average of 253,953 comScore panelists. Because comScore strives for a nationally representative sample, the number of panelists varies according to a market's size, from 19,998 in the greater New York City market (the largest in the sample) to 647 in the Burlington-Plattsburgh market, which straddles the Vermont-New York state border (the smallest by panel size, and one of the smallest by population). The median market by panel size, Little Rock-Pine Bluff in Arkansas, had 1,606 panelists. In most cases sites are tracked at the domain level: all pages on Example.com would be considered together as traffic to a single site. With particularly popular sites, however, comScore tracks different parts of the domain both individually (for example, images.google.com and maps.google.com) and collectively (all Google-owned properties together).

Thanks to the breadth and detail of the comScore data, this study provides the first comprehensive, nationwide look at the state of local news on the web. The comScore data offer several key traffic metrics within each broadcast market. These include *monthly audience reach*, which is the portion of panelists that visits a website at least once in the calendar month; the number of *monthly page views* that a site receives; *monthly minutes*, which measure the time spent on a site; and the number of monthly panelist *sessions* that a site accumulates, measuring the number of times that a person accessed one or more of a site's pages with no more than thirty minutes between clicks. For each market, comScore's listings include all sites visited by at least six of that market's panelists. Sites that have five or fewer visitors are not reported.

The full details of the procedure to determine which sites are counted as local news outlets can be found in the Appendix. But the intuition behind our method is simple: local news, by definition, draws a larger audience share within its home market than it does nationally. A local news website covering Seattle will have a larger audience share in the greater Seattle area than it will in Tulsa or Toledo. This fact, along with the richness of the comScore data, allows us to distinguish local from national news outlets.

### *More on Web Metrics*

Before delving more deeply into the analysis of local news traffic, we should elaborate a bit more on traffic metrics and methodology. Much discussion of the digital news audience focuses on “monthly audience reach” or equivalently “monthly unique visitors,” statistics that count users who view at least one of the site's pages in a given month. Newspaper organizations in particular are fond of monthly audience reach, perhaps because the audience reach figures are closest to old estimates of print circulation.

In fact, monthly audience reach is a much shallower statistic not remotely comparable to audited circulation numbers. The number of sites that a typical user will visit over the course of any thirty-day period is huge, and any individual visit means little. Those who visit a site once, spend less than thirty seconds, and then immediately click away still count as visitors. Most news sites have a high “bounce rate,” in which users visit a single page and then leave. A study of the twenty-five most popular national news

outlets by the Project for Excellence in Journalism highlighted this pattern. Most unique visitors to these top sites—77 percent on average—are “extremely casual users” who visit just once or twice a month.<sup>11</sup> For many sites the portion of casual users exceeds 90 percent.

Despite the connotation that these users have been “reached,” then, most unique visitors make no real connection with a site and spend almost no time there. With print, we do not count those who glance at newspaper headlines at a newsstand as readers. With television, we do not count those who flip past CNN while channel surfing as news viewers. But in the online world, similar behavior gets rolled into inflated monthly audience reach numbers.

Even when looking at the same metric, though, comScore data are significantly different from the data that websites collect themselves. Overcounting of unique visitors is a widespread problem that comScore’s data help address.

For those that publish on the web, browser cookies are one option for audience measurement. When users log in, web publishers can set a browser cookie that—at least in theory—can be used to track a user across different computers, different browsers, and different locations. Relatively few visitors choose to log in, though, and most readers use multiple devices or even multiple browsers over the course of a month. When cookies are not tied to a specific registered user, every computer and every browser counts as a unique reader. Simply clearing cookies, or browsing in “private” or “incognito” mode to escape a paywall, creates the same problem. Industry reports estimate that the unique-visitor-to-actual-person ratio is four to one or higher on many sites.<sup>12</sup> This problem has persisted even as real-time analytics platforms like Chartbeat and Omniture have allowed sites to gather increasingly rich data on user behavior.

Another option for counting unique visitors is to look at the IP addresses of users. Though less common, this method increases overcounting even more. Over the course of a month, an itinerant user with a laptop and an iPhone can count as dozens of unique visitors under this standard. This method also allows for undercounting, too, as multiple users in a coffee shop or a business may share an IP address.

comScore, by contrast, measures audience reach by installing software on users’ computers. While there are methodological challenges

with recruiting and maintaining a representative sample, comScore's data should not suffer from the overcounting of audience reach endemic to other data sources.

The number of unique visitors a site receives thus tells us little about a site's usage pattern or its relative audience. Audience reach numbers have the additional complication that they are not additive. Two sites with 5 percent audience reach don't add up to 10 percent, because we cannot know how much their audiences overlap. Precisely *because* audience reach includes even the shallowest interactions with a site, though, monthly reach numbers let us cast the net as wide as possible in searching for local news sources.

Compared to audience reach, page views and time spent on a site tell us much more about a site's contribution to the overall media landscape. These two metrics are the main focus of the rest of the chapter. However, both need to be understood within the overall landscape of digital media usage.

A site with tens of thousands of monthly page views may sound extremely popular. But in fact, page views are plentiful: users viewed 2,700 pages a month in our sample on average, or roughly ninety pages a day. Facebook alone—the most visited site by page views—accounted for 10 percent of page views (270) in the median market in our comScore data, with Google properties accounting for another 188 page views.

Most page views are short. Our comScore data show that a page view lasts twenty-six seconds on average; 98 percent of page views last less than two minutes, and 99.8 percent last less than 10 minutes. Pages views are most helpful when used comparatively, in understanding the relative audience that two sites have. The page-view numbers we are most interested in are fractional—the portion of the total online audience, or the portion of news traffic, or the portion of just local news traffic. It should be remembered that each of these fractions has a *very* large denominator.

One disadvantage of page views as a metric, however, is that they can be impacted by site architecture. Changes in the page layouts can increase—or decrease—the number of page views recorded. Some news sites are notorious for spreading short articles or photo slide shows over multiple pages in an attempt to maximize page views. Studies of page-view traffic need to be supplemented by metrics of time spent. As we will see below, though,



page views and time spent on a site tell a nearly identical story about the audience for local news.

Page views and time spent on a site are important for another reason as well: advertising. Even as many sites have renewed their efforts to put up paywalls, most online news revenue comes from selling online ads. Ad sales by the impression or the click are closely tied to page views. Video advertising on the web is more complicated, but is often sold by the second. The page views and minutes that accrue to news sites are thus a decent proxy for the amount of advertising space that local news sites control.

comScore data offer big advantages over other sources, particularly many news sites' self-reported traffic numbers. If we want to study a broad cross-section of web usage, particularly across dozens of local media markets, there is no real alternative to panel data from firms like comScore and Nielsen. However, this sort of data also has limitations that should be kept in mind.

A key question in any panel survey is how representative participants are of the general population. comScore reports that they use "an array of online recruitment techniques to acquire the members of [comScore's] panel." Calibration panels recruited offline, census data, and monthly phone surveys are used to weight online-recruited panelists in proportion to the general population. In several validation studies, the weighted comScore traffic estimates have differed by less than 5 percent on average from estimates compiled from other independent sources.<sup>13</sup> Still, many details of comScore's approach remain proprietary and cannot be evaluated independently. Online-recruited panelists may overrepresent avid web users: the more pages someone visits, the more likely she is to see a recruitment ad. Even if weighting the panel failed to correct for this, however, an excess of highly-active web users would tend to bias audience reach statistics upward rather than downward.

The comScore data have other limitations, too. Importantly, the comScore panel data used here do not measure usage from mobile devices. Mobile traffic was small in 2010, when the data were collected, but it has grown rapidly since. The growth of mobile browsing and news apps has hurt local news badly overall—a topic that we will discuss at length in chapter 7. But omitting mobile usage, again, means that local news audience share is even lower than this data suggest.

comScore's workplace panel is also smaller and likely less representative than its home panel. Much digital news consumption takes place during working hours,<sup>14</sup> but few workplaces allow the installation of comScore's tracking software. It is possible that home and workplace news consumption patterns differ in ways this dataset cannot capture.

## THE BASICS OF ONLINE LOCAL NEWS CONSUMPTION

The broad landscape of online local news is easy to summarize. Local news is a tiny part of web usage: collectively, local news outlets receive *less than half of a percent* of all page views in a typical market. Newspapers and television stations dominate what local news can be found online. Only a handful of local news websites—seventeen out of 1,074, all detailed later—are unaffiliated with traditional print or broadcast media. Across the one hundred markets, our methodology finds the following:

- 395 television station websites
- 590 daily newspaper websites
- 41 weekly news publication websites (nearly all alt-weekly newspapers)
- 31 radio station websites
- 17 web-native local news websites unconnected to print, television, or radio outlets

There is surprisingly little evidence in this data that the internet has expanded the number of local news outlets. And while the internet adds only a pittance of new sources of local news, the surprisingly small audience for online local news helps explain the dire financial straits in which local news organizations find themselves. A summary of the the web traffic data can be found in table 6.1.

Let us start with the discussion of audience reach, the broadest and shallowest metric of web use. Measured by unique visitors, the largest local news site in each market reached 17.8 percent of local users on average, with a standard deviation of 6.3 percent. However, the audience reach numbers drop quickly as one moves down the rankings: the second-ranked site averaged 11.6 percent, the third-ranked site 8.7 percent, the fourth-ranked site 6.0 percent, and the fifth-ranked site 4.3 percent. Because comScore does not provide individual-level data or the overlap between various sites'

TABLE 6.1  
Summary of Online News Outlet Data

|  | Mean | Std. Dev. | Min. | Max. |
|--|------|-----------|------|------|
| No. of Web-Native Local News Outlets     | .19  | .44       | 0    | 3    |
| No. of Local Online News Outlets         | 10.5 | 4.2       | 4    | 28   |
| Local News Page Views / Capita           | 13.8 | 10.0      | 1.8  | 90.2 |
| Local News Minutes / Capita              | 10.6 | 7.6       | 1.3  | 63.4 |
| Local News as Pct. of All Page Views     | .51  | .27       | .06  | 3.4  |
| Local News as Pct. of All Online Minutes | .54  | .39       | .06  | 3.2  |
| Nonlocal News Page Views / Capita        | 60.0 | 30.8      | 28.0 | 370  |
| Nonlocal News Minutes / Capita           | 59.0 | 16.4      | 23.4 | 126  |
| HHI in Page Views                        | 2749 | 1297      | 921  | 9003 |
| HHI in Minutes Spent                     | 2943 | 1444      | 939  | 8955 |

*Note:* Summary of the data on online news sources across our one hundred broadcast markets. Most local markets have no internet native news sources, challenging the common assumption that the internet is expanding the number of local news outlets.

visitors, it is impossible to calculate the portion of the audience that visits at least one local news site.

Statistics for audience reach can be greatly deceiving when used to measure how much traffic news sites get overall. As noted earlier, the large majority of unique visitors to national news sites are made up of users who visit just once or twice a month.<sup>15</sup> In fact, more detailed traffic metrics show that the total audience for local news outlets is uniformly small.

Online local news sites received only 11.4 monthly page views per person in the median market. Even with a few high-end outliers, the overall average rises to just 13.8 monthly page views, or roughly three pages per web user per week. These numbers represent just 0.43 percent of the total monthly page views in the median market (with the overall average slightly higher at 0.51).

Local news sites were between 0.30 and 0.62 percent of all monthly page views in half of the markets, equivalent to between 8.3 and 17.0 page views

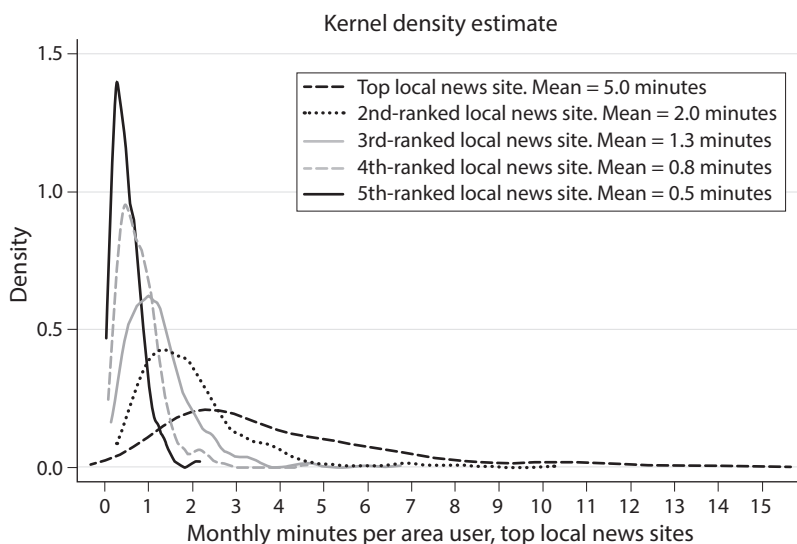


Figure 6.1 Distribution of local digital news audience in monthly minutes per capita. Not only do audiences spend little time on local news sites, numbers usually fall dramatically below the top-ranked local site. Fourth- and fifth-ranked local news sites average less than a minute a month per internet user.

per person. The largest outlier by far is Salt Lake City, where local news—and especially the television site KSL.com—gets more than 3 percent of all page views. At the other end of the spectrum are Colorado Springs–Pueblo, Las Vegas, and Los Angeles, which give less than 0.15 percent of their page views to local news sites on average. All three average less than four monthly local news page views per web user.

A similar story can be seen with time spent on news sites rather than page views. In the median market only 9.1 monthly minutes per user went to local news sites, just 0.45 percent of time online. More than half of that time, on average, goes to the local market's top-ranked site.

These numbers are illustrated graphically in figure 6.1, which shows the distribution of time spent on local news outlets. Time spent falls precipitously from a market's top-ranked site—averaging five monthly minutes per user—to the fifth-ranked site, which averages just thirty seconds. Half of markets had local news at between 0.33 and 0.63 percent of online minutes, or between 6.3 and 12.4 minutes per capita. Measured by page

views or minutes, local news outlets get just a tiny portion of citizens' attention.

Are these grim numbers because of low news consumption overall, or because local outlets are losing out to national news? The comScore data show that the answer is "both." Looking at all news sites—both those in the "News/Information" category and all the additional news sites identified earlier—we find that the average market sends seventy-four monthly page views to news sites of all stripes. This works out to roughly sixty page views for nonlocal news sources and fourteen for local ones. The figures for minutes spent are even smaller. In the average market, users spend sixty minutes per month on nonlocal news websites, but just eleven minutes on local ones.

These numbers are consistent with previous findings from other data sources that news sites receive just a few percentage points of web traffic.<sup>16</sup> Still, the small proportion of local news is surprising. Less than one in five news page views goes to a local news source.

#### HOW MANY OUTLETS? OF WHAT TYPE?

Even if local news is a small part of web content, knowing where that content comes from matters. How many such sites are there in a typical broadcast market?

Markets in the sample average about ten-and-a-half online local news sources. On a typical month, that breaks down into 6.1 newspaper sites, 3.8 local television sites, 0.3 radio stations, and less than 0.2 web-native news outlets. The markets with the largest numbers of outlets are Chicago (19), New York (20), Minneapolis (20), Cleveland (21), and Boston (with a whopping 28). Larger population broadcast markets have more digital news outlets, even after adjusting for market share. More populous markets *do not* show greater consumption of local news as measured by time or page views, however—a finding we will return to later. The markets with the fewest outlets in our survey were Baton Rouge, Louisiana (4), Fort Smith, Arkansas (5), and El Paso, Texas (5).

Importantly, the biggest differences in the number of outlets come from varying numbers of newspapers. Eighty-eight out of the hundred markets have three, four, or five television station websites, including stations with

just cable distribution. Most have no radio or internet-only outlets that meet our minimal audience threshold. That leaves differences in the number of newspapers to account for the rest of the variance. About half of the markets have either three or fewer newspapers or more than eleven newspapers. As we would expect, several of the markets with only two print news sources—Richmond-Petersburg (Virginia), Baton Rouge, Tucson (Arizona), El Paso, Colorado Springs-Pueblo, Fort Smith—compete for the fewest number of outlets overall. The two markets with the highest number of newspapers—Hartford-New Haven, Connecticut (14) and Boston (21)—both boast a profusion of papers tied to small New England towns. Most of the newspapers found are published daily. However, forty-one newspapers in our sample are weekly publications—almost all alternative weeklies published in one of the larger metro areas in our sample.

If there are more print than television online news sources, their collective online audiences are closer to parity. Put together, newspaper sites average 0.25 percent of their markets' monthly page views, versus 0.20 for television sites. But television sites do better in terms of minutes spent. Television and newspaper sites have identical averages: 0.25 percent of minutes each. This modest improvement is likely due to online video, which produces longer than average page view times.

### LOCAL NEWS COMPETITION ON THE WEB

As the audience numbers in the previous section show, local news is a small niche in the broader web. But within that niche, most local news markets are quite concentrated. Consider the top newspaper and top TV station site in each market. The top paper earns 0.15 percent of all page views on average, while the top television station adds another 0.16 percent. The outlet with the highest audience reach overall—always a TV station or newspaper—averages 0.22 percent of all local page views. These means are skewed upward by a few outliers, but the top newspaper and TV station sites together get 56 percent of local news page views in the median market.

Traffic for the smallest outlets we examine is minuscule by comparison. In an average month in our sample, sixty-three sites (out of 1,074 total) attain an audience reach between 1 and 1.2 percent, barely above our cutoff.

These sixty-three sites average less than 0.008 percent of all local page views (with a standard deviation of 0.0012). This means that the average top-rated local site has *275 times* as many page views as the smallest included sites. These numbers mean that any sites *too small* to be included in our survey account for only a tiny fraction of the local news audience. At this rate, even a dozen sites missing right below our cutoff threshold would still leave local news with less than half a percent of all page views.

Evidence of concentration shows up in more systematic metrics as well. The most commonly used metric of market concentration is the Herfindahl-Hirschman Index (HHI). The HHI is the sum of the squared market share (in percent) of all of the firms in a given market; it has possible values between 0 and 10,000. According to Department of Justice and Federal Trade Commission rules, markets with an HHI between 1,500 and 2,500 are classified as *moderately concentrated*, while markets with an HHI greater than 2,500 are classified as *highly concentrated*. The HHI statistic serves as an initial screen for heightened scrutiny, while the full test examines other factors—such as entry conditions—that might allow a firm to produce a “significant and non-transitory increase in price.”<sup>17</sup>

If we consider local online news markets separately from print and broadcast markets, we find a surprising level of concentration. Whether we use minutes or page views to measure market share, the HHI indicates that most online local news markets should be within the envelope of closer regulatory scrutiny.<sup>18</sup> Averaged across our three months, the median market has an HHI of 2,479 with page views and 2,593 with minutes spent online. Ninety-five of the one hundred markets have an HHI above 1,500 measured by page views, and ninety-six reach that level with online minutes. Markets do show high month-to-month variance in HHI, with a median monthly swing of  $\pm 296$  points in page views and  $\pm 340$  points in minutes spent. But the overall picture is clear: most online local news markets are dominated by just two or three news organizations.

### A CENSUS OF ONLINE-ONLY LOCAL NEWS OUTLETS

A central goal of this chapter is to catalogue online news sites that are not affiliated with traditional media outlets—and that therefore have a strong *prima facie* claim to be adding to media diversity. Perhaps the

single most surprising finding in this study is just how few such outlets there are.

Out of the 1,074 online local news sources this study identifies, only seventeen are genuinely new media outlets rather than just online outposts of print or broadcast outlets. The dearth of new internet outlets allows us to list these sites in their entirety. In descending order of local audience reach, here are *all* of the internet-only news outlets that show up in our survey:

- The online-only local news site with the largest audience reach is SeattlePI.com. Once the online home of the *Seattle Post-Intelligencer* newspaper, the site remained active even after the *P-I* stopped its presses and laid off nearly all of its staff in 2007. In the comScore data, the P-I website achieved reasonably broad reach but only shallow usage. Audience reach was between 7.7 and 12.7 percent, while the share of monthly page views (across all types of websites) was between 0.026 and 0.046 percent.
- Chattanooga.com, an online newspaper based in Chattanooga, Tennessee, is one of the earliest online-only local news projects in the country. Chattanooga.com was founded in the summer of 1999, in the wake of the sale of the *Chattanooga Times* to the larger *Chattanooga Free Press*; the consolidation made Chattanooga a one-newspaper town. Chattanooga.com garnered between 6.3 and 8.6 percent monthly reach, and between 0.06 and 0.08 percent of monthly page views.
- TucsonCitizen.com is the site of the former *Tucson Citizen* daily newspaper. The site survived the closure of the paper in May 2009, with the revamped site having a heavy focus on political opinion. The site received between 2.6 and 6.3 percent audience reach in Tucson during the period studied, but just 0.003 to 0.007 percent of page views.
- KYPost.com is an online newspaper serving northern Kentucky. Formerly the website of the *Kentucky Post* daily newspaper—a regional variant of the *Cincinnati Post*—the website continued on after the print versions ceased publication in December 2007. KYPost.com achieved between 2.1 and 3.3 percent audience reach in Cincinnati, and between 0.007 and 0.005 percent of the market's page views.
- OnMilwaukee.com is an online publication based in Milwaukee, Wisconsin, that marries local arts and events coverage with some local



news. It received between 2.5 and 3.1 percent reach, and between 0.002 and 0.003 percent of page views.

- GoWilkes.com is a local news and information site focusing on Wilkes County, North Carolina. It has only modest reach, getting between 2.1 and 2.8 percent of local users. Surprisingly, however, it has a heavy page-view count, accounting for between 0.26 and 0.60 percent of page views in the Greensboro-High Point-Winston Salem market area.
- FingerLakes1.com serves the Finger Lakes region in upstate New York. The relatively simple site contains both local events coverage and a listing of local news stories. It earned between 1.0 and 3.1 percent reach and between .11 and .22 percent of page views in the Rochester market.
- LorainCounty.com of Ohio is a local news and directory site founded by two brothers; the site's history as a news source stretches back to the mid-1990s. It received between 1.0 and 2.2 percent audience reach and 0.004 and 0.008 percent of local page views in the Cleveland market.
- GWDToday.com serves Greenwood, South Carolina. The site's design is unpolished, but its reporting staff does produce original local reporting, often several articles a day. The site had a market reach between .7 and 1.8 percent, and a page view share between .005 and .010 percent in the Greenville-Spartanburg-Asheville market.
- SanDiego.com declares that it has "evolved from a destination-focused travelers portal" into an "online community partner for locals and visitors alike." Travel links and resources are the most prominent site features, though it does provide a small amount of local news. The site had an audience reach of between 1.1 and 1.7 percent in San Diego, along with a minimal page view share of between 0.001 and 0.003 percent.
- SOMD.com is a local site focused on southern Maryland. While it features mostly local events and listings, it does include some local news, much of it from content partners and law enforcement press releases. The site's audience reach in the Washington, D.C., market was between 1.0 and 1.2 percent, with page views between 0.005 and 0.008 percent of the market total.
- iBerkshires.com is a small news and local information site that serves western Massachusetts. The site appeared only in our February data, with a reach of 1.2 percent and 0.008 percent of page views in the Albany-Schenectady-Troy market.

- SanJose.com is a “city guide” that focuses on dining and events, but also provides some local news. The site had a market reach of between 0.8 and 1.3 percent, and a page-view share between 0.0007 and 0.0015 percent.
- MinnPost.com, a nonprofit news site, describes its mission as providing “high-quality journalism for news-intense people who care about Minnesota.” Though it has often been discussed as a potential business model for local news, its traffic in our data is minimal: between 0.5 and 1.3 percent of audience reach in Minneapolis-St. Paul, and from .0009 to .0012 percent of page views.
- VoiceofSanDiego.com is a nonprofit news organization focusing on investigative reporting. Traffic numbers are low, however: reach was .48 percent in February (with 0.0005 percent of San Diego pages), 1 percent in April (with 0.0008 percent of pages), and too low to measure in March.

In addition to the above sites, the data included two sites that have since been shuttered. PegasusNews.com was a local site in Dallas-Fort Worth, which combined local news from staff writers with mostly syndicated content. The site was eventually sold to the *Dallas Morning News*, and shut down in 2014. SDNN.com, a San Diego News Network “community hub,” also counted as an online news site during the period studied, but shut down in mid-2010.

Some patterns in this data are obvious. The internet-only sites that average more than 3 percent monthly reach are websites of newspapers that ceased print publication, or—in the case of Chattanooga.com—were founded in the aftermath of a newspaper closure. While these sites may help maintain a bit of news diversity that would otherwise be lost, their persistence is not evidence of expanding local news options.

The poor showing of MinnPost.com and VoiceofSanDiego.com may be especially surprising to some. While MinnPost and VoSD have been celebrated examples of a new breed of local and regional online news organizations, numerous other local online news sites are missing altogether in the above listing—including many other sites once mentioned as promising experiments. The fact that traffic to these “model” outlets is minimal across the board is sobering for the future of journalism.

These results are so discouraging, and so contrary to prominent claims about hyperlocal media, that I performed a deeper dive into the data. Perhaps these outlets are present in the data, but miscategorized, or slightly below the 1 percent traffic threshold set as a consistent cross-market bar.

I thus assembled a larger list of internet-only news organizations, checking to see if any are included in the comScore data. This deeper search looked for specific site names regardless of category or traffic level, as long as comScore's six-visitor minimum was met. Sites based outside one of the top one hundred broadcast markets were excluded, as (of course) were outlets focusing on national rather than local news. The catalogue of relevant online local sites was drawn from the *Columbia Journalism Review's* News Frontier Database, from Michelle McLellan's listings at the Reynolds Journalism Institute, and from a list put out by the Harvard Kennedy School's Hauser Center. The final list of local online-only news organizations included the following:

- The Arizona Guardian (Phoenix)
- Baristanet (New York)
- The Bay Citizen (San Francisco-Oakland-San Jose)
- Capital (New York)
- California Watch (San Francisco-Oakland-San Jose)
- Chicago News Cooperative (Chicago)
- The Colorado Independent (Denver)
- The Connecticut Mirror (Hartford-New Haven)
- Florida Center for Investigative Reporting (Miami)
- The Florida Independent (Miami)
- The Gotham Gazette (New York)
- InDenver Times (Denver)
- Investigate West (Seattle)
- The Iowa Independent (Des Moines-Ames)
- The Lens (New Orleans)
- Maine Center for Investigative Reporting / Pine Tree Watchdog (Portland-Auburn)
- The Michigan Messenger (Detroit)
- The Minnesota Independent (Minneapolis-St. Paul)
- New England Center for Investigative Reporting (Boston)

- The New Haven Independent (Hartford-New Haven)
- New Jersey Newsroom (New York)
- Oakland Local (San Francisco-Oakland-San Jose)
- Open Media Boston (Boston)
- Portland Afoot (Portland, OR)
- The Rapidian (Grand Rapids-Kalamazoo-Battle Creek)
- Rocky Mountain Investigative News Network (Denver)
- The Sacramento Press (Sacramento-Stockton-Modesto)
- The San Francisco Appeal (San Francisco-Oakland-San Jose)
- The SF Public Press (San Francisco-Oakland-San Jose)
- The Seattle Post Globe (Seattle)
- Spot.us (San Francisco-Oakland-San Jose)
- The St. Louis Beacon (St. Louis)
- The South Los Angeles Report (Los Angeles)
- The Texas Tribune (Austin)
- The Tucson Sentinel (Tucson)
- Twin Cities Daily Planet (Minneapolis-St. Paul)
- VTDigger.com (Burlington-Plattsburgh)
- Wisconsin Center for Investigative Journalism (Madison)

The results of this deeper survey are striking. The Minnesota Independent showed up in just the April Minneapolis-St. Paul data, with six visitors (out of 3,201 panelists). In the same market, the Twin Cities Daily Planet also marked nine visitors in April, though none were recorded in February or March. The San Francisco Appeal earned eight visitors (out of 5,540 panelists) in February, six visitors in April, and too few to measure in March. The Gotham Gazette was in the New York sample for March and April, though not February; it received twelve visitors both months, out of 19,998 NYC market panelists. All of these numbers are far below our traffic threshold.

None of the other thirty-five outlets appeared even once in the com-Score data.

Another site largely absent in our data is Patch.com itself. Patch shows up just four times in our data: all three months in the New York market, where it received between thirty-seven and fifty visitors, and in the San Francisco market, where it received nine visitors in April. The New York media market is where Patch.com started, and it has its densest listing of

hyperlocal sites there. Even in New York, however, the numerous Patch sites collectively did not achieve 1 percent audience reach. Contemporaneously published reports suggest that the typical Patch story got only a hundred or fewer page views.<sup>19</sup> If these reports were accurate, they put most Patch sites far below our expected detection threshold.

The broad comScore coverage also allows us to piggyback onto in-depth studies of local journalism in the digital age. First, the Institute for Interactive Journalism (J-Lab) authored a 2010 study of the online news ecosystem in Philadelphia. They identified 260 local blogs, including “about 60 [with] some journalistic DNA in that they report news, not just comment on it.”<sup>20</sup> While J-Lab did not provide a full listing of these sites, they single out several as particularly successful examples.

The Philadelphia media market provides the fourth-largest panel in the sample, making it dramatically easier to find low-market-reach sites here than almost anywhere else. PlanPhilly.com shows up just in the February data, with seven visitors out of 7,967 panelists. None of the other online news sources show up at all.

The Project for Excellence in Journalism (PEJ) also conducted a detailed look at Baltimore’s online news environment in “How News Happens: A Study of the News Ecosystem of One American City.”<sup>21</sup> PEJ found ten unaffiliated digital news sources based in Baltimore. Half were hosted on larger sites such as Blogspot or Twitter, meaning that they were not visible in our data. Sites hosted on independent domains included BaltimoreBrew.com (founded by former *Baltimore Sun* staffers), BMoreNews.com, ExhibitANewsBaltimore.com, InsideCharmCity, and InvestigativeVoice.com (run by former *Baltimore Examiner* employees). None of these sites appeared in the comScore data.

How are we to make sense of these null findings? First, it is worth remembering just how much traffic one visitor in the comScore panel represents. As a rule of thumb, one comScore panelist approximates—very roughly—six hundred real-life audience members. The New York City television market, for example, has an online audience of slightly more than 11 million people, which comScore tries to track with a New York panel of 19,998. Assume for a moment that the sample construction is perfectly random: in that case, a site that averages three thousand unique, within-market visitors a month will still appear in our data less than half the time. Since our data have a traffic threshold for each market, local sites

with some cross-market reach can receive even more traffic without being likely to appear.

Measuring the size of tiny groups with panel methods is a known problem in the social sciences. In these cases, even small amounts of bias or measurement error can exceed the size of the group to be estimated.<sup>22</sup> While the comScore data set may be enormous by the standards of national surveys, it still cannot make precise audience estimates for the smallest websites in the smallest local markets. Still, the fact that such sites are too small to measure is a powerful substantive finding in its own right. Our data can provide strong bounds on their maximum audience.

### REGRESSION ANALYSIS

Local news may be a tiny subset of the content that citizens consume, but the comScore data do show that markets differ in both the number of online local news outlets available and the traffic that local news receives. How systematic are these differences? For example, in which kinds of media markets do we find web-native news outlets? What factors predict greater local digital news consumption? And are there consistent patterns in which local news markets are most concentrated? To shed light on these questions, I performed regression analyses on our one hundred local markets, combining the comScore data with additional data provided by the FCC.

A full list of variables used in the regression analysis can be found in the Appendix. The data are analyzed using two different sorts of regression models. First, negative binomial models are used to estimate both the number of web-native news outlets found in a given market, and the number of local online news outlets of all kinds. Second, OLS regression models are used to analyze local news consumption and the level of market concentration.

In all cases, the analyses use robust standard errors clustered by market. Repeated observations of the same market across months are certainly not independent, reducing our effective sample size. Because our sample size is small, only the largest and most consistent relationships are likely to be statistically significant.

Table 6.2 presents the results of the negative binomial models. These models, which assume that the dependent variable is a positive integer, are a better choice for count data than OLS regression.<sup>23</sup>

Let us start with the number of web-native news outlets found in a given market. Greater numbers of internet-only news sites are found in markets with lower per-person print circulation. The relationship is highly statistically significant, and it persists even if we exclude markets where print newspapers have stopped print publishing while maintaining their websites. While these online-only sites are unlikely to close gaps in coverage, internet-only news sources are more likely to be found where print newspaper readership is lower.

The model also suggests that markets that are both large and heavily Hispanic have fewer internet-only news sites, though the result is not quite statistically significant. No other variable comes close to statistical significance.

The story looks somewhat different when examining the total number of online local news outlets, a category dominated by sites of daily newspapers and television stations. First, there is strong evidence that larger markets have more news outlets. With a  $t$ -score  $> 5$ , this finding is nearly impossible to have been produced by chance alone. Still, the effect size is only moderate: adding four million people to a market would, on average, predict only one extra local news site.

There is also a strong association between the total number of online outlets and the number of newspaper companies operating in the market. This is consistent with our earlier analysis showing that most variance comes from different numbers of newspaper sites.

As with the analysis of internet-only news outlets, there is a complicated relationship between the racial and ethnic makeup of a market and the number of online news outlets we find there. The coefficients for the portion of Hispanic and black residents are both positive, though only the latter is significant. However, there are also strong and highly significant interaction effects. The model finds fewer online outlets in cities that are *both* large *and* heavily minority. There is perhaps a hint that markets with more elderly people have fewer local online outlets, though the result is not significant ( $p < .13$  in a two-tailed test). None of the other explanatory variables approach statistical significance.

TABLE 6.2

Regression: Number of Local Online News Outlets

|                              | Web-Native Local<br>News Sites  | Total Online Local<br>News Sites  |
|------------------------------|---------------------------------|-----------------------------------|
| TV Market Population         | .0007<br>(.0005)                | <b>.00026</b><br><b>(.00005)</b>  |
| Broadband Pct.               | 1.80<br>(2.84)                  | .045.<br>(.277)                   |
| Newspaper Circ./Capita       | <b>−2.92</b><br><b>(1.36)</b>   | .135<br>(.129)                    |
| Daily Newspapers             | .142<br>(.321)                  | −.030<br>(.035)                   |
| Newspaper Parent Companies   | −.0049<br>(.0887).              | <b>.031</b><br><b>(.009)</b>      |
| Commercial TV Stations       | −.088<br>(.086)                 | −.005<br>(.012)                   |
| Locally Owned TV Stations    | .094<br>(.258)                  | .044<br>(.029)                    |
| Minority-Owned Stations      | −.063<br>(.452)                 | −.012<br>(.040)                   |
| Newspaper-TV Cross-ownership | .209<br>(.529)                  | −.045<br>(.091)                   |
| Radio-TV Cross-ownership     | .186<br>(.218)                  | −.003<br>(.029)                   |
| News-Format Radio Stations   | −.064<br>(.066)                 | −.0047<br>(.0055)                 |
| Hispanic Pct.                | 1.56<br>(2.55)                  | .462<br>(.291)                    |
| Hispanic Pct. × Market Pop.  | <b>−.0016</b><br><b>(.0009)</b> | <b>−.00043</b><br><b>(.00008)</b> |
| Black Pct.                   | −.656<br>(3.76)                 | <b>1.35</b><br><b>(.52)</b>       |
| Black Pct. × Market Pop.     | −.0014<br>(.0015)               | <b>−.0008</b><br><b>(.0002)</b>   |



TABLE 6.2  
(continued)

|               | Web-Native Local<br>News Sites | Total Online Local<br>News Sites |
|---------------|--------------------------------|----------------------------------|
| Income        | .123<br>(.108)                 | .002<br>(.010)                   |
| Age 65+       | -2.92<br>(11.2)                | -1.46<br>(.95)                   |
| February      | <b>.223</b><br><b>(.101)</b>   | .012<br>(.008)                   |
| March         | .223<br>(.118)                 | .014<br>(.006)                   |
| Constant      | -3.07<br>(2.05)                | 1.77<br>(.25)                    |
| $\ln(\alpha)$ | -14.5<br>(.63)                 | -18.6<br>(.38)                   |
| $\alpha$      | .0000<br>(.0000)               | .0000<br>(.0000)                 |
| N             | 294                            | 294                              |

*Note:* This table presents results from a negative binomial regression model, analyzing both the number of web-native local news outlets and the total number of online local news outlets. Standard errors (in parentheses) are robust, clustered by media market.

These data also allow us to examine the consumption of local news, measured both by page views and minutes. Here we return to standard OLS linear regression models (table 6.3).

A particularly consistent predictor of local news consumption, in both page views and minutes, is the portion of the population that is Hispanic. Communities with a proportionally larger Latino population consume less local news than otherwise comparable cities. Moreover, interaction effects between market size and ethnic composition amplify this finding. Not only do heavily Hispanic markets have lower local news consumption on average, but also local news traffic in *larger* heavily Hispanic markets is lower still. The portion of market residents who are African American does not produce similar findings.

TABLE 6.3  
Regression: Online News Audience and Concentration

|                              | Page Views            | Minutes                | HHI<br>Page Views        | HHI<br>Minutes       |
|------------------------------|-----------------------|------------------------|--------------------------|----------------------|
| TV Market Population         | -.0002<br>(.0016)     | .0003<br>(.0014)       | -. <b>.525</b><br>(.279) | -.403<br>(.318)      |
| Broadband Pct.               | 16.6<br>(13.0)        | 17.3<br>(11.2)         | 896<br>(1453)            | 2174<br>(1573)       |
| Newspaper Copies/Capita      | 4.63<br>(3.31)        | 1.92<br>(2.83)         | -581<br>(550)            | -975<br>(652)        |
| Daily Newspapers             | 1.21<br>(.88)         | .590<br>(.744)         | 47.7<br>(114)            | 98.5<br>(156)        |
| Newspaper Parent Companies   | -.134<br>(.421)       | -.070<br>(.317)        | -9.20<br>(55.7)          | 43.0<br>(60.4)       |
| Commercial TV Stations       | -.091<br>(.386)       | .217<br>(.317)         | -.53<br>(57.8)           | -18.9<br>(64.8)      |
| Locally Owned TV Stations    | 3.11<br>(1.95)        | <b>2.13</b><br>(1.27)  | 52.1<br>(170)            | 37.9<br>(173)        |
| Minority-Owned Stations      | 1.60<br>(1.23)        | <b>2.20</b><br>(1.18)  | 125<br>(234)             | 254<br>(264)         |
| Newspaper-TV Cross-Ownership | <b>3.96</b><br>(2.41) | 1.68<br>(1.62)         | <b>1115</b><br>(514)     | <b>1201</b><br>(559) |
| Radio-TV Cross-Ownership     | .521<br>(.921)        | .095<br>(.656)         | 125<br>(156)             | 94.2<br>(164)        |
| News-Format Radio Stations   | .516<br>(.399)        | .247<br>(.269)         | 57.3<br>(35.9)           | 25.4<br>(39.1)       |
| Hispanic Pct.                | <b>-10.5</b><br>(5.5) | <b>-7.15</b><br>(4.14) | -586<br>(953)            | -27.8<br>(1049)      |
| Hispanic Pct. × Market Pop.  | -.0058<br>(.0024)     | -.0061<br>(.0021)      | .345<br>(.327)           | .045<br>(.373)       |
| Black Pct.                   | 2.26<br>(10.3)        | 1.09<br>(7.38)         | -507<br>(2705)           | -1589<br>(2543)      |
| Black Pct. × Market Pop.     | -.0046<br>(.0040)     | -.0028<br>(.0041)      | 1.02<br>(1.03)           | .82<br>(1.16)        |

TABLE 6.3  
(continued)

|                 | Page Views      | Minutes         | HHI<br>Page Views | HHI<br>Minutes  |
|-----------------|-----------------|-----------------|-------------------|-----------------|
| Income / capita | -.670<br>(.334) | -.480<br>(.254) | -10.8<br>(44.9)   | -28.4<br>(46.6) |
| Age 65+         | -109<br>(71)    | -75.9<br>(45.2) | -9670<br>(7207)   | -8643<br>(7239) |
| February        | 1.52<br>(.54)   | 1.80<br>(.53)   | -81.0<br>(85.7)   | 77.9<br>(101)   |
| March           | -.088<br>(.35)  | .608<br>(.35)   | -67.0<br>(68.6)   | 78.1<br>(93.1)  |
| Constant        | 26.2<br>(10.8)  | 16.0<br>(7.2)   | 4435<br>(1233)    | 4456<br>(1292)  |
| R <sup>2</sup>  | .374            | .323            | .269              | .225            |
| Root MSE        | 8.26            | 6.47            | 1155              | 1323            |

*Note:* This table presents results from OLS regression models that predict local news audience. The first two models analyze comScore audience numbers in page views and minutes. The third and fourth models analyze local online news concentration in page views and minutes, respectively, using the Herfindahl-Hirshman Index. Robust standard errors clustered by media market are in parentheses.

The model also suggests that media ownership patterns predict the level of local news consumption. The presence of a minority-owned television station is associated with greater local news usage in both page views and minutes, though only the number of minutes is statistically significant. Many of these minority-owned stations are in large, heavily Hispanic markets (such as Miami-Fort Lauderdale or Los Angeles). Similarly, the presence of locally owned TV stations also predicts higher levels of online news consumption, though here, too, only the number of minutes spent is statistically significant.

The level of TV-newspaper cross-ownership also seems to matter. Markets with cross-owned newspaper-television firms show an extra four monthly page views per person going to local news sites ( $p < .10$ , two-tailed). Findings for local news minutes are similar though not significant.

Curiously, markets with greater per capita income are estimated to consume local *less* news online than comparable poorer markets. This finding emerges with both minutes and page views, and it is statistically significant for both measures. Markets with more residents age sixty-five or older also show lower local internet news consumption, though the results are significant only with time spent.

Lastly, we look at predictors of local news market concentration online as measured by the HHI. Concentration in minutes and in page views is examined, and both metrics tell a very similar story. Overall, market concentration findings are less than in the preceding models. Most of our predictors do not approach statistical significance, with two exceptions.

First, all else being equal, more populous markets have lower levels of estimated concentration. This result is significant with page views, and approaches significance with minutes spent.

Second, markets with newspaper-television cross-ownership show dramatically higher levels of concentration in both minutes spent and page views. There are nineteen such markets in our data, and the estimated effect size is enormous: with TV-newspaper cross-ownership the model predicts an 1115-point jump in the HHI in page views, and a 1201-point jump in the HHI by minutes spent. Both metrics are statistically significant.

### ON (NOT) EXPANDING LOCAL NEWS VOICES

Has the internet significantly expanded the number of local news voices? The answer that emerges from the comScore data is a firm “no.” We can say least about online news sources that receive less than a few thousand unique visitors monthly, and are thus unlikely to appear in our data. But we do not need data on the tiniest sites to know that local online news falls far short of the hopes that continue to be placed on it.

Most television markets have fewer than a dozen local news websites—with two or three sites getting nearly all the digital audience. Those sites that do comparatively well are overwhelmingly newspaper and local television station websites, rather than new and independent sources of local news. Only sixteen of our top one hundred markets have an

unaffiliated internet news source that reaches our 1-percent audience threshold.

Even the exceptions prove the rule: the four most successful internet-only news sites were all related to the closure of a traditional print newspaper. The fact that sites like SeattlePI.com continue with a skeleton crew is welcome, but it does not represent an expansion of media diversity. Online local news markets resemble downsized versions of traditional media news markets, with the same news stories produced by the same newspapers and television stations.

Even more surprising than the small number of outlets, or the lack of new web-native news organizations, is just how small the local online news market is. Discussions about the newspaper crisis often start with the claim that online news has a revenue problem, not a readership problem. We are told repeatedly that “audiences are bigger than ever”<sup>24</sup> and that the problem with newspaper sites is that “lots of people came, but lots of advertising didn’t.”<sup>25</sup> We will address these sorts of foolhardy or simply false claims at greater length in the next chapter.

The comScore data show that this diagnosis is wrong. The central problem facing local online news sites is that their audiences are small—proportionally far smaller than even many publishers and journalists seem to realize. Metrics such as monthly audience reach are often falsely inflated, and deceptive even when measured accurately. A news startup is hailed as a success if it gets ten thousand page-views a month, even though many individual citizens view thousands of pages a month each, and even though page views last less than thirty seconds each on average. Online local news has a revenue problem in large part *because* it has a readership problem.

Arguments that the internet has expanded the number of local news voices, or allowed new web-based news outlets to fill gaps in news coverage, find little support in this data. In deciding *Prometheus v. FTC* (2004), the court’s majority worried that online local news sources might just be repackaged versions of television and newspaper content. The comScore data show that this is indeed the case.

Some have found evidence of consumer substitution between online and traditional news sources.<sup>26</sup> For national news, and particularly for commodity news content, this finding might hold. But the comScore

data make it difficult to sustain the same argument with regard to local news content. We find almost no examples of web-native news sites that are straightforward substitutes for the product of a television station or a newspaper. The lack of traffic these sites receive is strong evidence that citizens themselves do not think that they are comparable to television and newspaper websites.

The low levels of traffic to local news sites should color our assessments in other ways as well. The small audience for local news online makes it implausible that a midsized or smaller media market can support numerous online-only news organizations with adequate staff and resources. The story of hyperlocal journalism thus far is mostly a long list of failed experiments.

Moreover, the situation for most local digital news sites has been getting *worse* since the data in this chapter was collected. The analysis in this chapter remains, as of this writing, the only comprehensive study of online news at the media market level. But recent work shows that the struggles of digital local news have only grown. Iris Chyi and Ori Tenenboim, in a longitudinal study of fifty-one major newspapers, find that more than half saw their digital audience decline between 2011 and 2015.<sup>27</sup> The rise of mobile news in particular has been disastrous, a theme we will take up at length in the next chapter.

Lastly, offline media concentration carries over into online media markets. Most local news markets on the web are dominated by just a few firms. If online local news were to be considered as a separate market, half of the one hundred largest markets would qualify as highly concentrated under Department of Justice and Federal Trade Commission HHI guidelines, and nearly all would be considered at least moderately concentrated.

Perhaps the most striking example of offline media structure intersecting with local news on the web is seen with newspaper-television cross-ownership. In cities where a firm owns both a newspaper and a television station, we find an estimated jump in the Herfindahl-Hirschman Index greater than one thousand points. While the underlying causal relationship deserves more study, these numbers make a strong argument for regulatory caution. Restrictions on media cross-ownership do not just matter in print and on the airwaves: they impact news diversity on the web as well.

All of these findings are especially worrisome given recent decisions by the FCC as this book goes to press.

The FCC's December 2017 decision to roll back net neutrality rules has garnered a firestorm of public controversy. But for local media online, the decision made a month earlier to eliminate rules on media cross-media ownership will have a just as big of an impact. Critics saw the rule change as a gift to conservative-leaning Sinclair Broadcasting. Chairman Ajit Pai dismissed such concerns, claiming the old rule "doesn't reflect a world in which we get news and analysis throughout the day from countless national and local websites, podcasts, and social media outlets."<sup>28</sup>

But Pai is wrong: it is flatly not true that there are "countless" local digital news outlets. We know, *because we counted them*. The internet has added almost no new voices to the local media landscape, while weakening most existing newspapers and TV stations. Now the FCC's order threatens to weaken them further, and in the process create local media monopolies in small markets across the country. How local media can survive—even with these added challenges—is the subject of the next chapter.