

Online Readers Geographically More Dispersed Than Print Readers

by Hsiang Iris Chyi

| *Online reader surveys at 28 local newspapers suggest that newspapers based in locales of larger populations as well as those with higher print circulations tend to have a more geographically dispersed online readership.*

Media markets are defined by geography.¹ For U.S. newspapers in particular, content is rarely created without a geographic reference in mind.² But the Internet world has no geographic boundaries. So, when newspapers seek to expand their readership on the Internet, their online editions face a somewhat confusing scenario—namely, “the medium is global, the content is local.”³

Because the medium is global, most newspaper websites automatically attract a group of online users from outside the print market. But, because the content is local, publishers tend to neglect—intentionally or unintentionally—visitors from outside their print market, fearing that existing local advertisers, which provide as much as 90 percent of the online edition’s revenue,⁴ would find long-distance users irrelevant,⁵ and that pursuing non-local advertisers may pit the newspapers against a much wider and more aggressive range of competition for those advertising dollars. The indecisive attitude about long-distance online readers translates into inaction: Most U.S. newspapers make few efforts to understand or serve non-local online readers.

In the meantime, a growing number of media scholars and critics have started to examine the less-than-satisfactory result of newspapers’ online experiment in terms of readership⁶ and revenue,⁷ questioning the economic value

Chyi is an assistant professor in the School of Journalism at the University of Texas at Austin. The author thanks Greg Harmon and the researchers at Belden Associates (now Belden Interactive) for their data. They bear no responsibility for the conclusions reached based on the author’s analyses of the data. Special thanks go to George Sylvie, Jacie Yang, Mengta Yang, Seth Lewis and Nan Zheng.

of a newspaper's online readers primarily from the advertiser's perspective. Yet, as a result of the recession and the subsequent decline in advertising income, many newspapers are planning to charge directly online users for news access. In light of the resurrection of the subscription model,⁸ a re-evaluation of the value of these online readers is essential. However, few paywall plans seem to distinguish different niche audiences that constitute a newspapers' online readership—e.g., online readers from outside the print market. The lack of understanding about these non-traditional readers may result in a state of ambiguity that hinders the proper evaluation of newspapers' online readership and prevents newspapers from differentiating various types of users and their needs and wants.

To understand online newspaper readership better, this study examines closely the geographic distribution of online users of 28 U.S. newspaper websites. Of particular interest is the distance between a typical user and the newspaper, the grouping of readers at different geographic levels and the factors influencing users' geographic distribution. These issues are of great importance because newspapers are geographically specific and their readership, print or online, should be understood as such.

Literature Review

Geography is a central concern in newspaper economics⁹ because it determines scarcity (in the form of product substitutability), which, in turn, determines the value a newspaper creates and delivers. Rosse's classic umbrella model of newspaper competition illustrates intercity competition among newspapers in a four-layer hierarchical structure—metropolitan dailies, satellite city dailies, suburban dailies and weeklies.¹⁰ This model exemplified the importance of geography as a key factor determining the level of competition among newspapers operating within their own market boundaries.

In practice, newspapers define their market boundaries using specific descriptors—for example, Metropolitan Statistical Area (MSA),¹¹ ABC (Audit Bureau of Circulations) Retail Trading Zone,¹² ABC City Zone¹³ and Newspaper Designated Market Area (NDM)¹⁴—each serving specific purposes.¹⁵ Print newspapers operate within these clearly defined market areas.

Online, market boundaries seem to disappear. But geography has not lost its relevance in cyberspace. Because newspaper content is rarely created without a geographic reference in mind, the interplay between the medium's global capacity and the content's local orientation deserves scholarly attention.

To illustrate online newspaper geography, based on "the medium is global; the market is not" premise, Chyi¹⁶ borrowed the umbrella imagery and developed a five-layer model consisting of community, metro, regional, national and international levels. As most print newspapers operate at the community, metro or national level, their online editions may expand the readership to the next highest level. For example, a metro paper in print is more likely to attain

regional readers online, while a national newspaper site is more likely to reach users worldwide. An exploratory study showed that most national newspapers defined their long-distance market at the global level; for local newspapers, the results were mixed, indicating that local newspaper publishers were unsure about how to define their online readership geographically.¹⁷ Another study conceptualized long-distance users as the “geographic long tail,”¹⁸ suggesting that, as newspapers move from print to online, usage becomes less concentrated in the local market—previously defined by the print product—and extends to the long-distance market.

These studies present various models that illustrate online newspapers’ geographic markets. Along these lines, this study seeks to empirically examine the geographic grouping of online newspaper users at various geographic levels.

Research on the dual-geographic market of online newspapers has shown that an additional, potential audience segment for online newspapers exists beyond the print edition’s circulation area.¹⁹ As early as 1998-1999, a survey of online newspaper publishers reported that about one-third of their traffic came from outside their print market.²⁰ As the Internet audience tracking technologies evolved, research based on panel data collected by Internet research firm comScore MediaMetrix also showed that a substantial amount of online traffic to newspaper sites came from outside the print market.²¹ But the importance of long-distance users is most salient among major newspaper sites in the United Kingdom, where overseas users outnumber domestic ones. For example, one report found that 72 percent of the Mail Online’s users were from outside the UK, and the same holds true for Sun Online and Times Online (62 percent), and the Guardian and Telegraph (56 percent).²² Americans alone accounted for 36 percent of the total audience for major UK news sites.²³

Research Questions

Built upon these findings, this study goes beyond percentages to examine the geographic distribution of online newspaper readers: Where do they reside, and what is the “distance” in long-distance? Specifically, this study addresses the following research questions:

RQ1:

What is the average distance between a typical online reader and the newspaper (mean, median and mode)?

RQ2:

Do online readers cluster at specific geographic levels?

As for what factors affect online readers’ geographic distribution, previous research has shown that the size of a newspaper is associated with certain indicators of its online performance. For example, Chyi and Sylvie found that print circulation was positively related to the amount of traffic from both lo-

cal and long-distance markets.²⁴ Another study showed that print circulation was positively related to the actual size of online readership at both local and national levels but not related to the proportion of long-distance traffic.²⁵ The population of the print newspaper market might be of relevance, too, because newspaper consumption historically varied by geography-related factors such as region and urbanization levels and by population and household trends.²⁶ Additionally, the performance of the newspaper's website is an indicator of site quality, which may determine the appeal of the site and expand site reach beyond the print market.²⁷ Taken together, this study seeks to explore the plausible influence of these factors (i.e., population of the newspaper locale, print circulation and website performance) on the geographic distribution of online readership, addressing the following research question:

RQ3:

What factors predict the average distance between a typical online reader and the newspaper?

Methods

Secondary Data Analysis

The data in this analysis were collected by Belden Associates (now Belden Interactive), a newspaper research and consulting firm, which conducted online reader surveys on 28 local newspaper websites from October 2007 to June 2008. For the 28 newspapers under study, their average Sunday circulation is 95,772 and their average weekday circulation is 73,415. These newspapers' mean average weekday circulation is about twice as large as that of all 1,400 daily newspapers in the United States.²⁸ Nevertheless, because the data set includes five newspapers with a circulation greater than 100,000 and five with a circulation of less than 20,000, they constitute a fairly diverse sample of U.S. daily newspapers in terms of circulation.

While visiting the local newspaper website, randomly selected users were intercepted with a pop-up invitation to participate in the survey.²⁹ Therefore, each of the 28 surveys was based on a probability sample. The sample size totaled 25,964 users.

ZIP Code Processing

To address RQ1, this study used ZIP Code information provided by the survey respondents to identify the location of each respondent. ZIP Code, developed by the U.S. Postal Service, is one of the most important and effective geographic identifiers used by the general public. Since 1963, each area in the United States has been assigned a 5-digit numeric code, the first three digits of which represent the sectional center or large city, and the last two digits represent the post office facility or delivery area. Currently there are more than 42,000 ZIP Codes in use.³⁰

To calculate the distance between the respondent and the newspaper, each ZIP Code was translated into latitude/longitude coordinates, based on U.S. Census Bureau data—namely, the 2000 U.S. Gazetteer ZCTA Files,³¹ which contain information regarding counties, county subdivisions, places and ZIP Code Tabulation Areas (ZCTAs) for the 50 states, the District of Columbia and Puerto Rico.³²

Since some ZIP Codes were created after 2000 and thus were not included in the U.S. Census Bureau database, the corresponding coordinates of some 195 respondents were not available. These ZIP Codes were entered into the ZIP Code lookup search engine on the U.S. Postal Service website³³ to identify the area each code refers to, which, in turn, was used to retrieve the corresponding latitude/longitude coordinates from the National Weather Service website.³⁴

Mapping Analysis

To address RQ2, this study visualized the geographic distribution of individual online users on a map using BatchGeocode (<http://www.batchgeo.com/>), an online service that maps multiple addresses or ZIP Codes on a Google or Yahoo! map by converting an address to latitude/longitude coordinates.

Regression Analysis

To address RQ3, this study performed a hierarchical regression analysis to predict the mean distance between users and the newspaper locale by three independent variables (i.e., population of the newspaper locale, print circulation and website performance). The population and circulation figures were obtained from the *Editor & Publisher International Yearbook* and website performance was operationalized as the newspaper site's monthly visitors, which was obtained from *Bacons's Internet Media Directory*.

Based on the results of the regression analysis, it is also clear that newspapers' online readership, even if geographically dispersed, does not exist in a vacuum. The population of the newspaper's print market and the performance of the print edition (i.e., circulation) together determine how geographically dispersed the newspaper's online readership is.

Findings

RQ1 seeks to measure the average distance between a typical online reader and the newspaper (mean, median, and mode).

Among all users in the aggregate sample (N = 25,261), the mean is 161 (miles), the median is 12 and the mode is zero. The distribution is skewed to the right, suggesting that most online readers reside closely to the newspaper locale.

To delineate a more detailed picture at the individual newspaper level, Table 1 presents the average distance in terms of means, medians, and modes for each of the 28 newspaper sites. The mean ranges from 65 to 423 miles; the median ranges from 0 to 20 miles; the mode ranges from 0 to 12 miles. The mean shows the largest variance, and the mode shows the least.

Table 1
28 News Sites: Average Distance

<i>Location - Web site</i>	<i>Weekday print circulation</i>	<i>Average distance</i>			<i>SD</i>
		<i>Mean</i>	<i>Median</i>	<i>Mode</i>	
Denver - DenverPost.com	255,935	266.2	17.1	2.0	486.3
Denver - RockyMountainNews.com	255,675	240.8	15.4	5.0	482.2
St. Paul - TwinCities.com	184,371	193.3	20.3	4.0	411.1
Los Angeles - DailyNews.com	151,215	422.5	19.2	0.0	848.1
Birmingham - al.com	143,781	68.9	14.8	8.0	205.9
Mobile - al.com	95,699	119.6	19.5	12.0	243.0
Harrisburg/Lehigh Valley - PennLive.com	95,188	91.0	9.4	3.0	318.8
Long Beach - PressTelegram.com	87,637	131.8	9.9	11.0	430.1
Springfield - MassLive.com	83,351	100.1	7.9	2.0	366.8
Middletown - RecordOnline.com	79,122	130.5	18.7	0.0	360.9
El Paso - ElPasoTimes.com	68,998	171.6	10.7	11.0	400.4
Staten Island - SILive.com	58,034	114.3	4.5	4.0	385.6
Erie - GoErie.com	56,462	188.5	11.9	8.0	440.5
Davenport - qctimes.com	54,020	134.3	6.7	5.0	345.4
Huntsville - al.com	51,013	65.0	19.2	10.0	201.6
Vancouver - Columbian.com	46,203	110.9	8.7	9.0	389.5
San Gabriel - SGVTribune.com	42,602	91.6	5.9	5.0	347.6
Waterloo - WFCCourier.com	41,477	206.5	15.6	0.0	442.2
Chico - ChicoER.com	31,678	92.4	6.0	2.0	421.0
Pasadena - PasadenaStarNews.com	29,712	104.6	3.5	2.0	410.1
Dubuque - THOnline.com	28,315	160.2	16.4	0.0	359.3
Sandusky - SanduskyRegister.com	22,168	127.1	9.9	0.0	345.4
Goldsboro - NewsArgus.com	19,219	95.3	8.6	5.0	310.5
Nampa - IdahoPress.com	18,691	115.8	6.9	4.0	360.0
Pocatello - JournalNet.com	16,723	208.4	9.1	4.0	440.4
Klamath Falls - HeraldandNews.com	16,612	121.6	12.2	0.0	334.7
Whittier - WhittierDailyNews.com	16,339	100.6	3.0	2.0	387.2
Montrose - MontrosePress.com	5,401	160.6	0.0	0.0	398.9
<i>Average</i>	73,415	161.1	11.9	0.0	427.3

RQ2 concerns the grouping of online readers at specific geographic levels.

To explore the difference in readership distribution across newspaper sites with varying mean distance, three newspaper sites were selected for analysis: AL.com, the Web edition of *The Huntsville Times*, Huntsville, Ala., with the shortest mean distance (65 miles) among the 28 sites; MontrosePress.com, the Web edition of *The Montrose Daily Press*, Montrose, Col., with the average mean distance of 161 miles; and DailyNews.com, the Web edition of *The Daily News*, Los Angeles, Cal., with the longest mean distance (423 miles). Figures 1-3 present the geographic distribution of these three newspapers' online readership.

The overall shape of the distribution looks alike, but the distribution of AL.com users is characterized by a much shorter "tail." In addition, DailyNews.com shows a second peak or user cluster between 2,500 to 3,000 miles. The following analysis would identify the location of that second cluster of DailyNews.com.

To closely examine the grouping of users of DailyNews.com, each respondent's location was depicted on a map. Figure 4 shows that the primary cluster is surrounding the Los Angeles area, the market defined by the print newspaper, the ZIP Code of which is 91367. The second cluster is on the East Coast, in adjacent areas surrounding New York City. The distance between these two clusters is about 2,800 miles, matching the pattern illustrated in Figure 3.

RQ3 asks which factors predict (i.e., population of the newspaper locale, print circulation and website performance) the average distance between a typical online reader and the newspaper.

Table 2 first presents the results of the bivariate zero-order correlation analysis; Table 3 presents the hierarchical regression analysis. Population is the strongest predictor across all three models.

The R-square value of the first model shows that population alone accounts for 65 percent of the variance in mean distance. The full (i.e., the third) model indicates that as much as 78 percent of the variance in the mean distance can be explained by the three predictor variables. Population has the greatest influence on distance (*beta* = .688, *p* < .001), followed by print circu-

Table 2
Correlations between Mean Distance and Predicting Variables

	Mean Distance	Pop'l	Print Circul'	Monthly Visitors
Mean distance	—	.778*** (28)	.508** (28)	.199 (21)
Population		—	.382 (28)	.187* 21
Print circulation			—	.704*** (21)
Monthly visitors				—

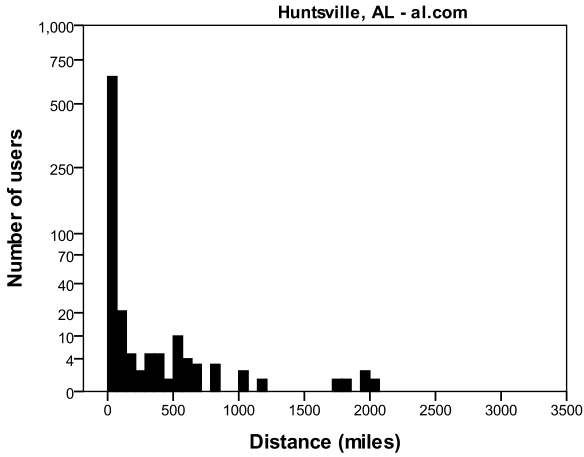
Note: Cell entries are Pearson's *r* and *n*.

* Correlation significant at the .05 level (2-tailed)

** Correlation significant at the .01 level (2-tailed)

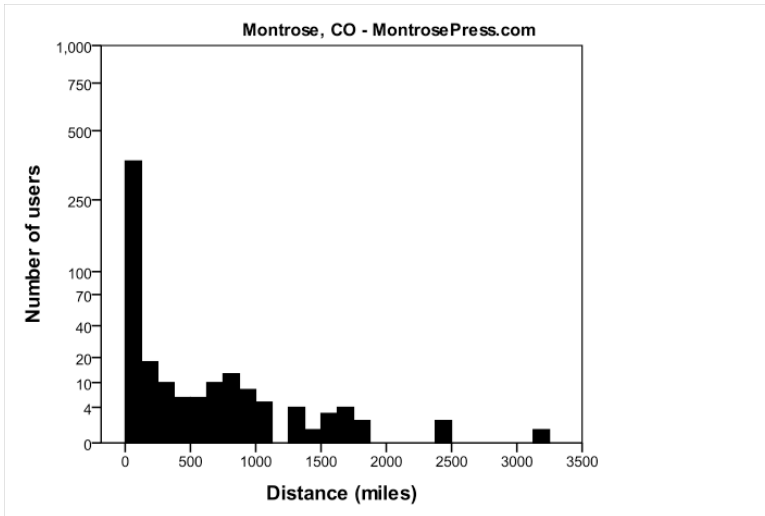
*** Correlation significant at the .001 level (2-tailed)

Figure 1
Geographic Distribution of Online Readers: Short



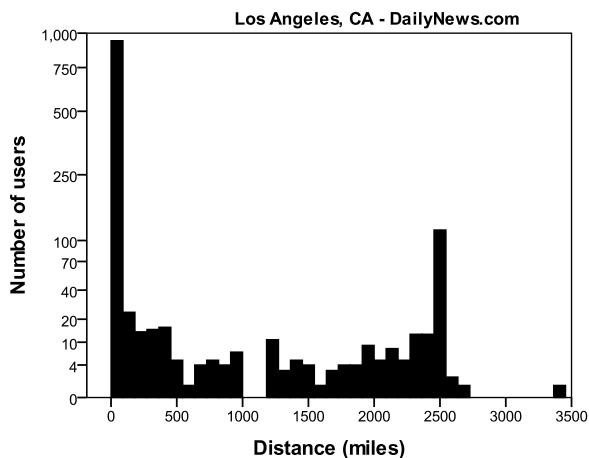
Mean=65.0, SD=201.6, N=714

Figure 2
Geographic Distribution of Online Readers: Medium



Mean=160.6, SD=398.9, N=469

Figure 3
Geographic Distribution of Online Readers: Long



Mean=422.5, SD=848.1, N=1,247

Figure 4
DailyNews.com User Distribution



Numbers of respondents having a particular ZIP code.

lation ($\beta = .536$, $p < .001$). Website performance (i.e., monthly visitors) is not a significant predictor of mean distance.

In other words, newspapers based in locales of larger populations, as well as those with higher print circulations tend to have a more geographically dispersed online readership, controlling for the effect of the other variables in the model. Website performance, on the other hand, is not a major factor affecting the geographic distribution of online readers.

Table 3
Predictors of Mean Distance between Online Readers and the Newspaper

Predictors	1	2	3
		Beta (SE)	
Population	.804*** (.000)	.702*** (.000)	.688*** (.000)
Print circulation		.315* (.000)	.536** (.000)
Monthly visitors			-.307 (.000)
N	21	21	21
Model	$F(1, 19) = 34.8$ $p < .001$	$F(2, 18) = 25.0$ $p < .001$	$F(3, 17) = 20.4$ $p < .001$
R ²	.647	.736	.783

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

Discussion

This study took an innovative approach and identified the geographic distribution of 28 local newspapers' online readership through a ZIP Code analysis. Additionally, this study visualized the "geographic long tail"³⁵ and groupings of online newspaper users by mapping out users' ZIP Codes. This approach turned abstract numbers into meaningful and easy-to-interpret information. Moreover, the quantitative analysis identified two factors, which explained most of the variance in online readers' geographic distribution.

Not surprisingly, user density is the highest surrounding the center of the print market, indicated by a distribution that is skewed to the right. But the mean distance between a typical online reader and the newspaper locale ranges from 65 to 423 miles (the latter is more than 7 hours of driving at the speed of 60 mph!), suggesting that the online readership is not completely confined by geography. Yet, it is the population of the newspaper locale and print circulation that determine the mean distance, suggesting that the geographic distribution of newspapers' online readership is deeply rooted in the print edition's geographic and readership base. The website's performance, on the other hand, is of no significant impact. Such findings carry a number of managerial implications

for newspaper companies.

First, the mapping analysis, despite its descriptive nature, discloses the geographic characteristics of online newspaper readership, which otherwise would have remained ambiguous. For example, who would have imagined that DailyNews.com, based in Los Angeles, has a user cluster 2,800 miles away in the New York area? Of course, one may wonder: What can a newspaper do about such users that are 2,800 miles away? In this regard, British newspapers have been experimenting with some fairly aggressive content and marketing strategies, hoping to pursue foreign readers and advertisers. *The Guardian*, for example, has a Washington-based newsroom that allows the site to increase the coverage of U.S. politics.³⁶ Times Online seeks to generate more traffic from American readers and even publishes an American edition of the print newspaper on the East Coast of the U.S. as a marketing tool for the website.³⁷ *The Financial Times*, eyeing China, launched a Chinese-language website in 2003 and has since attracted 1.5 million registered users.³⁸ Whether such efforts translate foreign traffic into revenue streams remains to be seen.³⁹

Back in the U.S. context, how much of its resources could a typical local newspaper, with an average weekday circulation of 35,683, devote to mirror some of the changes that the larger newspapers have made are questionable. With staff reductions and limited financial resources, can local newspapers go to great lengths to court online readers outside of their print market boundaries?

The answer is yes and no. On the one hand, it is unrealistic to expect local advertisers, whom local newspaper sites heavily rely on,⁴⁰ to develop substantial interest in long-distance users. It is from this perspective that "the value of the overseas audience is a fraction of the value of the U.K. audience."⁴¹ But, on the other hand, the landscape of Internet advertising has been changing. Many newspaper sites are now working with national advertising networks such as Google and Yahoo!, which connect advertisers and media outlets in unconventional ways. For example, Google sells targeted, keyword-based ads to a much wider range of advertisers—local and non-local—through its online, auction-based AdWords service and then serves such ads on content sites. As a result, long-distance online users, who were considered irrelevant or less valuable by local advertisers, may turn out to be relevant and valuable when being pursued as a niche audience.

Besides the increasing market potential of long-distance users as a result of new advertising practices, the value of long-distance users is even more salient in the context of the subscription model. Considering that online advertising revenue is still less than 5 percent of total newspaper revenue,⁴² some major newspapers are considering erecting the paywall and charging users for online news access. Among them, British newspapers *The Times* and *The Sunday Times* took the lead in July 2010, and *The New York Times* and *The Dallas Morning News* also launched their digital subscription plan in March 2011. Under the subscription scheme, the value of any online user is no longer determined by whether he or she is local but how likely one would pay for online content. Recent research

findings have confirmed that long-distance users tend to have higher income and are more loyal to the newspaper site for lack of similar offline alternatives.⁴³ Therefore, any newspaper site that is considering the paid-content model should view frequent out-of-market users as of more, not less, importance.

Based on the results of the regression analysis, it is also clear that newspapers' online readership, even if geographically dispersed, does not exist in a vacuum. The population of the newspaper's print market and the performance of the print edition (i.e., circulation) together determine how geographically dispersed the newspaper's online readership is. Therefore, with 1,400 U.S. daily newspapers of varying market sizes and circulation levels all attaining long-distance users, the one-size-fits-all strategy probably does not exist. For example, *The New York Times'* online readership is inherently much more international than that of local dailies, so what works for *The Times* may not work for others. Unfortunately, even *The New York Times*, which has a global user base,⁴⁴ has not done much to monetize visitors from all over the world.

Perhaps the real issue is that newspapers historically have viewed their product as functional and its demand predictable as opposed to innovative and unpredictable.⁴⁵ However, if this industry hopes to thrive (or just survive) on the Internet, it must research and better understand its online readership. This study demonstrates a rather straightforward approach, one that demands only minimal information—something as simple as users' ZIP Codes—from the reader. Another strong geographic indicator available to anyone who publishes online is each user's IP address, which also allows for geographic analysis of online readership.

As Internet technologies evolve, advanced tools for tracking and analyzing user behavior have become readily available. One example is Google Analytics, an enterprise-class, easy-to-use Web Analytics service that helps any website track a wide range of audience metrics and costs nothing to implement.⁴⁶ This is something newspaper sites, large or small, can and should take advantage of. As Jeff Jarvis points out, newspaper sites got all these out-of-market readers without even trying.⁴⁷ All they need to do is to analyze empirical data, think in digital terms, and plan accordingly—knowing where online readers reside is just the very first step toward understanding who they are and what they need.

Limitations of the Study

This study was based on secondary data, which included only these local newspaper sites. As a result, national newspaper sites like NYTimes.com, which presumably would yield different patterns of readership distribution, were not included in the analysis. In addition, the ZIP Code analysis identified only users residing within the United States, so international users were not included in the analysis. As previous research has shown that international users constitute major audience segments for a number of British news sites,⁴⁸ the exclusion of international users is less than satisfactory. But, because the 28 newspaper sites

under study are affiliated with local newspapers, the proportion of international users is expected to be of lesser significance.

It is noted that one of the newspapers in the sample (*The Rocky Mountain News*) folded in February 2009. A re-examination of the data has confirmed that excluding that particular case from the analysis would only slightly change the values generated by some of the statistical tests (i.e. aggregate mean, medium and correlation and regression coefficients) and such differences have little or no impact on the overall relationships found or the conclusions reached.

Another weakness, inherent in most online surveys, is that regular or heavy users may be more likely to participate in the survey than one-time users directed to the newspaper site through search engines. The potential biases should be taken into account when interpreting the results.

Nevertheless, this aggregate data set included local newspapers of various sizes and a large number of online newspaper readers. While scholarly research tends to focus on national newspapers, local dailies that constitute the majority of U.S newspapers remain understudied. This study addresses that gap, contributing to a better understanding of local newspapers' online readership.

Notes

1. Robert G. Picard, *Media economics: Concepts and issues* (Newbury Park, CA: Sage, 1989).
 2. Stephen Lacy and Todd F. Simon, *The economics & regulation of United States newspapers* (Norwood, NJ: Ablex, 1993).
 3. Hsiang Iris Chyi and George Sylvie, "The medium is global; the content is not: The role of geography in online newspaper markets," *Journal of Media Economics* 14, no. 4 (2001): 231-248.
 4. About 90 percent of the online edition's revenue came from local advertisers, see Newspaper Association of America, "Newspapers' online operations: Performance report 2006," *Newspaper Association of America*, 2007, <http://www.naa.org/docs/Digital-Media/200710_NP_Online_Per_Present.pdf>.
 5. Richard Pérez-Peña, "Newsday to charge to read its website," *New York Times*, Oct. 22, 2009, sect. B, p. 4; Neil Thurman, "The globalization of journalism online: A transatlantic study of news websites and their international readers," *Journalism* 8, no. 3 (2007): 285-307.
 6. Hsiang Iris Chyi and Seth C. Lewis, "Use of online newspaper sites lags behind print editions," *Newspaper Research Journal* 30, no. 4 (2009): 38-53; Martin Langeveld, "Is print still king? Has online made a move? Updating a controversial post," *Nieman Journalism Lab*, April 5, 2010, <<http://www.niemanlab.org/2010/04/is-print-still-king-has-online-made-a-move-updating-a-controversial-post/>>.
 7. Stephanie Clifford, "Newspapers' Web revenue is stalling," *The New York Times*, 2008; Scott Karp, "Newspaper online vs. print ad revenue: The 10 percent problem," *Publishing 2.0*, 2007, <<http://publishing2.com/2007/07/17/newspaper-online-vs-print-ad-revenue-the-10-problem/>>; Alan D. Mutter, "Newspaper web sales lag by every measure," *Reflections of a Newsosaur*, April 13, 2009, <<http://newsosaur.blogspot.com/2009/04/newspaper-web-sales-lag-by-every.html>>.
 8. Andrew Clark, "News Corp will charge for newspaper websites, says Rupert Murdoch," *The Guardian*, May 7, 2009, <<http://www.guardian.co.uk/media/2009/may/07/rupert-murdoch-charging-websites>>; Richard Pérez-Peña, "The New York Times to charge nonsubscribers for unlimited use of its site," *The New York Times*, Jan. 20, 2010, <<http://www.nytimes.com/2010/01/21/business/media/21times.html>>; Derek Thompson, "Is Murdoch's Plan to Charge for Online News Doomed?," *The Atlantic*, Aug. 6, 2009, <http://business.theatlantic.com/2009/08/is_murdochs_plan_to_charge_for_online_news_doomed.php>.
-

9. Lacy and Simon, *The economics & regulation of United States newspapers*.

10. James N. Rosse, "Economic limits of press responsibility," *Studies in Industry Economics* 56 (1975); James N. Rosse et al., "Economic issues in mass communication industries," (paper presented at Federal Trade Commission Media Symposium, Washington, D.C., 1978).

11. MSAs, defined by the U.S. Office of Management and Budget, refer to regions with at least one city of 50,000 population and a combined population of more than 100,000 in one or more counties.

12. The ABC Retail Trading Zone, defined jointly by the newspaper and the Audit Bureau of Circulation, refers to the area where newspapers conduct the primary trading for advertising and circulation.

13. The ABC City Zone, defined jointly by the newspaper and the Audit Bureau of Circulation, refers to the central portion of a city and its contiguous suburbs.

14. The NDM refers to a geographic area specified by the newspaper that does not correspond to predetermined geographic boundaries such as MSA, city zone or county zone.

15. See Robert G. Picard and Jeffrey H. Brody, *The newspaper publishing industry* (Boston: Allyn & Bacon, 1997), 38.

16. "The medium is global; the market is not: The umbrella-upgrading model of online newspaper markets," in *Evolving media markets: Effects of economic and policy changes*, ed. Robert G. Picard (Economic Research Foundation for Mass Communication & Turku School of Economics and Business Administration, 1998).

17. Chyi and Sylvie, "The medium is global; the content is not: The role of geography in online newspaper markets."

18. George Sylvie, "Developing an online newspaper business model: Long distance meets the long tail," (presented at the International Symposium on Online Journalism, Austin, Texas, 2008).

19. Hsiang Iris Chyi and George Sylvie, "Are long-distance users an inconvenient truth? Profiling U.S. newspapers' online readership in the dual-geographic market," *International Journal on Media Management* 12, no. 2 (2010): 93-112.

20. Chyi and Sylvie, "The medium is global; the content is not: The role of geography in online newspaper markets."

21. "One product, two markets: How geography differentiates online newspaper audiences," *Journalism & Mass Communication Quarterly* 84, no. 3 (2007): 562-581.

22. Jemima Kiss, "Newspaper ABCes: Soaring online user figures offer solace - and challenges," *The Guardian*, Feb. 25, 2008, <<http://www.guardian.co.uk/media/2008/feb/25/pressandpublishing.abcs>>.

23. Thurman, "The globalization of journalism online: A transatlantic study of news websites and their international readers."

24. Chyi and Sylvie, "The medium is global; the content is not: The role of geography in online newspaper markets."

25. Sylvie and Chyi, "One product, two markets: How geography differentiates online newspaper audiences."

26. William A. Tillinghast, "Declining newspaper readership: Impact of region and urbanization," *Journalism Quarterly* 58, no. 1 (1981): 14-23, 50.

27. Sylvie and Chyi, "One product, two markets: How geography differentiates online newspaper audiences;" Chyi and Sylvie, "The medium is global; the content is not: The role of geography in online newspaper markets."

28. In 2007, the average circulation for a U.S. daily newspaper was 35,683 and 56,501 for weekday and Sunday editions, respectively Editor & Publisher, "Circulation of U.S. daily newspapers by circulation groups," in *Editor & Publisher international yearbook* (Editor & Publisher, 2008).

29. The survey was made available on the 28 sites for 21-41 days. Participants who completed the questionnaire were entered in a drawing for a cash award.

30. United States Postal Service, "USPS - Frequently Asked Questions - ZIP Code™ Information," 2009, <<http://faq.usps.com/eCustomer/iq/usps/request.do?session={7efc6a50-dd2a-11de-41e7->
