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## A study of the concept of interactivity as it applies to online newspapers

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**A STUDY OF THE CONCEPT OF INTERACTIVITY AS IT APPLIES TO  
ONLINE NEWSPAPERS**

Bradley Thomas Pedersen

**Thesis submitted to the  
Perley Isaac Reed School of Journalism  
at West Virginia University  
in partial fulfillment of the requirements  
for the degree of**

**Master of Science  
in  
Journalism**

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Convergence

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# **Abstract**

## **A Study of the Concept of Interactivity as it Applies to Online Newspapers**

Bradley Thomas Pedersen

This project examines how frequently a sampling of online newspapers incorporates interactive features into online content. The newspapers for the study represent the eastern, western and central regions of the United States. The analysis focused on the amount of links and their destination, opportunities for feedback and the use of images, video and audio. The study found that the sampled newspapers do not frequently use links, images, video and audio or give users opportunities to give feedback.

## **Acknowledgments**

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Also, a great debt of gratitude is due to my parents, Craig and Martha Pedersen, who were always there when I needed them, either financially or emotionally. Although they did not understand the full process or extent of the research done on this project, they were always there to offer an ear to listen, hand to help me back up or a shoulder to cry on when the stress became too much.

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## **Introduction**

The media and its ability to present news constantly changes, keeping up with technology. The world has come together on the Internet, a vast and limitless communication network. It has revolutionized the field of journalism by allowing instantaneous and more in-depth reporting and more reader interaction.

The technology available on the Internet has given old media, such as newspapers, magazines and broadcasters, has the potential to improve the quality of information and the individual news experience. Since its inception, newspapers have been gravitating almost naturally to the Internet, though the transition has not been a smooth one. Newspapers, due to lack of general Web knowledge and budget, have had a difficult time embracing all of the Internet's possibilities.

## **Research Questions**

- I. How are newspaper websites using the Internet to further extend the readers ability to explore content on a specific story's topic?
- II. How do the analyzed newspaper websites make it possible for users to interact with the newspaper staff and the content of a story?

## **Literature Review**

Through the use of hyperlinks, text, still and moving images, audio and other multimedia presentations, news can be utilized to provide more in-depth coverage than in traditional print editions. Since arriving on the Internet, newspapers' websites have seen an increase in web traffic.<sup>1</sup> But with their time on the Internet, newspapers have not fully embraced their full potential by limiting interactivity, becoming "not much more than electronic versions of the parent newspaper."<sup>2</sup> One example would be their usage of

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<sup>1</sup> Web traffic refers to the amount of people accessing a site.

features, such as links and multimedia presentations, to enhance already successful sections of the print edition. According to Thompson and Wassmuth, “91 percent of the papers online have classified ads, but few use interactive features.”<sup>3</sup>

Currently, online papers are still in an early stage of their convergence with the Internet, with potential to utilize several forms of digital communications like audio, video, still images, text and animations.<sup>4</sup> Online newspapers have drawn criticism for not utilizing all available resources and capabilities.<sup>5</sup> By taking full advantage of all of the available technologies, online newspapers could revolutionize the quality of their content, which would, in turn, attract more readers back to traditional print additions. Though some believe that the Internet should redefine traditional newspapers from basic print editions to elaborate multimedia experiences, others feel that the old styles of content should be “complemented,” not overrun, by technology.<sup>6</sup>

When considering going online, traditional print media must try to utilize all of the available resources. This idea is commonly known as media convergence. The most basic definition of media convergence says that it is “a ‘coming together’ of different media.”<sup>7</sup> A more in-depth definition says that media convergence consists of “partners

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<sup>2</sup> Wendy Dibeau and Bruce Garrison, “How Six Online Newspapers Use Web Technologies,” *Newspaper Research Journal* 22, no. 2 (Spring 2001), 80.

<sup>3</sup> David Thompson and Birgit Wassmuth, “Few Newspapers Use Online Classified Interactive Features,” *Newspaper Research Journal* 22, no. 4 (Fall 2001), 16.

<sup>4</sup> Dibeau and Garrison, “How Six Online Newspapers Use Web Technologies,” 80.

<sup>5</sup> *Ibid.*, 81.

<sup>6</sup> Tanjev Schultz, “Mass Media and the Concept of Interactivity: An Exploratory Study of Online Forums and the Reader,” *Media, Culture & Society* 22, no. 2 (Mar 2000), 208.

<sup>7</sup> Elizabeth Birge, “Teaching Convergence - But What is It?,” *Quill* 92, no. 4, 11.

working together to cover or develop news stories, [where] the relationship can range from cooperating on breaking news, to sharing budgets.”<sup>8</sup>

Traditionally, media convergence took place between a print medium and broadcast. This merger was designed to share information, resulting in more in-depth news coverage at special events, such as political campaigns and election coverage,<sup>9</sup> though, in some cases, it was utilized for day-to-day content for both parties. But content wasn’t always the only aspect affected by the media coming together. Sometimes the extent of this convergence only goes as far as “cross-promotional announcements or activities, such as newspapers publishing broadcast schedules and TV stations highlighting stories in upcoming editions of the newspaper.”<sup>10</sup> Ideally, both parties will benefit from the convergence, not only monetarily. Instead, both party’s content should flourish to a higher quality than before the convergence by utilizing the additional resources made available through the merger.<sup>11</sup>

The Internet has changed the idea of the traditional media convergence, especially for newspapers that primarily deal with text, still photographs and layouts on broadsheets.<sup>12</sup> The Internet makes more media options, not traditionally associated with print media, available for newspapers. Allowing the use of text, still and moving imagery, audio and interactive multimedia, such as chat rooms, hyperlinks, e-mail, and message

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<sup>8</sup> Ibid.

<sup>9</sup> Stan Ketterer, Tom Weir, J. Steven Smethers and James Back, “Case Study Shows Limited Benefits of Convergence,” *Newspaper Research Journal* 25, no. 3 (Summer 2004), 53.

<sup>10</sup> Ibid, 53.

<sup>11</sup> Ibid., 61.

<sup>12</sup> Peter Desbarats, *Newspaper and Computers: An Industry in Transition*, Ottawa: Supply and Services Canada, 1981.

boards and blogs, while eliminating classic broadsheets, the Internet is making it almost essential for newspapers to embrace new technology to survive in a high-tech world. All of the available options are changing the ways in which a traditional print newspaper must present information to be able to compete with other online news sources.<sup>13</sup>

The Internet is not a new place for most forms of media; broadcast and print mediums have been present online for years.<sup>14</sup> Journalists must stay in close contact with technology; it has helped to shape the field<sup>15</sup> and how readers get their information, with advances ranging from the printing press all the way to instant news on the web and television. But for print media, the idea of seamlessly bringing together their usual print editions, while offering additional content in online versions, seems to be eluding most.<sup>16</sup> One reason may be that most journalists have no special training outside of their prescribed field. Academics are having a difficult time tailoring their curricula to properly train students for the emerging field.<sup>17</sup> But even with a proper educational background, print management does not know how to distribute the tasks involved in producing an online and print newspaper in the constantly evolving technological field.<sup>18</sup> Many of them, instead of embracing and utilizing the technology available on the Internet or creating exclusive online content, align their print and Internet editions.<sup>19</sup>

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<sup>13</sup> Betsy Joyce, "The Print-to-Web Evolution and the Importance of Usability," *Public Roads* 65, no. 3 (Nov/Dec 2001), 56.

<sup>14</sup> Birge, "Teaching Convergence - But What is It?," 10.

<sup>15</sup> Pablo J. Boczkowski, "The Process of Adopting Multimedia and Interactivity in Three Online Newsrooms," *Journal of Communication* 54, no. 2 (June 2004), 198.

<sup>16</sup> Ibid.

<sup>17</sup> Birge, "Teaching Convergence - But What is It?," 10.

<sup>18</sup> Boczkowski, "The Process of Adopting Multimedia and Interactivity in Three Online Newsrooms," 198.

Newspapers have seen an extreme decrease in their circulation. According to one figure, although the population of the United States has risen by 75 million, circulation figures in 1993 were equal to circulation figures in 1960.<sup>20</sup> Because we are in an information based society where news is reported almost as fast as it happens, newspapers have lost their sense of relevancy,<sup>21</sup> being replaced by television and Internet-based news sources. But, according to Valauskas, several publishers see the Internet as the key to bringing readers back to newspapers by expanding coverage and capabilities.<sup>22</sup> The depth capabilities of news messages can be greatly increased by the successful convergence of newspapers and the Internet. New technologies like streaming video<sup>23</sup> and improved access speeds give users more media choices and capabilities, better satisfying their information wants and needs.<sup>24</sup>

In 1994, newspapers began to embrace the Internet by publishing their print editions online.<sup>25</sup> Almost all daily newspapers were online by 1999,<sup>26</sup> updating their websites each day. But since 1994, all newspapers haven't come to a solitary form of how to create online content. Most newspapers online editions either have a unique staff

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<sup>19</sup> Edward J. Valauskas, "Photons, Electrons and Publishing," *Online* 19, no. 6 (Nov/Dec 1995), 87-93.

<sup>20</sup> Ibid.

<sup>21</sup> Ibid.

<sup>22</sup> Ibid.

<sup>23</sup> Streaming video is a way of transferring video information in a steady, continual stream. This is used because most Internet users do not have fast enough connections to allow large multimedia files to download in a timely manner. Streaming video increases speed by allowing users to view a video while it is still being transmitted.

<sup>24</sup> Ruggiero, "Uses and Gratifications Theory in the 21st Century," 15.

<sup>25</sup> Boczkowski, "The Process of Adopting Multimedia and Interactivity in Three Online Newsrooms," 203.

<sup>26</sup> Ibid.

with different stories than the print edition or they have aligned online and print editions.<sup>27</sup>

Although organizational styles may not be uniform, one thing almost all newspapers agree on is that an online edition must provide more information than a print edition. Everything from the information to the way it is presented must be unique from the print edition to attract more readers.<sup>28</sup> One way to do this is to include more interactive features, such as expanded versions of stories.<sup>29</sup> Multimedia elements, such as hyperlinks and opportunities to interact with reporters and editors help readers tailor the news to meet their needs.

Along with the ever-changing needs of consumers, journalists must constantly be able to adapt to a changing environment. According to Birge, even the desired skills of reporters have changed. Along with basic writing, reporting and social skills, most newspapers want reporters that know how to use and own a basic digital camera, along with knowledge of media law and ethics.<sup>30</sup>

Some even require different writing skills for online newspapers than for traditional print editions. Joyce advises that online reporters follow three basic rules:

1. Be succinct. Write no more than 50 percent of the text you would have used to cover the same material in a print publication.
2. Write for scan ability. Don't require users to read long, continuous blocks of text: instead use short paragraphs, subheadings and bulleted lists.

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<sup>27</sup> Boczkowski, "The Process of Adopting Multimedia and Interactivity in Three Online Newsrooms," 203.

<sup>28</sup> Joyce, "The Print-to-Web Evolution and the Importance of Usability," 56.

<sup>29</sup> Valauskas, "Photons, Electrons and Publishing."

<sup>30</sup> Birge, "Teaching Convergence - But What is It?," 12.

3. Use hypertext to split up long information into multiple pages.<sup>31</sup>

These three writing rules, though not applied by many, have changed how journalists write. According to Herbert, the adjustment may be difficult, but the only way to adjust is by “learning, practicing and managing” the new style.<sup>32</sup> There are several possible reasons for this change.

The first would be that, in the information age where news is so rapidly presented, people browsing the Internet are looking for specific news. Providing more brief news, coupled with hyperlinks, allows users to get a quicker overview of all of the news until they find exactly what they are looking for. By providing a smaller piece of news, it allows users to see all of the news before devoting their attention to one piece of news.<sup>33</sup> But, the need for brief descriptions of stories may not be inclusive of the users’ needs; instead they meet a more general technological need. Shorter and more compact stories limit the use of bandwidth, which insures that the computer will be able to quickly process all of the information much quicker. According to observations by Joyce, users “will not continue to navigate through a site if the time to move from one page to another within the site is more than one second.”<sup>34</sup> Slow sites deter users, causing them to go to faster sites.<sup>35</sup>

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<sup>31</sup> Joyce, “The Print-to-Web Evolution and the Importance o Usability,” 56.

<sup>32</sup> John V. Herbert, *Journalism in the Digital Age: Theory and Practice for Broadcast, Print and Online Journalism*.

<sup>33</sup> Boczkowski, “The Process of Adopting Multimedia and Interactivity in Three Online Newsrooms,” 205.

<sup>34</sup> Joyce, “The Print-to-Web Evolution and the Importance o Usability,” 56.

<sup>35</sup> Ibid.

The second reason that could slow the computer is bandwidth. Bandwidth is the amount of information that can travel through an Internet connection at any given time. If a site has full-length stories, along with other interactive features, such as video and images, the bandwidth is increased. This makes the page load slower on the users' computers. Higher bandwidth also costs more for the newspaper. Keeping the bandwidth lower not only is more user-friendly, but it is cost efficient as well, which is why links are an important part of an interactive website. They, like text, do not take as long to load when compared to visual images and video. According to Boczkowski, "a substantial part of the audience doesn't have the bandwidth to really enjoy a multimedia presentation."<sup>36</sup>

When designing a newspaper website, the digital divide<sup>37</sup> should be taken into consideration. This could include the individual user's knowledge of how to run a computer or even the computer's specifications. Some computers are not capable of handling elaborate multimedia presentations: Some computers lack speakers, making it impossible to hear an audio clip, and some lack the proper drivers to run a video or multimedia presentation. Web designers should take into consideration those with computers that cannot handle multimedia presentations, while still making options available to cater to more technologically inclined users.

Some researchers feel that "a low degree of technical sophistication" is "key to continuing to reach print papers' broad consumer base,"<sup>38</sup> since the basic print edition is what attracted readers in the first place. Usually the more computer savvy Internet users

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<sup>36</sup> Boczkowski, "The Process of Adopting Multimedia and Interactivity in Three Online Newsrooms," 205.

<sup>37</sup> The digital divide is the ability of users to utilize computers and the technology available on the Internet. Mitigating factors that may keep users from being able to use computers and technology include socioeconomic status, race, age, and religion.

<sup>38</sup> Ibid., 204.

are the ones attracted to more complex multimedia presentations, which incorporate a “complex mix of text, audio, video and computer animation.”<sup>39</sup> This may alienate those lacking adept computer knowledge. Though a simple style may help attract some users, it is important not to leave out all forms of multimedia: The user is not completely inept, considering they were able to make it to the site at all.

The Internet has taken the traditional newspaper and has given it the possibility to become a fully interactive forum for not only reading the news, but also giving feedback, viewing graphics, watching video and hearing sounds. There are three key factors, according to Ruggiero, that the Internet possesses over newspapers: interactivity, demassification and asynchronicity.<sup>40</sup>

Interactivity is a key word to remember when dealing with online newspapers, it is what makes them different from traditional print editions. The Oxford English dictionary defines interactivity as a “reciprocal action,” but it is actually a much more complex theory than that.

The theory of interactivity, which is still in developmental stages, “expresses the degree to which communication transcends reaction.”<sup>41</sup> This generally means that interactivity is based upon a general message from a sender, which is then acted upon by a receiver. With most computer-based communication, this interactivity can come in many forms, such as sending feedback to the writer, posting and responding to messages, or seeking out more information. The theory of interactivity, according to Rafaeli, is

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<sup>39</sup> Ibid.

<sup>40</sup> Thomas E. Ruggiero, “Uses and Gratifications Theory in the 21st Century,” *Mass Communication & Society* 3, no. 1 (Winter 2000), 15.

<sup>41</sup> Rafaeli, Sheizaf and Fay Sudweeks, “Networked Interactivity,” *Journal of Computer Mediated Communication* 2, no. 4 (March 1997) <<http://www.ascusc.org/jcmc/vol2/issue4/rafaeli.sudweeks.html>> 11 Feb 2005.

based upon reactions from any type of communication, and is an important part of the communicative process and is essential to social interaction.<sup>42</sup> Being able to interact with different communications mediums, according to a content analysis by Rafaeli, gives people a sense of belonging, making them naturally gravitate to the Internet, creating an intricate web of communication.<sup>43</sup>

Interactivity is not just something that happens online, it is a process. It all starts with a basic message that can lead to a number of outcomes, based upon “which messages in a sequence relate to earlier messages.”<sup>44</sup> According to Rafaeli, all communication is based upon interaction, because communicators are trying to bring forth a “jointly produced meaning” and understanding by sending messages,<sup>45</sup> and applies to all kinds of communication forms and forums. Part of interactivity is a “simultaneous and continuous exchange” of ideas<sup>46</sup> that is “sensitive to the goal of users and helps to direct them in fruitful directions.”<sup>47</sup> The exchange of ideas, based upon acceptance and satisfaction, is not a pre-determined condition, but is a continuous flow of information.<sup>48</sup>

Though interactivity is a continuous flow of information, according to a study conducted by Rafaeli, not all forms of communication are totally interactive, considering

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<sup>42</sup> Ibid.

<sup>43</sup> Ibid.

<sup>44</sup> Ibid.

<sup>45</sup> Ibid.

<sup>46</sup> Ibid.

<sup>47</sup> Kirsh, David, “Interactivity and Multimedia Interfaces,” *Instructional Sciences*. 25: (1997), 81.

<sup>48</sup> Rafaeli and Sudweeks

that interactivity is a variable, not a constant.<sup>49</sup> Not all messages are as interactive as others. There are two type of interactive messages: declarative and reactive. Declarative messages are based on a one-way flow of information: sender to receiver. An example of declarative information is that of which would come from a television or radio, a sender delivers a message to receivers, who have no real input or way of making the message meet their immediate needs.<sup>50</sup> Reactive information is a two-step flow of information, where a sender delivers a message to receivers, but the receivers are able to make that information meet their own needs by having the capabilities to seek out further information on the message or give feedback to the original sender.<sup>51</sup> Ward suggests that there may be another type of interactive message other than reactive or declarative messages. This three-way communication process allows users to contribute more to the journalistic process. It lets users make the journalists more aware of the reader's "needs, interests and pre-occupations," allowing them to "provide story ideas and contacts."<sup>52</sup> Examples of this type of communication include newsgroups, blogs and online message boards.

Online newspapers should utilize interactive features to help stabilize readerships. According to a content analysis of websites by Rafaeli, "less interactive uses of the Internet are not likely to see stable memberships."<sup>53</sup> Rafaeli feels that some sites may develop a loyal readership, but interactive features are more likely to attract and maintain

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<sup>49</sup> Ibid.

<sup>50</sup> Ibid.

<sup>51</sup> Ibid.

<sup>52</sup> Ward, Mike, *Journalism Online*, Woburn, MA: Focal Press, (2002), 146.

<sup>53</sup> Rafaeli and Sudweeks.

readers, by giving them a sense of “symmetry in contributions, creativity and productivity, agreement, humor and a sense of belonging.”<sup>54</sup>

Interactivity is at the center of the online news experience. Ruggiero defines interactivity as “the degree to which participants in the communication process have control over, and can exchange roles in, their mutual discourse.”<sup>55</sup> This means that users are given the power to find the information they are most interested in finding. But, according to Johnson, after observing a group of students’ Internet usage, 75 percent of found stories by chance, upon being enticed by headlines or short summaries.<sup>56</sup>

But interactivity is not as basic as going to a website, reading some text, watching a few videos and then clicking some links for further information. Though these factors help to increase user interactivity, they are merely a part of a bigger picture. It may seem like an easy concept to grasp, interactivity is a complex theory. Perhaps a more inclusive definition of interactivity highlights its multidimensional nature:

[The] amount of choice provided to users, amount of effort a user must exert to access information, how actively responsive a medium is to users, potential to monitor system use, degree to which users can add information to the system that a mass undifferentiated audience can access, and degree to which a media system facilitates interpersonal communication between specific users.<sup>57</sup>

Interactivity encompasses the entire spectrum of communicative activity, ranging from the person who develops and posts content to the casual observer, who accessed the sender’s message.

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<sup>54</sup> Ibid.

<sup>55</sup> Ibid.

<sup>56</sup> Michelle Johnson, “How Do We Read Online,” *Quill* 89, no. 1 (Jan/Feb 2001), 11.

<sup>57</sup> Ruggiero, “Uses and Gratifications Theory in the 21st Century,” 15.

Another essential part of the online news process is the idea of demassification. A print newspaper is a medium with standard news to serve the masses, while online newspapers, coupled with hyperlinks and other interactive features, makes it more customizable, allowing the news to fit the individual. Ruggiero defines demassification as “the ability of the media user to select from a wide menu.”<sup>58</sup> Another definition of demassification says that “the individual media user is able, through newer technologies, to pick from a large selection of media.”<sup>59</sup> The idea of demassification is the primary reason for users to use the Internet as a news source. These special, interactive features, not available in print editions, allow users to satisfy their needs.<sup>60</sup>

Asynchronicity, the third part of concept of interactivity on the Web, is referring to the time factors of the Internet. It deals with the differences between real-time scenarios, such as chat rooms, where users are present and taking an active role in the discussion forming, and delayed areas, such as message boards, blogs and e-mail, where users are free to answer at their convenience, as well as “send, receive, save, or retrieve messages.”<sup>61</sup>

Though there are an almost infinite number of online news outlets, one concern of researchers is that, since many focus primarily on national issues, the public would become out of touch with local and other important public issues.<sup>62</sup> This is especially prevalent when certain online editions, such as the Wall Street Journal, offer

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<sup>58</sup> Ibid, 16.

<sup>59</sup> Ibid.

<sup>60</sup> Ibid.

<sup>61</sup> Ibid.

<sup>62</sup> Johnson, “How Do We Read Online,” 10.

customizable news. The main concern is that, because they would focus only on a few selected issues, readers who only use online news sources would lose touch with issues other than the ones they choose to examine.<sup>63</sup>

One strong criticism of online newspapers is that they “often depend too much on wire news service content, such as that from the Associated Press or Reuters.”<sup>64</sup>

Essentially, since there is no limit on content, newspapers do not provide as much local and spot news on their websites, primarily because of limited resources, according to a study conducted by Dibeau and Garrison.<sup>65</sup> Another criticism Dibeau and Garrison made in their study of online newspapers is that, because they are in strict and constant competition, their need to be the first to report an event lowers the quality of coverage.<sup>66</sup>

One of the most important and prominent features of online newspapers are their ability to utilize nonlinear storytelling techniques. Print editions follow a linear method of storytelling — readers are presented with the facts in a uniform method — hindering readers’ ability to easily obtain further information than what is present.

With the technology to properly incorporate the elements of not only text and graphic images, but also video, audio and other interactive multimedia, such as hyperlinks,<sup>67</sup> journalists can enrich the readers’ experience. Journalists that utilize these web-based options are practicing nonlinear storytelling,<sup>68</sup> which gives readers the power

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<sup>63</sup> Ibid.

<sup>64</sup> Dibeau and Garrison, “Six Online Newspapers Use Web Technologies,” 83.

<sup>65</sup> Ibid.

<sup>66</sup> Ibid.

<sup>67</sup> Clickable text taking internet users to other web pages or files relating to the one they are viewing.

to tailor content to fit their needs.<sup>69</sup> Hyperlinks help to develop a personalized view of the news, sometimes called a hyperstory.<sup>70</sup> Hyperstories and hyperlinks “offer flexibility in structure and style that make it potentially the most versatile technology system ever developed for individualizing instruction.”<sup>71</sup> The idea of nonlinear storytelling gives the reader an active role in obtaining information through both internal and external links.<sup>72</sup> Hyperlinks are the core of nonlinear storytelling on the Internet because of their role in leading readers to extra content.<sup>73</sup> The process of nonlinear storytelling usually begins at the front page of a website. From there, readers are given their choice of content, possibly through samples of stories, pictures or links.<sup>74</sup> As the progress through their selections, they continue to sculpt a narrative fitting their needs, taking them through several “layers of content.”<sup>75</sup>

With nonlinear storytelling and the use of links being unique to the Internet, one would assume that newspapers would take full advantage of these capabilities to fully satisfy their readers’ needs. Further studies revealed that, in daily newspapers, nonlinear storytelling was rare and than many “smaller circulation newspapers did not offer their

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<sup>68</sup> Brian L. Massey, “Examination of 38 Web Newspapers Shows Nonlinear Storytelling Rare,” *Newspaper Research Journal* 25, no. 3 (Summer 2004), 96.

<sup>69</sup> Ibid.

<sup>70</sup> Hilary McLellan, “Hyperstories: Some Guidelines for Instructional Designers,” *Journal of Research on Computing in Education* 25, no. 1, 28

<sup>71</sup> Ibid.

<sup>72</sup> Internal links refer to links that send readers to another part of the website. External links take readers to another site.

<sup>73</sup> Massey, “Examination of 38 Web Newspapers Show Nonlinear Storytelling Rare,” 100.

<sup>74</sup> Ibid., 96.

<sup>75</sup> Ibid.

readers links to extra-content.” Most of these newspapers described their web-edition to be no different from their print-edition.<sup>76</sup> As time goes on, studies show that there has been an increase in nonlinear storytelling techniques, though, through observation, Dibeau and Garrison determined that fewer online newspapers practice it than broadcast sites.<sup>77</sup>

In the United States, approximately 2,000 newspapers are available online, though fewer than half are dailies.<sup>78</sup> These newspapers are primarily community newspapers or niche publications, infrequently published in comparison to dailies.<sup>79</sup> But the publishers of online dailies often allow the website to “scoop” the print edition,<sup>80</sup> primarily in an attempt to stay ahead of the competition.

According to Tremayne, the entire Internet is linked together through hyperlinks. In terms of the Internet, the network theory basically states that there is a higher number of links than websites, which virtually ties the entire Internet together.<sup>81</sup> Though almost all sites contain links, they can be categorized by the number of links they contain. Most sites have very few links, though some sites, called hubs, contain hundreds or thousands of links.<sup>82</sup> Another example used states that the age of a website enhances how many

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<sup>76</sup> Massey, “Examination of 38 Web Newspapers Show Nonlinear Storytelling Rare,” 100.

<sup>77</sup> Dibeau and Garrison, “How Six Online Newspapers Use Web Technologies,” 82.

<sup>78</sup> Ibid, 58.

<sup>79</sup> Ibid.

<sup>80</sup> Ibid.

<sup>81</sup> Mark Tremayne, “The Web of Context: Applying Network Theory to the Use of Hyperlinks in Journalism on the Web,” *Journalism & Mass Communication Quarterly* 81, no. 2 (2004): 239.

<sup>82</sup> Ibid., 240.

links direct web surfers to it. Pages like Yahoo.com or Ebay.com have “thousands or even millions” of links, while younger sites have considerably fewer.<sup>83</sup>

But age doesn't lead always lead to higher linkage, according to the principle of preferential attachment,<sup>84</sup> which says websites need more than just age to be linked heavily. They must also have a high level of usefulness and popularity.<sup>85</sup> With this said, the power given to these “major sites” is heavily growing, making them more and more of a mass communication force, allowing them to utilize the agenda setting theory.<sup>86</sup>

Through a five-year content analysis of 10 online newspapers, Tremayne claims that, over time, news stories online will feature more links,<sup>87</sup> and that more “stories about international relations will be more heavily linked than other sites,”<sup>88</sup> leading to less coverage of spot news. He also claims the margin between spot news and international relations coverage will grow as the number of links escalates.<sup>89</sup> Also, in 1997, “the average main-page story on a US national-news website had three links to related material,” which more than tripled by 2000.<sup>90</sup> On average, international affairs had three

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<sup>83</sup> Ibid.

<sup>84</sup> The principle of preferential attachment, according to Tremayne, states that, “when choosing which pages to link to, most will choose ones that are already heavily linked. If many others find a site useful, then it becomes more likely to be chosen than more obscure pages.”

<sup>85</sup> Ibid.

<sup>86</sup> The agenda setting theory states that a media outlet controls what news reaches the public by controlling which news is published.

<sup>87</sup> Ibid.

<sup>88</sup> Ibid.

<sup>89</sup> Ibid., 242.

<sup>90</sup> Mark Tremayne, “The Web of Context,” *Journalism & Mass Communication Quarterly* 81, no. 2 (Summer 2004), 243-244.

more links per page than spot news, which grew to roughly five more per page by 2001.<sup>91</sup> Tremayne suggest that more extensive stories usually require more links.<sup>92</sup> International stories are usually longer, and may need more links to clarify some of the content for users that may be exposed to it for the first time, aside from the fact that they are more relevant to a world-wide audience than spot news. But, for local papers, there is no reason to cut down on spot news and local coverage, considering that their market is not international, like the New York Times. According to Dibeau and Garrison, “users of news sites seek local news from local news sites,” and local news, from these sites, is valued more than weather information, national news and classified ads, according to the number of hits for these stories.<sup>93</sup>

Because an online newspaper can be accessed internationally, researchers believe that local coverage could be considered a possible niche market. Researchers believe that the Internet will become the “ultimate in individualism, a medium with the capability to empower the individual in terms of both the information he or she seeks and the information he or she creates.”<sup>94</sup> Also, researchers believe that the mass audience that has embraced the Internet will be broken into smaller, “more elite audiences,” turning it into an “endless feast of niches and specialties,” considering that, as a whole, the Internet has no specific target audience, according to a study by Ruggiero.<sup>95</sup>

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<sup>91</sup> Ibid., 244.

<sup>92</sup> Ibid., 246.

<sup>93</sup> Dibeau and Garrison, “How Six Online Newspapers Use Web Technologies,” 83.

<sup>94</sup> Ruggiero, “Uses and Gratifications Theory in the 21st Century,” 20.

<sup>95</sup> Ibid., 21.

With the wide variation of communications mediums available to readers, the mass market will eventually filter down into smaller groups, depending upon which form of media they prefer.<sup>96</sup> This idea, basically, falls back on the uses and gratifications theory. The theory states that audiences gravitate to communications mediums that attract and meet their needs both socially and psychologically.<sup>97</sup> It is utilized to study the effects of media, specifically to see why an audience was attracted to specific mediums and content.

But the uses and gratifications theory still meets a lot of criticism. According to some researchers, the uses and gratifications theory is weak in the fact that it:

- “Relied heavily on self-reports” [instead of a uniform method of coding].
- “[It] was unsophisticated about the social origin of the needs that audiences bring to the media.”
- “[It] was too uncritical of the possible dysfunction both for self and society of certain kinds of audience satisfaction”
- “[It] was too captivated by the inventive diversity of audiences used to pay attention to the constraints of the text.”<sup>98</sup>

Another criticism was that, instead of focusing on the audience reaction, it focused prominently on the communicators’ perspective.<sup>99</sup>

Though it is heavily criticized, the uses and gratifications theory can still be helpful to understand how and why an audience chooses the information it selects. This allows the media to focus more on those issues to intrigue and attract the audience.

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<sup>96</sup> Ibid., 19.

<sup>97</sup> Ibid., 3.

<sup>98</sup> Ibid., 5.

<sup>99</sup> Ruggiero, “Uses and Gratifications Theory in the 21st Century,” 5.

Another theory of why people are moving more to the Internet for their news is the media dependency theory. This theory states that “media influence is determined by the interrelations between the media, its audience and society.”<sup>100</sup> In other words, the individual’s need for information and its effect directly influence what media they seek out and what information the media presents to society. This applies to the Internet because, with the vast amount of content, users are forced to seek out “specific communication media channels or messages.”<sup>101</sup>

It costs more to successfully run a print and online edition of a paper simultaneously. To do this, not only does a newspaper need its traditional newsroom staff and equipment, but it also requires the assistance of web designers and online-content developers, as well as extra software. This brings up the question of how newspapers can afford an online venture. Newspapers were hesitant and unsure of what the Internet had to offer. Many had seen the blunders incurred by many of the major media conglomerates who lost millions on risky online ventures.<sup>102</sup> One of their fears would ultimately be the hiring of web designers and consultants, who usually demand high pay for employing their skills,<sup>103</sup> though most have looked past these basic fears.

Only 15 newspapers with websites in the United States charge for access to all of their content, while more charge for access to archived stories or special sections.<sup>104</sup>

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<sup>100</sup> Ibid., 8.

<sup>101</sup> Ibid., 9.

<sup>102</sup> John Motavalli, *Bamboozled at the Revolution: How Big Media Lost Billions in the Battle For the Internet*, New York: Viking, 2002.

<sup>103</sup> Ibid.

<sup>104</sup> Carl Sullivan, “Pay Sites Struggle, but the Niche May Get Richer,” *Editor & Publisher* 135, no. 5 (Feb. 2002), 19.

Others require a basic registration, which is free.<sup>105</sup> Instead of money, these free registration sites ask a few demographical questions to assess their readers.<sup>106</sup>

But when a publication decides to make readers pay for access, it has to decide what type of business model it wishes to follow; some free information or charge for everything. Out of all of the newspaper sites that charge for access, the most successful has been the Wall Street Journal.<sup>107</sup> The access fee of \$39, for those who subscribe to the print edition, is less than the \$79 for those without a subscription to the print edition.<sup>108</sup> This sizable discount makes a print subscription more appealing and, in 2000, approximately one-third of the 375,000 online subscribers also received the print edition.<sup>109</sup> But, according to Robinson, “even with subscription revenue, the site isn’t profitable,”<sup>110</sup> because there will always be free news available somewhere online.<sup>111</sup> But the Wall Street Journal, like several other niche publications, will always have, even if miniscule, users in need of “premium and customized content.”<sup>112</sup>

But the Wall Street Journal may be an exception when offering discounts for the print and online editions, since it offers the physical newspaper and access to “personal

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<sup>105</sup> Wayne Robins, “An Eye for an Eye,” *Editor and Publisher* 135, no. 5 (Feb. 2002), 14-19.

<sup>106</sup> *Ibid.*

<sup>107</sup> Robinson, “Print Discovers Web,” 58.

<sup>108</sup> Wall Street Journal online edition, accessed Nov. 13, 2004:  
[http://online.wsj.com/public/page/0,0\\_0811,00.html?page=0\\_0811](http://online.wsj.com/public/page/0,0_0811,00.html?page=0_0811)

<sup>109</sup> Robinson, “Print Discovers Web,” 58.

<sup>110</sup> *Ibid.*

<sup>111</sup> *Ibid.*, 59.

<sup>112</sup> Sullivan, “Pay Sites Struggle, but the Niche May Get Richer,” 20.

finance tools,” archives and up-to-the-minute stock information.<sup>113</sup> Because stock information is constantly changing, it is necessary to have access changes not available through out the day in the print edition. According to Sullivan, print subscribers who also have paid online subscriptions, only account for 2.6 percent of most newspapers’ circulation.<sup>114</sup> Even more, most newspapers cannot get more than 12 percent of print subscribers to subscribe to online editions, even when access is free with their paid print subscription.<sup>115</sup>

But, contrasting the aforementioned figures, nearly all of the newspapers with paid website access report slight circulation increases of their print editions, though they do not totally attribute it to the Internet.<sup>116</sup> Most newspapers see an increase in circulation when major events occur, such as terrorist attacks and war, as well as new programs and special features.<sup>117</sup>

Sites that offer free registration require basic information, such as age, zip code and an e-mail address instead of money.<sup>118</sup> This information is really, to newspapers, just as valuable as monetary compensation. This invaluable information allows newspapers to “better target advertisers’ messages, improving the effectiveness of their ads.”<sup>119</sup> Being able to better target an audience allows newspapers to charge more for ads, therefore making it more affordable to provide higher quality information both online and in

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<sup>113</sup> Wall Street Journal online.

<sup>114</sup> Sullivan, “Pay Sites Struggle, but the Niche May Get Richer,” 20.

<sup>115</sup> *Ibid.*, 19.

<sup>116</sup> *Ibid.*

<sup>117</sup> *Ibid.*

<sup>118</sup> Robins, “An Eye for an Eye,” 14-19.

<sup>119</sup> *Ibid.*

print.<sup>120</sup> The financial benefits of free registration allowing newspapers to provide target demographics to advertisers, according to Robins, may make the Internet a financially secure venture for them.<sup>121</sup> Robins also says that, with quality and well maintained information, an online newspaper will lead to profitability.<sup>122</sup>

But free and paid registrations aren't the only options for viewing the content of online newspapers. Some, such as the New York Times, offers a free version and a paid version. The free version offers the news, while the paid version offers "an exact replica of the print newspaper, including display advertisements."<sup>123</sup> As of 2002, approximately 3,000 subscribed to the paid, electronic replica, gaining roughly 60 new subscribers a day, though the free version still remains the most popular.<sup>124</sup> Though profits are small, considering the money put into hiring online consultants, web designers and, in some cases, an online staff, most newspapers find a lot of their benefits in a renewed interest in print editions and regaining a once lost readership.<sup>125</sup>

Though it will be a very difficult task, if journalists can fully utilize all of the technology on the Internet, the quality of journalism will improve.<sup>126</sup> An improvement of

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<sup>120</sup> Ibid.

<sup>121</sup> Ibid.

<sup>122</sup> Ibid.

<sup>123</sup> Sullivan, "Pay Sites Struggle, but the Niche May Get Richer," 19.

<sup>124</sup> Ibid.

<sup>125</sup> Howard Williams, "Emerging Content Requirements for News Products," *Bulletin of the American Society for Information Science and Technology* 30, no. 6 (Aug/Sep 2004), 13-19.

<sup>126</sup> John V. Pavlik, *Journalism and New Media*. New York: Columbia University Press, 2001.

the overall state of journalism and quality and reliability of information would help to renew some of the disenfranchised public's faith in the media.<sup>127</sup>

## **Methods**

In order to determine how effectively newspapers in the United States are utilizing the concept of interactivity in their online editions, a content analysis was conducted. Since the study consisted of American newspapers, and to have an equal regional representation, the United States will be divided into three sections: western, central and eastern, with four newspapers from each region being examined. Regions will be determined by time zones. The first region, the eastern region, will be represented by the Eastern Time Zone. The second region, the Midwest, will be represented by the Central Time Zone and the third region, the Western region, will be represented by both the Mountain and Pacific Time Zones. Online newspapers are to be checked once a day, at 10 a.m. (See Table 1)

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<sup>127</sup> Ibid.

**Table 1 (Newspapers by Geographic Region and Time)**

<b>Western Newspapers</b>			
Los Angeles Times	Los Angeles	www.latimes.com	Checked at 1 p.m.
Arizona Republic	Phoenix, AZ	www.azcentral.com	Checked at 1 p.m.
The Everett Herald	Everett, WA	www.heraldnet.com	Checked at 1 p.m.
The Bend Bulletin	Bend, OR	www.bendbulletin.com	Checked at 1 p.m.
<b>Central Newspapers</b>			
Chicago Tribune	Chicago, Ill	www.chicagotribune.com	Checked at 11 a.m.
Minneapolis Star Tribune	Minneapolis, Minn.	www.startribune.com	Checked at 11 a.m.
The Argus Leader	Sioux Falls, SD	www.argusleader.com	Checked at 11 a.m.
The Valley Morning Star	Harlingen, TX	www.valleystar.com	Checked at 11 a.m.
<b>Eastern Newspapers</b>			
New York Times	New York	www.nytimes.com	Checked at 10 a.m.
Boston Globe	Boston, MA	www.boston.com/news/globe	Checked at 10 a.m.
New Jersey Daily Journal	Vineland, NJ	www.thedailyjournal.com	Checked at 10 a.m.
The Huntington Herald Dispatch	Huntington, WV	www.herald-dispatch.com	Checked at 10 a.m.

The times selected were chosen to insure that the newspapers will be published for the day, considering most newspapers are published and in the hands of the readers by 10 a.m. This analysis was done for a period of 16 days and only took place on week days, Monday through Friday, since not all online newspapers have weekend online editions.

These newspapers were determined by circulation size. The division, based on a report on circulation size by Editor and Publisher,<sup>128</sup> separates newspapers into four different categories. The largest category features newspapers with a circulations size of 500,000 and above, and was called National Newspapers. Other categories to be analyzed are newspapers with circulations between 100,000 to 499,999, called Regional Newspapers; 50,000 to 99,999, called State Newspapers; and 25,000 to 49,999, called

<sup>128</sup> The report can be found at [http://www.editorandpublisher.com/eandp/news/article\\_display.jsp?vnu\\_content\\_id=1756525](http://www.editorandpublisher.com/eandp/news/article_display.jsp?vnu_content_id=1756525)

Local Newspapers. Each region was represented by one online newspaper of each circulation size (see Table 2).

**Table 2 (Newspaper Divisions by Circulation Size)**

<b>Newspapers with 25,000-49,999 circulation (Local)</b>			
Huntington Herald Dispatch	Huntington, WV	www.herald-dispatch.com	Eastern
Valley Morning Star	Harlingen, TX	www.valleystar.com	Midwestern
The Bend Bulletin	Bend, OR	www.bendbulletin.com	Western
<b>Newspapers with 50,000-99,999 circulation (State)</b>			
New Jersey Daily Journal	Vineland, NJ	www.dailyjournal.com	Eastern
The Argus Leader	Sioux Falls, SD	www.argusleader.com	Midwestern
Everett Herald	Everett, WA	www.heraldnet.com	Western
<b>Newspapers with 100,000-499,999 circulation (Regional)</b>			
Boston Globe	Boston, MA	www.boston.com/news/globe	Eastern
Minneapolis Star Tribune	Minneapolis, Minn.	www.startribune.com	Midwestern
Arizona Republic	Phoenix, AZ	www.azcentral.com	Western
<b>Newspapers with 500,000 or more circulation (National)</b>			
New York Times	New York	www.nytimes.com	Eastern
Chicago Tribune	Chicago	www.chicagotribune.com	Midwestern
Los Angeles Times	Los Angeles	www.latimes.com	Western

The top three stories will be analyzed and determined by the position on the page and headline size. The highest stories, with the largest headlines, on the page will be considered the top stories. A coding sheet has been devised to keep track of each variable that will be tracked during the analysis, and is included in Appendix A. For each documented story, the date, publication name, web address in which the story can be accessed directly, story title, author and story type was documented on the coding sheet. A coding sheet was supplied for each story analyzed during the course of the study, and analyzed the story on three basic levels: links, feedback opportunities, and embedded

visuals and audio. Each of these categories was divided into several smaller, specific categories, allowing a more in-depth analysis.

The first of the three categories to be analyzed in this study are links. The first thing the study analyzed was the total number of links to additional content provided within the story's individual webpage. Links, in the case of this study, are triggers that send a user to additional content that is pertinent to the story topic. Advertisements and links that are part of a standard toolbar, which is included in a uniform layout, were not counted in this study. A uniform layout includes toolbars that are featured in every part of the newspapers' online content and do not change. These offer no additional content for stories and, normally, send users to different sections of the online edition or websites of advertisers. They are provided only for navigational purposes. For this study, advertisement links, such as banner ads<sup>129</sup>, are paid sponsorships, which were not counted.

When analyzing the links found in online newspaper stories, the first type examined were internal links. Internal links are those that send users to additional content, such as previous or current articles of the same or similar topic, located within the organization's website. A tally was kept for the following classifications of internal links: links to previous stories, links to current stories and links to additional/related stories. Previous stories are stories on the same topic that have been published at an earlier date within the organization's website. Current stories are stories that are running on the same topic, published on the same date of the article being analyzed, within the organization's website. Stories that feature additional/related content are stories that have

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<sup>129</sup> Banner ads are pictures that serve as links to an advertiser's website. They are called banner ads because they usually are shaped like a banner and placed either at the top or bottom of a webpage.

content that relate to or are of similar nature of the topic, such as editorials or columns, within the organization's website.

The second type of link analyzed in this study was external links. External links are links that send users to additional content or information pertaining to the story topic outside of the newspaper's website. This was divided into three categories: links to governmental sites, links to non-profit sites, and links to sites of commercial organizations. Governmental sites, for this study, are any website that is government run/regulated. Web addresses for governmental organizations end with the .gov extension, which stands for government. An example of this would be the website for the Office of Homeland Security.<sup>130</sup> Non-profit websites, for this study, are websites that are run by humanitarian organizations, such as the Red Cross.<sup>131</sup> These web addresses end with the .org extension, which stands for organization. The final type of external link for this study is that of any commercial organization. Commercial organizations are websites that were made to garner a profit and usually end in the .com extension, which stands for commercial. An example of a commercial organization would be Yahoo.<sup>132</sup> Each of these types of links will be represented and tallied on the coding sheet, to determine the frequency of their use.

The third type of link examined in this study was links to multimedia features. Multimedia links are those that send users to view videos, images,<sup>133</sup> or audio clips. Video links, audio links and links to images were tallied on the coding sheet to determine

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<sup>130</sup> The web address for the Office of Homeland Security is <http://www.dhs.gov/dhspublic/index.jsp>

<sup>131</sup> The web address for the Red Cross is <http://www.redcross.org>

<sup>132</sup> The website for Yahoo is <http://www.yahoo.com>

<sup>133</sup> Images included in the image category of the multimedia links section include graphs, charts, photographs, illustrations, cartoons, image slideshows and animations.

their frequency. Links to images were broken down into more specific categories, all of which are represented and tallied on the coding sheet. These specific categories determine how frequently stories use links to graphs, links to charts, links to photographs, links to cartoons and links to images.

Another type of link examined are links that give the user the opportunity to leave feedback. The difference between feedback links and the aforementioned links are that feedback links are not meant to send users to additional content relating to the story. Instead, they give the user a way to comment on or discuss the story with other users.

The first feedback link analyzed were links to message boards, forums and blogs. Message boards, forums and blogs are grouped together on the coding sheet, and were tallied together, since, in this study they are all similar in nature as they give the user the opportunity to leave feedback for other users to view and reply to messages. Interaction is not done in real time, but is delayed; interaction is not instantaneous, instead is determined by how often users access them.

The next type of link analyzed were links to e-mail addresses. These links are designed to enable users to send e-mail messages directly to a specific e-mail account. The e-mail category is broken into three specific categories, depending upon the intended recipient. The recipient categories analyzed during the study are e-mails to the editor, reporter/writer and general/newsroom. The frequencies of these links were tallied on the coding sheet. Another type of link related to feedback that was represented and tallied on the coding sheet are chat rooms. Chat rooms differ from the other types of feedback because they are a method of feedback that uses real-time interaction, meaning that communication between the sender and receiver is instantaneous.

The final category that this study analyzed examines embedded multimedia. Embedded multimedia include embedded videos, embedded sounds and embedded images, such as graphs, charts, photographs, cartoons and animations. The difference between embedded multimedia and linked multimedia is that, unlike linked multimedia, embedded multimedia is automatically loaded when a webpage is accessed. Unlike embedded multimedia, users must to access linked multimedia by clicking a link to access another page, which contains the desired multimedia feature. Embedded multimedia was divided into more specific categories. The first category to be tallied on the coding sheet was embedded images and visuals. This category was divided into several smaller categories: embedded graphs, embedded charts, embedded photographs and illustrations and embedded animations. Each of the categories pertaining to embedded images and visuals were tallied on the coding sheet to analyze how frequently they are used.

The second factor determining the frequency of embedded multimedia was to analyze the use of embedded videos. Embedded videos are a permanent part of the website and need no further linkage to open them and begin to load and play immediately when a webpage is accessed. The frequency of embedded videos was tallied on the coding sheet, just as the usage of embedded audio was tallied. Embedded audio, which will be tallied separately from embedded videos, are similar to embedded videos in that they are a permanent part of the website and need no further linkage to open them and begin to load and play immediately when a webpage is accessed. The difference is that embedded audio uses no visual images, only sounds.

All of these features help to increase the possible level of interactivity. There is no true way to measure the actual level of interactivity achieved by a newspaper, since the level of interactivity depends solely on how the user utilizes what is provided. Instead, online newspapers can only go as far as to provide opportunities for interactivity.

A content analysis allowed an observation of how many opportunities these online newspapers provide users to fully interact with the materials presented.

## **Results and Discussion**

Every newspaper had different methods of presenting material, though each utilized a basic layout design to present links. Each newspaper had a toolbar embedded on the left, right or top edges of the pages. These toolbars contain links to different sections of the online edition, as well as links to contact the newsroom. Throughout each individual story were advertisements for not only companies and sponsors of goods and services, but links to pages such as Google or other popular search engines to do searches related to the article's topic. But, for this study, the toolbars and any type of advertisements were not analyzed.

Once the content analysis was completed, newspapers were then organized by circulation size. Each newspaper had a total of 48 stories analyzed during the course of the study, giving each region a total of 144 stories. Totals for each of the analyzed sections of the coding sheet were then compiled by newspaper size, and an average compiled for the entire region (see Tables 3, 4 and 5).

**Table 3 (Total and Average Links for Online Newspapers by Circulation Size)**

<b>General Links</b>	<i>Total Links</i>	<i>Internal Links</i>	<i>External Links</i>	<i>Multimedia Links</i>	
<i>National</i>	Total: 696 Avg: 4.83	Total: 383 Avg: 2.66	Total: 103 Avg: 0.72	Total: 214 Avg: 1.49	
<i>Regional</i>	Total: 621 Avg: 4.31	Total: 469 Avg: 3.26	Total: 16 Avg: 0.11	Total: 134 Avg: 0.93	
<i>State</i>	Total: 135 Avg: 0.94	Total: 11 Avg: 0.08	Total: 64 Avg: 0.44	Total: 60 Avg: 0.42	
<i>Local</i>	Total: 604 Avg: 4.19	Total: 347 Avg: 2.41	Total: 108 Avg: 0.75	Total: 142 Avg: 0.99	
<b>Internal Links</b>	<i>Previous</i>	<i>Current</i>		<i>Additional/Related</i>	
<i>National</i>	Total: 96 Avg: 0.67	Total: 20 Avg: 0.14		Total: 267 Avg: 1.85	
<i>Regional</i>	Total: 198 Avg: 1.38	Total: 107 Avg: 0.74		Total: 164 Avg: 1.14	
<i>State</i>	Total: 6 Avg: 0.04	Total: 0 Avg: 0.00		Total: 5 Avg: 0.03	
<i>Local</i>	Total: 290 Avg: 2.01	Total: 15 Avg: 0.10		Total: 42 Avg: 0.29	
<b>External Links</b>	<i>Governmental</i>	<i>Non-Profit</i>		<i>Commercial Org.</i>	
<i>National</i>	Total: 16 Avg: 0.11	Total: 9 Avg: 0.06		Total: 81 Avg: 0.56	
<i>Regional</i>	Total: 1 Avg: 0.01	Total: 5 Avg: 0.03		Total: 10 Avg: 0.07	
<i>State</i>	Total: 5 Avg: 0.03	Total: 3 Avg: 0.02		Total: 57 Avg: 0.40	
<i>Local</i>	Total: 1 Avg: 0.01	Total: 0 Avg: 0.00		Total: 107 Avg: 0.74	
<b>Multimedia Links</b>	<i>Image Links</i>	<i>Video Links</i>		<i>Audio Links</i>	
<i>National</i>	Total: 152 Avg: 1.06	Total: 54 Avg: 0.38		Total: 1 Avg: 0.01	
<i>Regional</i>	Total: 103 Avg: 0.72	Total: 24 Avg: 0.17		Total: 7 Avg: 0.05	
<i>State</i>	Total: 45 Avg: 0.31	Total: 9 Avg: 0.06		Total: 1 Avg: 0.01	
<i>Local</i>	Total: 99 Avg: 0.69	Total: 58 Avg: 0.40		Total: 12 Avg: 0.08	
<b>Image Links</b>	<i>Graphs</i>	<i>Charts</i>	<i>Photographs Illustrations</i>	<i>Image Slideshows</i>	<i>Animations</i>
<i>National</i>	Total: 4	Total: 25	Total: 61	Total: 27	Total: 5

	Avg: 0.03	Avg: 0.17	Avg: 0.42	Avg: 0.19	Avg: 0.03
<i>Regional</i>	Total: 2 Avg: 0.01	Total: 13 Avg: 0.09	Total: 67 Avg: 0.47	Total: 20 Avg: 0.14	Total: 2 Avg: 0.01
<i>State</i>	Total: 0 Avg: 0.00	Total: 6 Avg: 0.04	Total: 8 Avg: 0.06	Total: 0 Avg: 0.00	Total: 0 Avg: 0.00
<i>Local</i>	Total: 2 Avg: 0.01	Total: 5 Avg: 0.03	Total: 49 Avg: 0.34	Total: 47 Avg: 0.33	Total: 0 Avg: 0.00

**Table 4 (Feedback Opportunities for Online Newspapers by Circulation Size)**

<b>Feedback Opportunities</b>	<i>Total</i>	<i>Message Board/Blogs</i>	<i>E-Mail</i>	<i>Chatrooms</i>	<i>Other Methods</i>
<i>National</i>	Total: 64 Avg: 0.44	Total: 21 Avg: 0.15	Total: 31 Avg: 0.22	Total: 0 Avg: 0.00	Total: 12 Avg: 0.08
<i>Regional</i>	Total: 100 Avg: 0.69	Total: 22 Avg: 0.15	Total: 53 Avg: 0.37	Total: 0 Avg: 0.00	Total: 25 Avg: 0.17
<i>State</i>	Total: 131 Avg: 0.91	Total: 1 Avg: 0.01	Total: 99 Avg: 0.69	Total: 0 Avg: 0.00	Total: 35 Avg: 0.24
<i>Local</i>	Total: 227 Avg: 1.58	Total: 12 Avg: 0.08	Total: 151 Avg: 1.05	Total: 0 Avg: 0.00	Total: 63 Avg: 0.44
<b>E-Mail</b>					
<b>Destination Opportunities</b>	<i>Editor</i>	<i>Reporter</i>		<i>General/Newsroom</i>	
<i>National</i>	Total: 0 Avg: 0.00	Total: 31 Avg: 0.22		Total: 0 Avg: 0.00	
<i>Regional</i>	Total: 0 Avg: 0.00	Total: 53 Avg: 0.37		Total: 0 Avg: 0.00	
<i>State</i>	Total: 0 Avg: 0.00	Total: 98 Avg: 0.68		Total: 0 Avg: 0.00	
<i>Local</i>	Total: 5 Avg: 0.03	Total: 144 Avg: 1.00		Total: 1 Avg: 0.01	

**Table 5 (Embedded Images, Visuals and Audio for Online Newspapers by Circulation Size)**

<b>Embedded Images, Visuals and Audio</b>	<i>Embedded Images</i>	<i>Embedded Video</i>	<i>Embedded Audio</i>
<i>National</i>	Total: 176 Avg: 1.22	Total: 0 Avg: 0.00	Total: 0 Avg: 0.00
<i>Regional</i>	Total: 78 Avg: 0.54	Total: 0 Avg: 0.00	Total: 0 Avg: 0.00
<i>State</i>	Total: 93 Avg: 0.65	Total: 0 Avg: 0.00	Total: 0 Avg: 0.00
<i>Local</i>	Total: 142	Total: 0	Total: 0

	Avg: 0.99	Avg: 0.00	Avg: 0.00	
<b><i>Embedded Image Types</i></b>	<i>Embedded Graphs</i>	<i>Embedded Charts</i>	<i>Embedded Photographs</i>	<i>Embedded Animations</i>
<i>National</i>	Total: 3 Avg: 0.22	Total: 19 Avg: 0.13	Total: 154 Avg: 1.07	Total: 0 Avg: 0.00
<i>Regional</i>	Total: 1 Avg: 0.01	Total: 1 Avg: 0.01	Total: 76 Avg: 0.53	Total: 0 Avg: 0.00
<i>State</i>	Total: 1 Avg: 0.01	Total: 5 Avg: 0.03	Total: 87 Avg: 0.60	Total: 0 Avg: 0.00
<i>Local</i>	Total: 1 Avg: 0.01	Total: 0 Avg: 0.00	Total: 141 Avg: 0.98	Total: 0 Avg: 0.00

## ***Links***

One purpose of this study was to find out how often online newspapers use links to further the content of their stories. Once the content analysis was completed, the average number of links was tabulated for each newspaper, to see approximately how many links were used each day. Also, the averages were tabulated to determine which size newspaper most frequently used links: Newspapers with 25,000-49,999 circulation (local), Newspapers with 50,000-99,999 circulation (state), Newspapers with 100,000-499,999 circulation (regional), or Newspapers with 500,000 or more circulation (national). Each size newspaper used links, but in different ways.

Overall, Newspapers with 500,000 or more circulation, which will be referred to as national newspapers for this study, most frequently used links in their online stories. As well as having the highest total number uses of links, national newspapers also had the highest average number of links.

The average number of links in the online editions of the New York Times, Los Angeles Times and Chicago Tribune combined totaled approximately five links per story.

Approximately three of the five links sent readers to internal documents,<sup>134</sup> such as previous or current stories and additional information and coverage. On average, one of the three internal links sent readers to previous stories pertaining to the topic.

Approximately two of the three average internal links sent readers to additional or related information within the organization. Very rarely did national newspapers send readers to additional content outside of the organization, instead, most commonly links sent readers to additional information and related stories, with a focus on more additional content, such as story collections pertaining to the topic, than current or previous stories.

Though rarely used, external links were more common in national newspapers. The three sampled newspapers averaged one external links per story. Although governmental and non-profit links were used by the sampled newspapers in the category, the most commonly used external links were those to commercial organizations, averaging one per story. When combining the three national newspapers category, there were a total of 16 government website links, nine non-profit organization links and 81 links to commercial organizations.

National and local newspapers most commonly used external links to further their coverage, with local newspapers using external links more often than national newspapers. For both local and national newspapers, links to commercial websites, such as Topix.net, were the most common type of external link.

Multimedia links, which send readers to features such as photographs, videos, and audio clips, averaged one link per story in national newspapers. Links to images, such as graphs, charts, photographs, animations and image slideshows, were more common than

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<sup>134</sup> Internal Documents refers to stories that have run within the institution. These links send readers to additional content, but this content is found exclusively within the organization.

links to videos or audio clips. Over the course of the study, there were 54 links to videos and one link to audio clips.

Image links, the most common multimedia link, totaled 152 links, averaging one link per story. For this study, image links were divided into five sub-categories: links to graphs, links to charts, links to photographs and illustrations, links to image slideshows and links to animations. Of the subcategories, links to photographs and illustrations were the most frequently used, totaling 61 links during the course of the study. Links to image slideshows<sup>135</sup> were the second most common feature, appearing 27 times, followed closely by charts, which appeared 25 times. Links to animations and graphs were the least common, respectively appearing four times each during the course of this study.

The next category of newspapers, those with a circulation size of 100,000-499,999, referred to as regional newspapers for this study, used links almost as frequently as the largest newspaper category. Regional newspapers averaged approximately four links per story during the course of this study, with a total of 621 links for the entire category. Internal links were the most common type of link in regional newspapers. Internal links were more common among the regional category than with national category. A total of 469 internal links were found during the course of the study, averaging three internal links per story. Links to previous stories were the most common sub-category of internal links with regional newspapers, with a total of 198 occurrences, averaging one link per story. The second most common type of internal link in this category were links to additional content and related stories, appearing 164 times, averaging one link per story, while links to current stories were the least common. Links

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<sup>135</sup> Image slideshows are a multimedia presentation of photographs that change either automatically or when the user clicks a designated link.

to current stories appeared 107 times during the course of the study, averaging one link per story.

Multimedia links were the second most common type of link in regional newspapers. During the course of the study, 134 links to multimedia were present, averaging one multimedia link per story, usually to images. Links to images were the most common with 103 occurrences (averaging one link per story), while video links were the second most common with 24 occurrences and audio links were the least common, only occurring seven times throughout the course of the study. Links to photographs and illustrations were the most common, totaling 67 occurrences, and were more frequent in regional newspapers than national newspapers. Links to image slideshows were the second most common in the regional category, with 20 occurrences during the course of the study, followed by links to charts (13 occurrences), and graphs and animations (2 occurrences each).

In the category of regional newspapers, external links were the least common, with a total of 16 occurrences. Like national newspapers, external links to commercial organizations were the most common (10 occurrences) in regional newspapers. The second most common external link in the regional newspapers category were links to non-profit websites (5 occurrences), while only one link to governmental websites were tallied during the course of the study.

Newspapers with a circulation size of 25,000-49,999, which will be referred to as local newspapers for this study, the smallest category analyzed, contained a higher amount of links than the category above it, newspapers with a circulation of 50,000-99,999, which will be referred to as state newspapers for this study. Local newspapers

had a total of 604 links during the course of the study, averaging four links per story, while state newspapers had 135 links, averaging one link per story. Though internal links were the most common type in local newspapers (347 links total, averaging two links per story), they were the least common type of link in regional newspapers (11 links total).

Of the 347 internal links attributed to local newspapers during the course of the study, links to previous stories were the most common (290 occurrences, averaging two links per story), links to additional and related stories were the second most common (42 occurrences) and links to current stories were the least common (15 occurrences).

Throughout each online newspaper, internal links most commonly sent users to stories that were of the same topic. During the course of the study, the Huntington Herald Dispatch, in Huntington, W. Va., ran a series of stories about a movie being filmed in the city about Marshall University. Several features and news stories were written during the course of filming and published each day. The series was prominent in the online edition. Each time a story about the movie was published, a list of links from the previous stories was provided for users, who might not have been able to keep up with the series, to catch up on what was happening.

Though the numbers were significantly lower, regional newspapers followed the same pattern with links to previous stories being the most common (six occurrences), links to additional and related stories were the second most common (five occurrences) and links to current stories were the least common (zero occurrences).

In the case of both regional and local newspapers, multimedia links were the second most common type of link, though local newspapers had the most frequent usage. Local newspapers used a total of 142 links to multimedia, averaging one link per story,

while regional newspapers used 60 links to multimedia. In both cases, links to images were more prevalent than video links or audio links. Local newspapers had more links to images (99 occurrences, averaging one link per story) than regional newspapers (45 occurrences). Local newspapers also had more links to videos (58 occurrences) and links to audio clips (12 occurrences) than regional newspapers (nine video links and one audio link). In the case of both local and regional newspapers, the most common type of image link was links to photographs and illustrations. Local newspapers used links to photographs and illustrations more frequently (49 occurrences), while regional newspapers had a total of eight links to photographs and illustrations over the course of the study. The second most common type of image link in the category of local newspapers was links to image slideshows, with 47 occurrences. Throughout the course of the study, local newspapers also had five links to charts, two links to graphs and zero links to animations. Regional newspapers had no links to graphs, image slideshows or animations and six links to charts.

Both local and regional newspapers had the least amount of external links of any type. Local newspapers had 108 external links, averaging one link per story, and regional newspapers had 64 external links. Both local newspapers and regional newspapers had more external links to commercial links than links to governmental and non-profit websites. Local newspapers had 107 links to commercial organizations, averaging one link per story, one link to governmental websites and zero links to non-profit websites. Regional newspapers had 57 links to commercial organizations, five links to governmental websites and three links to non-profit websites.

## ***Feedback Opportunities***

Feedback gives readers an opportunity to be a part of a newspaper's discourse, whether it is as personal as the ability to send e-mail to reporters and editors and post opinions on blogs, or as impersonal as anonymous message boards or the ability to send general newsroom e-mails. The Internet has allowed newspapers to receive feedback more instantaneously than any other period of journalism. The study analyzed the opportunities that newspapers presented readers to send feedback by analyzing how frequently each method occurred during the sample time.

The frequency of time-delayed feedback methods was examined first, such as the usage of message boards and blogs, and e-mail. E-mail was then broken into three separate categories; e-mail sent to the editor, e-mail sent to the reporter or writer and e-mail sent to a general account or the newsroom. Another type of messaging is real-time messaging, such as chat rooms. The study found that none of the newspapers included in this data set provide real-time communication methods, such as chat rooms.

Throughout the study, a trend in feedback made itself prevalent: The larger the reader bases, fewer opportunities to leave feedback are provided. The highest amount of feedback opportunities came from the smallest circulation size newspapers. Local newspapers (circulation of 25,000-49,999) gave readers 227 opportunities to send feedback, averaging two per story. The second highest amount came from state newspapers (circulation of 50,000-99,999), which gave readers 131 opportunities to leave feedback during the course of the study, averaging one opportunity per story. Regional newspapers provided 100 opportunities to leave feedback, averaging one opportunity per story, while national newspapers provided 64 opportunities to leave feedback.

The most common type of feedback opportunity given by all sizes of newspapers was e-mail. Local newspapers most frequently offered e-mail feedback, with 151 opportunities, averaging one opportunity per story.

The most common e-mail destination for local newspapers was to the reporter (144 opportunities, averaging one per story). Throughout the study, only five opportunities to send e-mail to an editor were given by the local newspapers, and all five were presented by the Valley Morning Star in Harlingen, TX. In each case, the e-mail address for the editor of local news was given at the bottom of the story, in addition to the reporter's e-mail address, asking for story ideas. Local newspapers also offered only one opportunity to send e-mail to a general account or newsroom, which was also provided by the Valley Morning Star, only because the story it was taken from was a compilation of staff reports.

State newspapers, who made available the second highest number of opportunities to leave feedback via e-mail, provided 99 opportunities to leave e-mail feedback, averaging one per story. Ninety-eight of those 99 opportunities provided directed e-mail to individual reporters. The study found that reporters are the primary destination for feedback e-mail, with 100 percent of regional newspaper's 53 e-mail opportunities and national's 31 e-mail opportunities directed to reporters.

### ***Other Feedback Methods***

Though e-mail is the most common and most commonly featured means for providing feedback, other methods are becoming more popular and frequent. Message boards and blogs have helped reshape the world of journalism, allowing everyone to, in some way, function as a journalist. But that is not the focus of this study, it is focusing on

their usage as a way to leave input on a particular article within the organization's website. Because they are one of the more new technologies that the Internet provides, blogs and message boards within a story were not commonly found within this study. There was no set trend in the four circulation sizes as to blog usage. The highest amount of blogs and message boards present during the study were found within the regional newspapers. This can be directly attributed to the Arizona Republic, which provided 18 of 22 blogs and message boards for the regional newspapers, due to their current series on the immigration debate. The immigration debate, although a national topic, is one of interest to Arizona residents, due to their geographic location.

National newspapers, as expected, had a higher amount of blogs and message boards than the other newspapers, with exception to regional newspapers. The national newspapers contained a total of 21 blogs. Local newspapers came in third, with 12 blogs and state newspapers had one blog during the course of the study.

Surprisingly, the local newspapers, although lacking in links, gave readers the most opportunity to leave feedback. These newspapers are more likely to get less feedback because they have smaller audiences. But, though they get less feedback, they may take feedback into consideration more because of their smaller staffs, who may be able to give more attention to it. Also, unlike the two other newspaper classifications, they primarily rely on staff reports over wire stories on their websites, allowing more feedback directly related to stories to reach the newspaper.

Regional and state newspapers allow feedback, but only through e-mail to the reporter, while, with the exception of a blog posted with a special report by the New York Times, none of the larger newspapers offered many opportunities to leave feedback. One

reason behind this is that the response to such nationally known newspapers might be too overwhelming, making it nearly impossible to keep up with any feedback, causing it to become meaningless.

### ***Embedded Images, Visuals and Audio***

Amongst all four classifications of newspapers, the most common type of embedded visual<sup>136</sup> was the photograph. None of the four classifications of online newspapers used embedded animations, embedded videos or embedded sound or audio clips.

National newspapers most frequently used embedded images as a part of their stories in their online edition, with 176 embedded images and visuals throughout the course of the study, averaging one embedded image or visual per story. One hundred fifty-four of the embedded images and visuals were embedded photographs, while 19 were embedded charts and three were embedded graphs.

Unlike feedback, the usage of embedded images lacks any set pattern. Instead, the results were of a more random nature. Local newspapers had the second highest usage of embedded images, with 142 embedded images and visuals during the study. Nearly 100 percent of the local newspaper embedded images were embedded photographs. There were no embedded charts present in local newspapers online editions, though there was one embedded graph, leaving 141 of all embedded images to be embedded photographs. This gave local newspapers an average of one embedded photograph per story.

State and regional newspapers were similar in the usage of embedded visuals: state newspapers used 93 embedded images, averaging one embedded image per story,

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<sup>136</sup> Embedded visuals are visuals such as graphs, charts, photographs, animations or videos that open automatically when the page is accessed.

and regional newspapers used 78 embedded visuals, averaging one embedded image per story, during the course of the study.

Though the majority of the embedded images used were embedded photographs (state newspapers used 87 embedded photographs [see Table 40] and regional used 76 embedded photographs [see Table 41]), both circulation sizes used embedded charts and embedded graphs. State newspapers used more embedded charts, with a total of five during the course of the study, and one embedded graph. Regional newspapers used one embedded graph and one embedded chart.

## Conclusion

After the content analysis was completed, the data showed that newspapers do not provide many opportunities for readers to interact with the content of their online editions. Though each varies in how they supply links to their readers, they all focus primarily on linking to stories within the organization, which limits their coverage to only their perspective on the subject. By linking to other organizations, whether they are governmental, non-profit or a commercial organization, they could expand the quality of their coverage by presenting not only the newspaper's view and opinion, but also that of the organization it is linking to. Many journalists may feel that it is unnecessary to show sources, since they feel as though they have covered an event or topic in-depth and well enough that their work is all a reader needs to be properly informed. But by providing external links to governmental or non-profit agencies, reporters may be able to give users access to things such as policies or internal documents, furthering content and emphasizing the point of a story. Linking to external sites may help journalists emphasize the strength of their reporting, and the strength of their organization.

Though they profile the entire country, as well as four different circulation sizes, these 12 publications they may not completely represent online newspapers as a whole entity, could make the results limited. Another limit in this research is that it only counted links, visuals and feedback opportunities that are not part of a standardized toolbar. These toolbars usually provide links to other sections of the online paper, such as sports and classifieds. The stories analyzed in this study are just off of the homepage, whereas more links and interactive features may be found in other sections of the online edition. Focusing on the top three stories in an online edition may not be completely

representative of the entire newspaper. Interactive features, such as videos, may be more prevalent in other sections, such as sports, where events are more often televised and reported on more visually. Some events, such as the traffic stories in the Argus Leader, do not lend themselves to visual or audio elements.

The data provided by the sampling in this study also revealed that online newspapers do not frequently use visual elements, such as photographs and videos. Photographs are the most commonly used visual and links to videos are more commonly used in all cases than embedded videos or audio. A larger scale investigation, including a larger sample size and analyzation of online newspapers front pages, may give more insight into how frequently these sites use the interactive features provided by the Internet.

Online newspapers, unlike print editions, have the opportunity to let users interact more with the content and staff. The ability to leave feedback and search further into specific topics makes online newspapers an attractive information source to computer-savvy readers. The smaller newspapers seem to be doing a better job of offering opportunities to readers to leave feedback. These newspapers may be able to allow more feedback because of their smaller readership, allowing reporters and newspaper staff to pay more attention to feedback they may receive. Larger newspapers have a much larger readership, which would probably offer so much feedback that it would be nearly impossible to give each user leaving feedback the attention that they deserve.

Online newspapers have the ability to further their content by using links or other interactive features that the Internet provides. But by either limiting usage of links,

visuals and audio features and feedback opportunities, online editions are nothing more than electronic versions of the print edition.

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## **Story Information**

Date: \_\_\_\_\_

Publication and Web Address: \_\_\_\_\_

Story Title: \_\_\_\_\_

Author: \_\_\_\_\_

Story Type (Political, Health, Sports, etc.): \_\_\_\_\_

## **Links**

Total Number of Links: \_\_\_\_\_

Internal Links: \_\_\_\_\_

    Previous Story: \_\_\_\_\_

    Current Story: \_\_\_\_\_

    Additional/Related Story: \_\_\_\_\_

External Links: \_\_\_\_\_

    Governmental: \_\_\_\_\_

    Non-Profit: \_\_\_\_\_

    Commercial Org.: \_\_\_\_\_

Multimedia Links: \_\_\_\_\_

    Image Links: \_\_\_\_\_

        Graphs: \_\_\_\_\_

        Charts: \_\_\_\_\_

        Photographs/Illustrations: \_\_\_\_\_

        Image Slideshows: \_\_\_\_\_

        Animations: \_\_\_\_\_

    Video Links: \_\_\_\_\_

    Audio Links: \_\_\_\_\_

## **Feedback**

Feedback Opportunities: \_\_\_\_\_

    Messageboards/Blogs: \_\_\_\_\_

    E-Mail: \_\_\_\_\_

        Editor: \_\_\_\_\_

        Reporter/Writer: \_\_\_\_\_

        General/Newsroom: \_\_\_\_\_

    Chatroom: \_\_\_\_\_

    Other Methods: \_\_\_\_\_

## **Embedded Images, Visuals and Audio**

Total Embedded Images/Visuals: \_\_\_\_\_

    Embedded Graphs: \_\_\_\_\_

    Embedded Charts: \_\_\_\_\_

    Embedded Photographs: \_\_\_\_\_

    Embedded Animations: \_\_\_\_\_

Embedded Video: \_\_\_\_\_

    Video Links: \_\_\_\_\_

Embedded Sound/Audio Clip: \_\_\_\_\_

    Sound/Audio Clip Link: \_\_\_\_\_