



The official research | INTERNATIONAL SYMPOSIUM
journal of the | ON ONLINE JOURNALISM

Volume 3, Number 1, Winter 2013

Are “Digital Natives” Dropping Print Newspapers? A National Survey of
College Newspaper Advisers
Hsiang Iris Chyi

Verbal and Visual National News Framing of Dilma Rousseff and her
Successful Bid as Brazil’s First Female President
Tania Cantrell Rosas-Moreno

Animation, Documentary or Interactive Gaming? Exploring
Communicative Effects of Environmental Messaging Online
Astrid Gynnild and Paul C. Adams

Through the Lens: Visual Framing of the Japan Tsunami in U.S., British,
and Chinese Online Media
Rosellen Downey, Erika Johnson, and Bailey Brewer

More Than Shovelware: A Call for Layered Stories for Online Journalism
Yanjun Zhao

Table of Contents

Editors' Note 3

Journal Details..... 4

Are “Digital Natives” Dropping Print Newspapers? A National
Survey of College Newspaper Advisers 5

Hsiang Iris Chyi

Verbal and Visual National News Framing of Dilma Rousseff
and her Successful Bid as Brazil’s First Female President 19

Tania Cantrell Rosas-Moreno

Animation, Documentary or Interactive Gaming? Exploring
Communicative Effects of Environmental Messaging Online 39

Astrid Gynnild and Paul C. Adams

Through the Lens: Visual Framing of the Japan Tsunami in
U.S., British, and Chinese Online Media 61

Rosellen Downey, Erika Johnson, and Bailey Brewer

More Than Shovelware: A Call for Layered Stories for Online
Journalism 76

Yanjun Zhao

Editors' Note

Welcome to Volume 3, Number 1 of the #ISOJ, the official research journal of the International Symposium on Online Journalism.

This third volume, first issue features five articles from the research papers that were peer-reviewed and selected for presentation at the 13th International Symposium on Online Journalism held in April 2012 at the University of Texas at Austin.

This issue also features the Top Research Paper (which received the highest scores from the peer-review judges from the paper competition) from the symposium, "Are "Digital Natives" Dropping Print Newspapers? A National Survey of College Newspaper Advisers," by Dr. Iris Chyi. This article explores the continuing importance of the school newspaper on college campuses and whether the print or digital model will reign in the future.

This issue also includes research on:

- The Brazilian media's framing of the first female head of state in Brazil, Dilma Rousseff, and the implications of the findings from the study for the future of journalism in Brazil.
- The potential of visual genres such as animation and interactive games when presenting environmental science content to audiences.
- The visual framing of the March 2011 Japan tsunami in Chinese, British, and U.S. online media.
- The experimentation of layering content for the online platform and how it creates a unique reading experience for today's online news consumers.

We hope you enjoy this latest volume of work!

Amy Schmitz Weiss and Rosental Calmon Alves

Co-Editors

Journal Details

About the Journal

Co-Editors:

Rosental Calmon Alves

Amy Schmitz Weiss

About Us

#ISOJ The Journal of the International Symposium on Online Journalism is an international journal devoted to advancing the scholarship in the area of journalism and innovative technologies. Articles included in the journal are based on original research, methodologies relevant to the study of journalism and innovative technologies (online, tablets, mobile platforms, etc.), critical syntheses of research and theoretical perspectives on journalism today. The journal maintains a social scientific and broad behavioral focus.

Disclaimer

The editors cannot be held responsible for any errors or consequences that arise from the use of information contained in the #ISOJ Journal. The views and opinions in the journal do not reflect those of the publisher or editors.

Copyright and photocopying

All rights reserved. No part of this publication may be reproduced, transmitted or stored in any form or any way without the prior permission in writing from the copyright holder. Authorization to photocopy items for internal and personal use is granted by the copyright holder of the libraries and other users registered with their local Reproduction Rights Organization and/or Copyright Clearance Center and provide the appropriate fee paid directly to the RRO.

Contact

Rosental Calmon Alves – rosental.alves@austin.utexas.edu

Amy Schmitz Weiss – aschmitz@mail.sdsu.edu



Are “Digital Natives” Dropping Print Newspapers? A National Survey of College Newspaper Advisers

Hsiang Iris Chyi

Simply because young adults are less likely to read a print newspaper compared with other age groups, many news professionals assume “digital natives” have lost interest in the print format. This study re-visits such an assumption with a survey of 198 U.S. college newspaper advisers. Results showed that the print edition outperforms the Web edition in terms of readership, preference, and advertising revenue. Print circulation in most cases has remained stable. Most respondents don’t believe an online-only model is realistic within the next five years. These results carry implications for commercial newspapers as they envision the future of their industry.

This article received the Top Paper award at the 2012 Symposium. This award is given to the author who received the highest marks on their research paper from the judges during the peer-review process of the research paper competition.

Simply because young adults are less likely to read a print newspaper compared with other age groups (Edmonds, Guskin, & Rosenstiel, 2011), most news professionals assume young people have lost interest in reading print newspapers (Kaufhold, 2010b). Newspaper firms thus allot substantial resources experimenting with multiplatform news delivery, hoping to retain young readers (Graybeal, 2011).

Although previous research has documented that most people find the print newspaper more useful, satisfying, likeable, and enjoyable than its online counterpart (Chyi & Chang, 2009; Chyi & Lasorsa, 2002; Chyi & Yang, 2009; De Waal, Schoenbach, & Lauf, 2005; Online Publishers Association, 2004), many within and outside the newspaper industry believe that young people are an exception, and the way to retain these “digital natives” is to pursue them online—through the Web, social media, or mobile apps. However, after 16 years of experimentation, no viable business model for online news seems to exist (Gill, 2011). It is therefore important to re-visit some of the widely accepted assumptions about young readers’ attitudes toward online and print media. Specifically, do “digital natives” really prefer getting news online to reading the “dead-tree” edition of a newspaper?

This study reassesses such assumptions through a national survey of college newspapers because 1) most college newspapers publish in both online and print formats, 2) both formats are offered for free, and 3) their target readers are college students ages 18-22, all with Internet access (thus the so-called “digital natives”). Additionally, these college papers publish content relevant to college students’ lives. These scenarios provide a great opportunity to clarify the belief about young readers’ format preference on the other-thing-being-equal basis.

Literature Review

Newspaper Consumption Among Young Adults

It is not news that younger people are less likely to read print newspapers compared with other age groups. According to the Pew Research Center, 46% of those over the age of 65 reported reading a print newspaper yesterday. Among those ages 18-24, only 7% did so (Pew Research Center for the People and the Press, 2010, p. 14). Yet, the age differences in newspaper consumption patterns seem to have existed long before the Internet became a mass medium (Edmonds et al., 2011; Mindich, 2005; Prior, 2007). It is also not news that younger people are more likely to spend time online compared with other age groups. The 2011 Pew survey found 94% of U.S. adults age 18-29 used the Internet, while only 41% of those 65 or older did so (Pew Research Center’s Internet & American Life Project, 2011).

Combining these two facts, it is easy to conclude that young people are dropping print newspapers in favor of online news sources. Indeed, a 2008 study reported that 90% of the 322 journalists surveyed believed that young adults prefer online news to print news (Kaufhold, 2010b). This *Wired* magazine article provided a typical example hinting at the future (or demise) of print newspapers, saying, “What this world will look like is anyone’s guess, but it probably won’t include *The Washington Post* thudding on anyone’s doorstep at 5 in the morning” (Penenberg, 2004). Such claims, coupled with more sophisticated arguments like Harvard business professor Clayton M. Christensen’s disruptive technology theory (Christensen, 2003), have largely shaped the newspaper industry’s vision about the future (Chyi & Lee, 2012), in which digital media eventually dismantle current market leaders. Consequently, most newspapers have shifted a substantial amount of their dwindling resources from print to online. A recent survey of newspaper publishers indicated that the Web is their number one priority for attracting young readers (Graybeal, 2011).

David Mindich, author of the book *Tuned out: Why Americans under 40 don’t follow the news*, was among the first to point out that young people go online “for anything but news” (2005, p. 4). Some recent research findings also challenge the widely accepted assumption that young people use the Internet or mobile devices for *news purposes*. According to the Pew Research Center, while young people are most likely to incorporate technologies into their daily lives, they are *not* using these technologies to get news at higher rates than do older people (Pew Research Center for the People and the Press, 2010, p. 4). In other words, the real cause of the generational gap in news consumption

may be a lack of interest in following the news, and technology alone is probably not an effective solution to the “news fatigue” (“Young adults suffering from news fatigue, study says,” 2008) or “information surplus” (Chyi, 2009) problem. If that is the case, pursuing young readers by focusing on delivery technologies may be missing the point.

Additionally, given that no viable business models have yet been discovered for local, general-interest news on the Web (Hindman, 2011; McDowell, 2011) or through mobile devices (Andrews, 2011), the technologically oriented approach currently undertaken by most newspapers may hinder the sustainability of the newspaper industry. It is therefore essential to reexamine the assumptions about young people’s news-seeking habits and their attitude toward print and online media.

Format Preference: Print vs. Online

Previous research on users’ preference for online vs. print news formats has yielded fairly consistent findings—most people find the print newspaper more useful, satisfying, likeable, and enjoyable than its online counterpart (Chyi & Chang, 2009; De Waal et al., 2005; Online Publishers Association, 2004). Additionally, a series of studies examined people’s preference for print versus online newspapers on the “other things being equal” basis—that is, by asking people to choose their preferred format while holding key factors constant. Such studies also generated consistent results: Given the same content and the same price, the print edition of a newspaper is overwhelmingly preferred (Chyi & Chang, 2009; Chyi & Lasorsa, 1999, 2002; Chyi & Lee, 2012). In an attempt to explain why the performance of online news as a product has fallen short of expectations, Chyi and Yang (2009, 2012) explored the economic concept of “inferior goods”¹ and its applicability to online news. Their analyses of survey data collected by the Pew Research Center confirmed that online news is an inferior good among users.

However, to what extent different age groups perceive media formats differently has not received substantial scholarly attention. Yet, many describe young adults ages 18-24 as “digital natives.” The term was coined by Marc Prensky in 2001 and was used frequently thereafter to refer to people who were born after the introduction of digital technology (Palfrey & Gasser, 2008). In contrast, people who were born before the existence of such technology have been termed “digital immigrants.” The implication is that digital natives, who grow up with the technology, better understand the value of such technology and thus may have different (or more advanced) media habits and format preference. For example, some media scholars suggested that that news media follow the lead of tomorrow’s news audience because “the digital natives are leading the way—and are way ahead of news organizations” (Yaros, 2008).

College Students as “Digital Natives”

According to a recent Pew report, young adults are indeed more likely to own high-tech gadgets than other age groups, and college students distinguish themselves further from their non-student peers in terms of laptop ownership and Internet usage on cell phones. Among four-year undergraduate students, 98% use the Internet and 92% use

the Internet through wireless devices. In contrast, only 75% of U.S. adults are online and only 57% access the Internet wirelessly (Smith, Rainie, & Zickuhr, 2011). Therefore, while the “digital natives” concept is not completely accurate—not every young person has access to the latest digital technology—there is no doubt that college students constitute one of the most tech-savvy groups in society. By examining their attitudes toward different newspaper formats through the lens of college newspaper advisers, this study seeks to provide a reality-based assessment on the future of newspapers.

College Newspapers

As for how to accurately measure young adults’ format preference for traditional and online newspapers, previous research has identified certain factors as “inhibitors” of newspaper consumption. For example, when people perceive the topics covered by newspapers as unappealing, newspaper readership is negatively affected (Readership Institute, 2003). Therefore, to rule out the plausible effect of irrelevant content on young people’s newspaper reading behavior, this study focuses on college newspapers, which serve as a primary information source for college students and cover events most relevant to campus life.

While college newspapers are not seeking profitability as commercial newspapers do, they are subject to the same (if not stronger) changes in reader attitude and format preference. Additionally, most college newspapers are published in both print and online formats and both formats are offered for free, allowing for a side-by-side comparison of college students’ format preference in the most realistic setting. While all episodic evidence suggests that the print edition still is the primary product and major revenue driver for college newspapers (Krueger, 2010), a systematic examination is lacking.

Therefore, this study seeks to examine whether college students indeed embrace digital media over traditional newspaper formats. The goal is to offer a better understanding of young people’s news habit and format reference so that commercial newspapers may better serve digital natives.

Research Questions

As of today, commercial newspapers are facing a number of challenges: 1) Declines in print circulation: Newspaper circulation has been declining since 1987 (weekday) and 1993 (Sunday) despite a growing U.S. population (Newspaper Association of America, 2012a). Since 2004, the pace of such declines has quickened; 2) Loss of print advertising revenue: Print ad revenue reached an all time high of \$49 billion in 2000 and dropped to \$21 billion in 2011 (Newspaper Association of America, 2012b); 3) The relatively small share of Web advertising revenue: In 2011, the online edition accounted for only 13.6% of newspapers’ total advertising revenue (Newspaper Association of America, 2012b).

It is easy to attribute these challenges to the changing habits of digital natives and the unattractiveness of a physical newspaper (Penenberg, 2004), but an empirical

investigation may help identify factors underlying the real problem. Therefore, this study seeks to examine the current status of U.S. college newspapers from the readership, circulation, advertising, and format preference standpoints, addressing the following research questions:

RQ1: What is the size of the readership reached by the print and Web editions respectively?

RQ2: Which format—print or online—do college students prefer?

RQ3: What is the advertising revenue generated by the print and Web editions respectively?

RQ4: What are the changes in print circulation and advertising revenue during the past three years?

RQ5: What is the likelihood that college newspapers become an online-only publication in five years?

Method

A Web-based survey of 198 U.S. college newspapers was conducted during May 6–June 6, 2011.

Sampling

A list of college newspaper advisers was obtained from College Media Advisers (now College Media Association), a national association of college media advisers founded in 1954. The link of the Web-based survey was emailed to each of the 486 newspaper advisers who were members of the association. The cover letter stated that only those who were responsible for or familiar with the business operations of the college newspaper were eligible to fill out the survey. Three reminders were sent during the one-month period.² The completion rate was 41%. The final sample includes a total of 198 completed surveys, representing 198 college newspapers in the U.S.

Survey Instrument

The survey examined the current state of U.S. college newspapers, the relative importance of their print and Web editions in terms of audience size and advertising revenue, and college media advisers' view about college students' preference for the print/Web edition and the feasibility of online-only publishing. The survey took an average of 10 minutes to complete. The questionnaire was developed based on consultations with college newspaper advisers familiar with the business operation of their newspaper.

Results

Sample Profile

On average, the 198 college newspapers served a student population of 13,432 (SD = 11,508). Specifically, about one-third of the respondents (32%) indicated that they were serving a student population of under 5,000, some 17% were serving a population between 5,000 to 9,999, about 22% between 10,000 and 19,999 students, and 29% were serving 20,000 or more students. Each paper had an average of 1.9 full-time and 1.6 part-time non-student staff members as well as 46 student staff members. The average annual income was \$206,785, the sources of which include advertising (47%), student fees (31%), academic funds (18%), and other (5%).

Multiplatform publishing is common among these campus newspapers. Of the 198 college newspapers surveyed, 98% published a print edition, 97% published a Web edition, and 21% had a mobile app.

Regarding their print operations, 28% of the papers in the sample published less than once a week, 43% were weeklies, 14% published between two to four issues per week, and 15% were dailies. On average, these papers published an average of 14 pages per issue (SD = 6.5). Slightly more than half of the papers (51%) adopted the tabloid format, and 46% in broadsheet format. History-wise, as many as 60% of the papers were founded more than 50 years ago, 28% were 21-50 years old, and only 10% had a history of 20 years or less.

The Web edition, in contrast, is significantly younger. The average history is 7.4 years (SD = 4.8). On average, 23% of the newspapers updated the Web site more than once a day and 26% did so once a day. Overall, 89% updated their sites at least once a week. Most sites featured multimedia content—75% of the Web editions included videos, 64% featured slideshows, and 54% published audio stories.

Readership: Print vs. Web

RQ1 sought to compare the number of students reached by the print and Web editions, respectively. The average print circulation (per issue) was 4,850 copies (SD = 4,202)—the median was 3,000. In terms of online readership, among the 103 respondents who were able to provide Web audience metrics (many indicated they had no such information), the online edition attained an average of 2,864 unique visitors (SD = 9,322) per day—yet the median was only 400.

The print edition reached nearly twice as many readers on a given day.

To make more valid comparisons, repeated measures ANOVA analysis indicated a significant difference between print circulation (mean = 5,590, SD = 4,429) and unique visitors (mean = 2,848, SD = 9,327) among 103 papers that provided data on both print

and online usage ($F [1,102] = 9.168, p < .01$).

When the analysis included only the 19 newspapers that published five issues (in print) and updated its Web site at least five times a week, the average print circulation was 11,053 (SD = 3,374) and the number of unique visitors was 6,273 (SD = 12,426).

All results indicated the print edition reached nearly twice as many readers on a given day (assuming conservatively that each print copy was read by only one student).

Format Preference

RQ2 asked which format—print or online—college students prefer. Approximately 93% of college newspaper advisers indicated that college students preferred the print edition. Only 7% said students preferred the Web edition.

A follow-up question probed the reasons. The open-ended responses were content-analyzed and classified into a number of themes. Among the 138 responses regarding why college students prefer the print edition, the most commonly cited reasons were:

Accessibility/portability (n = 84): The print edition is visible and readily accessible on campus at classroom buildings, residence halls, and libraries. Because the newspaper is portable, students conveniently pick it up and read it before class begins, in class, or at lunch. While the Web edition is also accessible through Wi-Fi connections on campus, some respondents believed the print edition is more convenient, "I don't think [students] need the information so badly that they'll visit it online;" another said, "they use phones and computers for other purposes."

93% of college newspaper advisers indicated that college students preferred the print edition.

Tangibility (n = 9): The physical nature of the print edition was perceived as an advantage. One respondent indicated, "[Students] like having something in their hands and can read it more easily in class." Additionally, the print paper, as one of the few things students don't consume online, "allows them to disconnect from electronics."

Web edition is not as strong (n = 9): Several respondents indicated that their Web edition was relatively new, unknown, or not well managed. One indicated their social media presence was more effective in reaching college students than their Web site, "Students go to our Facebook site, but it's hard to get them to the website. Part of it might be that the web is not as good of an operation as the print."

Habit (n = 8): Some respondents said the print edition is a tradition that has been around for a long time. Students are in the habit of picking up the paper every morning on the way to class. They still want to read the paper in print.

Exclusive content (n = 7): The print edition offers exclusive content that is not available online—for example, crosswords, games, coupons, and photo keepsakes. One said, “They like to see print pictures.”

Still, 7% of the respondents indicated that students preferred the Web edition—here is a summary of the 11 responses:

Accessibility (n = 4): The Web edition is accessible from everywhere. Online, “that is where they live.”

Students don’t read print (n = 4): A handful respondents indicated college students no longer read print newspapers. “It is trending this way.” “They don’t read print if they can help it.”

Multimedia/interactivity/timeliness (n = 3): The Web edition is technically more advanced, featuring multimedia content such as video or color photos that students like.

The print edition generated almost all (96%) of the advertising income.

Advertising Revenue

RQ3 sought to compare the advertising revenue generated by the print edition with that by the Web edition. Results showed that the print edition generated almost all (96%) of the advertising income and the Web edition accounted for only 4% of the advertising revenue.

Trends and Projections

RQ4 sought to identify the changes in print circulation and advertising revenue during the past three years. Print circulations have remained stable for 58% of the newspapers surveyed, 26% have seen circulation declines, and 11% reported circulation increases. In terms of print advertising revenue, 42% of the papers have seen declines, 30% said it has stayed the same, and 25% reported increases.

Nearly two-thirds (63%) of the respondents said it is “very unlikely” or “unlikely” that their college newspapers would become online-only publications in five years.

RQ5 asked about the likelihood that college newspapers become an online-only publication in five years. Nearly two-thirds (63%) of the respondents said it is “very unlikely” or “unlikely” that their college newspapers would become online-only publications in five years; 23% expressed a neutral view; 14% indicated it is “very likely” or “likely” that their paper would become online-only in five years’ time.

A follow-up question probed the reasons why college newspapers are unlikely to become online-only publications in five years. Among the 101 responses, the primary reasons were:

Students prefer print (n = 34): Because of a strong print readership, many respondents said dropping the print edition within the next five years would be unlikely. Several found the online-only model unrealistic—"I think that would be the death of this paper. Until we become a little more respected source of news... no one would follow us to the web." Another said, "We would gladly trade our costs of printing the paper for moving online... However, once the racks disappear from campus, you are out of sight and out of mind to your audience." One indicated the possibility that the print edition might be reduced (but will not disappear) within the next five years.

Print advertising revenue is important (n = 23): Because most of the advertising revenue comes from the print edition, "revenue requirements will keep [the print edition] around." "Advertisers love print!"

Print is the tradition (n = 10): As most of the college papers surveyed have been publishing in print for more than 50 years, it is hard to believe the university would discontinue a tradition so integral to the culture of the institution. As one respondent put it, "It's hard to buck 100 years of tradition."

Print serves educational purposes (n = 10): Students need print publications for portfolios, and the print edition offers more design opportunities. "The newspaper is essentially a lab. It teaches the students in ways Web alone cannot."

Among the 14% of the respondents who indicated that their newspapers might go online-only in five years, the single dominant reason was cost reduction.

Cost reduction (n = 13): When decrease in funding from the administration is likely, it is harder to justify printing cost.

Discussion

In sum, these findings suggest that the print edition outperformed the Web edition in terms of readership and preference and generated the vast majority of advertising revenue. Print circulation and advertising revenue in most cases remained stable. As for the future, most college newspaper advisers did not believe an online-only model would become feasible within the next five years. Albeit, such results were collected from college newspaper advisers, they carry managerial implications for commercial newspapers as they envision the future of their industry.

While college newspapers differ from commercial newspapers in many ways, the findings of this study revealed a good deal of similarities. For example, in both cases, the Web edition fails to reach nearly as many readers as the print edition. Previous research has identified the relatively small online readership in relation to the print readership in

most (commercial) newspapers' local markets (Chyi & Huang, 2011; Chyi & Lewis, 2009; Scarborough Research, 2012), and this study uncovered similar patterns among college newspapers. Additionally, just as most people prefer print newspapers (Chyi & Chang, 2009; Chyi & Lasorsa, 2002; Chyi & Lee, 2012; Chyi & Yang, 2009; De Waal et al., 2005; Online Publishers Association, 2004), college students seem to share the same format preference. In other words, digital natives are *not* dropping print newspapers in favor of their online counterparts as most think they would or have.

The print edition can be the most popular format among digital natives when it is readily accessible, free, and relevant.

Indeed, one thing that distinguishes these college newspapers from most metro dailies is their fairly stable print circulation (Newspaper Association of America, 2012a). At the time of this study, U.S. daily newspapers have seen declining circulation for 15 consecutive six-month periods (Edmonds et al., 2011), yet 74% of the college papers surveyed in this study reported having either stable or increased print circulations during the past three years—only 26% reported circulation declines. Perhaps because most college papers are supported by school funds, they have the ability to keep their print levels high. To say the least, the results suggest that young adults have no problems reading the print edition of their college newspapers. In other words, the print edition *can* be the most popular format among digital natives when it is readily accessible, free, and relevant.

In contrast, the Web edition, despite being accessible and free and with multimedia capacities, still is *not* the most popular format among digital natives. Such findings support the “online news is an inferior good” postulate (Chyi & Yang, 2009, 2012) and raise questions about the technology-driven approach taken by most commercial newspapers (Picard, 2009). Most importantly, given that college students respond favorably to their campus newspapers in print, commercial papers may follow suit, by increasing visibility and accessibility, providing relevant content, developing specific pricing schemes, or even launching a free edition for young readers.

The real problem has little to do with the “print format” per se and cannot be solved with technology alone.

Regarding the future, college newspaper advisers perceived the online-only model as unrealistic if not risky. Yet, that is what many in the newspaper industry seem to be pursuing. Such examples range from global payers like *The New York Times*³ to smaller newspaper firms such as the Journal Register Company, the CEO of which, when promoting his “Digital First, Print Last” strategy, said, “Stop focusing on print,” “Focus on the future and the future is not Print” (Paton, 2010). While no one knows what the future is like, given the current state of the newspaper market (Newspaper Association of America, 2012b), an online-only, all-digital future does not seem practical and may not arrive any time soon.

Limitations and Conclusion

It is acknowledged that this study did not directly measure college students' format preference. The information on format preference was gathered from college newspaper advisers instead. Yet, since these newspaper advisers observe how college students respond to their publications on a day-to-day basis, it is reasonable to assume their views are largely based on reality. Additionally, the readership and advertising revenue comparisons also point to the same conclusion—the print edition is the primary product.

In conclusion, do "digital natives" prefer getting news online to reading the "dead-tree" edition of a newspaper? The answer, according to college newspaper advisers, is no. Moving news from print to online may actually turn young (and old) readers away, as this and other studies have suggested (Chyi & Yang, 2009; Thurman & Myllylahti, 2009). Newspapers should revise their digital strategy for "digital natives" because the real problem, be it a lack of interest in news (Kaufhold, 2010a) or an inevitable consequence of information surplus (Chyi, 2009), has little to do with the "print format" per se and cannot be solved with technology alone.

References

- Andrews, R. (2011, September 14). Newspapers are messing up their mobile strategies, researchers say. *paidContent*. Retrieved September 18, 2011, from <http://paidcontent.org/article/419-newspapers-are-messing-up-their-mobile-strategies-researchers-say/>
- Boyes, W., & Melvin, M. (2008). *Microeconomics* (Vol. 7th). Boston, MA: Houghton Mifflin.
- Christensen, C. M. (2003). *The innovator's dilemma: The revolutionary book that will change the way you do business*. New York: HarperBusiness.
- Chyi, H. I. (2009). Information surplus in the digital age: Impact and implications. In Z. Papacharissi (Ed.), *Journalism and citizenship: New agendas* (pp. 91–107). New York: Taylor & Francis.
- Chyi, H. I., & Chang, H.-C. (2009). Examining the use of and preference for online news in the context of intermedia competition. In L. Leung, A. Fung, & P. S. N. Lee (Eds.), *Embedding into our lives: New opportunities and challenges of the Internet* (pp. 101–123). Hong Kong: Chinese University Press.
- Chyi, H. I., & Huang, J. S. (2011). Demystifying the demand relationship between online and print products under one newspaper brand: The case of Taiwan and the emergence of a universal pattern. *Asian Journal of Communication*, 21(3), 243–261.
- Chyi, H. I., & Lasorsa, D. L. (1999). Access, use and preference for online newspapers. *Newspaper Research Journal*, 20, 2–13.
- Chyi, H. I., & Lasorsa, D. L. (2002). An explorative study on the market relation between online and print newspapers. *Journal of Media Economics*, 15(2), 91–106.

Chyi, H. I., & Lee, A. M. (2012). Will the Internet disrupt? A reality check on format preference for traditional and digital content across five media. Paper presented at the 10th World Media Economics and Management Conference, Thessaloniki, Greece.

Chyi, H. I., & Lewis, S. C. (2009). Use of online newspaper sites lags behind print editions. *Newspaper Research Journal*, 30(4), 38–53.

Chyi, H. I., & Yang, M. J. (2009). Is online news an inferior good? Examining the economic nature of online news among users. *Journalism & Mass Communication Quarterly*, 86(3), 594–612.

Chyi, H. I., & Yang, M. J. (2012). Who would miss getting news online and why (not)? Examining the emotional attachment to online news – an inferior good. In F. L. F. Lee, L. Leung, J. L. Qiu, & D. S. C. Chu (Eds.), *Frontiers in new media research*. Routledge.

De Waal, E., Schoenbach, K., & Lauf, E. (2005). Online newspapers: A substitute or complement for print newspapers and other information channels? *Communications*, 30(January), 55–72.

Edmonds, R., Guskin, E., & Rosenstiel, T. (2011). Newspapers: By the numbers. *The State of the News Media 2011*. Retrieved June 1, 2011, from <http://stateofthemedias.org/2011/newspapers-essay/data-page-6/>

Fallon, K. (2011, September 9). New York Times will end print edition (eventually), publisher says. *The Atlantic*. Retrieved October 9, 2011, from <http://www.theatlantic.com/entertainment/archive/2010/09/new-york-times-will-end-print-edition-eventually-publisher-says/62731/>

Graybeal, G. M. (2011). Newspapers publish less in print; focus on Web to attract young readers. *Newspaper Research Journal*, 32(1), 90–97.

Gill, K. (2011, February 28). Online revenue cannot rescue newspaper biz model. *The Moderate Voice*. Retrieved April 8, 2012, from <http://themoderatevoice.com/102679/online-revenue-cannot-rescue-newspaper-biz-model/>

Hindman, M. (2011). *Less of the same: The lack of local news on the internet*. FCC-Commissioned report.

Katz, M. L., & Rosen, H. S. (1991). *Microeconomics*. Homewood, IL: Irwin.

Kaufhold, K. (2010a). Dark days ahead. In M. E. McCombs, A. W. Hinsley, K. Kaufhold, & S. C. Lewis (Eds.), *The future of news: An agenda of perspectives* (pp. 17–30). San Diego, CA: Cognella.

Kaufhold, K. (2010b). Journalists show unified optimism about young adults' news consumption. *Newspaper Research Journal*, 31(2), 63–68.

Krueger, B. (2010, September 14). Students prefer printed college newspapers over online. *Poynter Online*. Retrieved September 28, 2010, from <http://www.poynter.org/column.asp?id=136&aid=190619>

McDowell, W. S. (2011). The brand management crisis facing the business of journalism. *International Journal on Media Management*, 13(1), 37.

Mindich, D. T. Z. (2005). *Tuned out: Why Americans under 40 don't follow the news*. New York: Oxford University Press.

Newspaper Association of America. (2012a). Newspaper circulation volume. Retrieved March 18, 2012, from <http://www.naa.org/Trends-and-Numbers/Circulation/Newspaper-Circulation-Volume.aspx>

Newspaper Association of America. (2012b, March 14). Advertising expenditures: Annual. Retrieved March 18, 2012, from <http://www.naa.org/Trends-and-Numbers/Advertising-Expenditures/Annual-All-Categories.aspx>

Online Publishers Association. (2004, February). Multi-channel media brands: Attitudinal and usage study. Retrieved from http://onlinepubs.ehclients.com/images/pdf/140_W_opa_multichannel_media_brand_study_nov03.pdf

Palfrey, J., & Gasser, U. (2008). *Born digital: understanding the first generation of digital natives*. Basic Civitas Books.

Paton, J. (2010, December 2). John Paton's Dec. 2 presentation at INMA Transformation of News Summit in Cambridge, Mass. *Digital First*. Retrieved October 23, 2011, from <http://jxpaton.wordpress.com/2010/12/02/presentation-by-john-paton-at-inma-transformation-of-news-summit-in-cambridge-mass/>

Penenberg, A. L. (2004, November 24). Newspapers should really worry. *Wired*. Retrieved from <http://www.wired.com/culture/lifestyle/news/2004/11/65813>

Pew Research Center for the People and the Press. (2010). Americans spending more time following the news. Retrieved April 15, 2011, from <http://people-press.org/files/legacy-pdf/652.pdf>

Pew Research Center's Internet & American Life Project. (2011). Who's online: Internet user demographics. Retrieved March 16, 2012, from <http://pewinternet.org/Trend-Data/Whos-Online.aspx>

Picard, R. G. (2009). Blogs, Tweets, social media, and the news business. *Nieman Reports*. Retrieved May 30, 2011, from <http://www.nieman.harvard.edu/reportsitem.aspx?id=101884>

Prior, M. (2007). *Post-broadcast democracy: How media choice increases inequality in political involvement and polarizes elections*. New York: Cambridge Univ Pr.

Readership Institute. (2003). *The newspaper experience study*. Northwestern University. Retrieved from http://www.readership.org/consumers/data/newspaper_exp.pdf

Scarborough Research. (2012). Audience-FAX online database. Audience-FAX online database. Retrieved March 22, 2012, from <http://abcas3.accessabc.com/scarborough/login.aspx>

Smith, A., Rainie, L., & Zickuhr, K. (2011, July 19). College students and technology. *Pew Internet & American Life Project*. Retrieved March 16, 2012, from <http://pewinternet.org/Reports/2011/College-students-and-technology/Report.aspx?view=all>

Thurman, N., & Myllylahti, M. (2009). Taking the paper out of news. *Journalism Studies*, 10(1), 1–18.

Yaros, R. A. (2008, winter). Digital natives: Following their lead on a path to a new journalism. *Nieman Reports*. Retrieved March 22, 2012, from <http://www.nieman.harvard.edu/reportsitem.aspx?id=100671>

Young adults suffering from news fatigue, study says. (2008, June 2). *The New York Times*. Retrieved from <http://www.nytimes.com/2008/06/02/technology/02iht-young.1.13383992.html>

Endnotes

1. In microeconomics, inferior goods are defined as goods for which an increase in income decreases consumption, everything else held constant (Boyce & Melvin, 2008; Katz & Rosen, 1991). Classical examples of inferior goods include inexpensive items such as macaroni and cheese, Ramen Noodles, or bus travel.
2. On May 16, May 22, and May 31, respectively.
3. Its publisher Arthur Sulzberger, Jr. said, "We will stop printing *The New York Times* sometime in the future, date TBD" (Fallon, 2011).

Hsiang Iris Chyi is an assistant professor in the School of Journalism at the University of Texas at Austin. Her research demystifies the often misunderstood economic nature of online content and addresses the economic viability of online news. Her “Ramen Noodles Theory” suggests that online news, like Ramen Noodles, is an inferior good. Her recent work on users’ format preference for traditional media challenges the theory of disruptive technology. Chyi has published in Journalism & Mass Communication Quarterly, Journal of Media Economics, International Journal on Media Management, Journalism Studies and Journalism Practice and serves on the editorial board of four academic journals. She has received the Top Rated Research Paper Award from the International Symposium on Online Journalism, the Barry Sherman Teaching Award in the Media Management & Economics Division of AEJMC, the Faculty Research Award from the College of Communication at UT Austin, the Top Paper Award in the Newspaper Division of AEJMC, and the International Newspaper Marketing Association Award for industry relevance. Chyi received her bachelor’s degree from National Taiwan University, a master’s degree from Stanford University, and a Ph.D. degree from the University of Texas at Austin.

Acknowledgements

This study is funded by the School of Journalism at the University of Texas at Austin. Special thanks go to Frank Serpas III, Sally Renaud, Ron Spielberger, Hillary Warren, and the 198 newspaper advisers affiliated with the College Media Association for their contribution to this survey. The author also thanks Glenn Frankel, Nan Zheng, Kurt Mitschke, Avery Holton, Angela M. Lee, Jordan Humphreys, and Priscilla Pelli for their support and assistance.



Vol. 3, No 1, Winter 2013. 19-38

Verbal and Visual National News Framing of Dilma Rousseff and her Successful Bid as Brazil's First Female President

Tania Cantrell Rosas-Moreno

In 2010, Brazil elected its first female head of state, Dilma Rousseff, a former guerilla turned trained economist handpicked to succeed Luiz Inácio Lula da Silva. Even with the former popular president's backing, the race was tight, forcing a run-off. This framing study qualitatively analyzed almost 600 news articles plus 86 visual aids sampled from three constructed weeks of three online news publications' coverage of Rousseff's successful campaign. The latent news frames that emerge from the verbal and visual news cues are contextualized within Brazil's rising stature as a world power, its growing middle class and (positive) implications for women and other minorities. The results further our understanding of Brazil's state of journalism, as Brazil continues to mature as a democracy and its "partly free"-ranked press persists in evolving.

She was a former guerilla who was imprisoned and tortured for opposing the military dictatorship that ruled Brazil from 1964 to 1985. Having never been elected to an office until 2010, she is not a seasoned politician. But, she is a trained economist and a former member of Lula's cabinet, having served as his minister of energy then chief of staff. And now, Brazil's Iron Lady, Dilma Rousseff, is the first female president of Brazil. According to Forbes magazine's 2012 annual rankings, she is also the third most powerful woman and 22nd most powerful person in the world (Forbes, 2012).

Ms. Rousseff has taken office at a critical time in Brazil's history. Riding a wave of unprecedented economic success nationally and internationally, she is the leader who might solidify the BRIC nation's rising stature as a world power. This comes only 27 years into its latest era of democracy, having experienced a turbulent past of military coups and dictatorships, and within one decade of unsurpassed middle class explosion and stabilization. This also comes after the phenomenally successful two-term presidential career of President Luiz Inácio "Lula" da Silva, dubbed the "most popular politician on earth" (see, for example, Follath & Gluesing, 2012). During his tenure, among other noteworthy achievements, Brazil was tapped to host the 2014 World Cup and 2016 Olympics. Brazil is also home to Petrobras, the world's third-largest energy company. Further, Brazil is quickly advancing from the world's eighth-largest economy to its fifth (Phillips 2010).

Yet, as Brazil leads in certain international social and economic spheres, it lags behind in others. For instance, Brazil has had one of the lowest rates of women's political participation in the world despite hosting Latin America's earliest, largest, most diverse, radical and successful women's movement (Htun, 2002). This is one reason why until its 2010 election, Brazilian female leadership was sidelined and watched other Latin American nations including Chile, Panama and Argentina producing female state heads.

This comparative narrative analysis investigates Brazilian national online news verbal and visual framing of its first successful female presidential bid. Given that general literacy levels are increasing and that newspaper attention is spiking in Brazil (Smith, 2008), how leading national news media show and tell Ms. Rousseff's story requires scholarly attention. Relying on almost 600 articles and 90 visual aids from three differently-produced news mediums should help minimize news normalization and routinization plus allow dismissal of "per chance" findings (Shoemaker & Reese, 1996; Cantrell & Bachmann, 2008). Perhaps most importantly, the news analysis can provide important indicators of what election of Brazil's first female head-of-state might mean for the state of journalism and levels of democracy within Brazil.

Journalists as Framers and News Framing

Considering news media framing of an emerging democracy during the primary demonstration of its democratization—presidential elections—is crucial. At the least, it investigates "...the quality of information provided to the public *by the media*" (Lawrence, 2010, p.266, emphasis added). Patterson argues that since candidates' speeches are filled with pledges of what they will do if elected, and those pledges are in the future, then journalists can report nearly anything they want (Patterson, 1993).

Journalists, then, are powerful social actors (Carragee & Roefs, 2004) through their privileged opportunity to transmit facts and ideas; they (sub)consciously create, structure, and/or reproduce ideologies within at least cultural, political, social and historical contexts. They have power "to shape—and distort—public perceptions; the power to promote—or marginalize—competing perspectives on public problems; and the power, therefore, to promote or inhibit the political goals of various societal groups" (Lawrence, 2010, p.278).

In election news coverage, journalists' power requires more attention, primarily when functioning within a partly-free media society such as Brazil's, as noted earlier. But, to elaborate: Although Brazil has a vibrant democracy with strong constitutional guarantees of freedom of expression, election year 2010 was particularly tumultuous in terms of the Brazilian press' freedom to operate. A new freedom of expression bill signified gains in the legislative arena, but there were setbacks in the judiciary as courts continued to issue injunctions preventing the press from reporting on several important criminal cases bound press progressions (Freedom House, 2011). In brief, although Brazil is experiencing "media opening," its press system ranks 44 among 196 countries and territories (Freedom House, 2011). Lawson (2002) defined media opening as the "process by which mass media become more representative of societal viewpoints and

more independent of official control" (as cited in Porto, 2007, p.18).

Journalists are framers, and frames "...are *organizing principles* that are socially *shared* and *persistent* over time, that work *symbolically* to meaningfully *structure* the social world" (Reese, 2003, p.11, emphasis in original). Because frames are culturally embedded, they "... form universally understood codes that implicitly influence the receiver's message interpretation, which lends meaning, coherence, and ready explanations for complex issues" (Van Gorp, 2010, pp.87-88). In other words, frames indicate the "We all know what we're talking about here" (Lewis & Reese, 2009) or a we-all-know-what-we-mean sense (Reese, 2010).

Journalists, then, are powerful social actors... [and] framers.

While purely verbal framing analyses have their place, the framing research cannon has gained momentum through the combination of verbal *and* visual study. "The visual reporting in newspapers is much more than a playlist provided by the wire services passed on to readers. Instead, photo editors reference news values particular to their discipline and audience as they produce the daily visual report of a news event" (Fahmy, Kelly & Kim, 2007, p.557). Since photojournalism has its own entrenched traditions, practices and values, photographs are not neutral (Hulteng, 1985; Tagg, 1988). In fact, the presence, or lack, of an image and the content of a news photograph help determine the interpretation of a news event (Entman, 1993). In sum, not only do visuals enhance learning, but the combination of visual and verbal messages can merge together and change audiences' perceptions of issues (Coleman, 2010, p.242).

Recent framing theory developments differentiate between the *what* and the *how* of framing. "The *what* perspective is more frame-centric; it is concerned with frame building and involves the dissection of the content of the frame, specifically the network of concepts and the unique narrative and myths that make it work" (Reese, 2010, p.19). The *what* of framing, then, comprises manifest, or categorical, and latent, or interpretative, frames. As Messaris and Abraham (2003) have noted, visual framing is both contingent upon and distinct from framing that occurs in written parts of print news.

The special qualities of visuals—their iconicity, their indexicality, and especially their syntactic implicitness—makes them very effective tools for framing and articulating ideological messages. (p. 220)

Analyzing news media frames during an election period in an emerging democracy should tip researchers toward an understanding at the macrolevel of key ideologies. And ideologies work most effectively... when our formations seem to be simply descriptive statements about how things are (i.e. must be), or of what we can "take-for-granted." ... *Ideologies tend to disappear from view into the taken-for-granted "naturalized" world of common sense.* (Hall, 2003, p.90, emphasis added)

Peeking at those ideologies through combined visual and verbal framing considerations should help make sense of the state of journalism and the current levels of democracy within Brazil. The underlying perspectives guiding this study, then, are:

RQ1: What news frames emerge from the Brazilian national online news coverage of Dilma Rousseff during her campaign for president?

RQ2: What might the verbal and visual news frames indicate about the state of journalism and the current levels of democracy within Brazil?

Method

Almost 600 news articles and 90 visual aids sampled from three constructed weeks of three online news publications' coverage form the body for analysis. The constructed weeks began Monday, July 19 2010, concluded Friday, October 29 2010, and included Monday, November 1 2010, the day after the election results were announced. Research has shown constructed week samples to be more efficient than other forms of sampling for newspaper studies (Hester & Dougall, 2007; Riffe, 1993). Only articles with Ms. Rousseff's name—generally, "Dilma"—in the headlines were pulled on the days of the constructed weeks to ensure each story included in the sample focused on her. The news media included in this study are *Folha de São Paulo*, or Brazil's newspaper of record; *Jornal do Brasil*, a legendary top-three paper that strives to survive through its digital version, which went live September 2011; and *Valor Econômico*, a top business publication chosen strategically to see how a female economist and leader might be represented within a traditionally male-dominant sphere.

Peeking at ... ideologies through combined visual and verbal framing considerations should help make sense of the state of journalism and the current levels of democracy within Brazil.

Folha de São Paulo can be considered Brazil's newspaper of record. Founded in 1921, it has one of the largest circulations of dailies in the land reaching almost 300,000 households. Its average net circulation is 54% male and 45% upper middle class (Publicitas, 2011). Self-declared neutral, some media analysts perceive it as right-wing (see, for example, Lungaretti, 2009). Produced out of the nation's industrial capital in São Paulo by the Grupo Folha, *Folha* offers both regional and national editions and is headed by the nation's top journalists.

In addition to being one of the three most long-lived newspapers of the nation with a founding date in 1891, *Jornal do Brasil*, or *Jornal*, was Brazil's *first* online newspaper. September 2010 it went completely digital, although discussion concerning a return to print versions continues. As a digital-only medium, it enjoys 10 million page views with 2.5 million unique visitors, and visitors spend about five minutes on the page (V. Basmagi personal communication, March 22, 2011). *Folha de São Paulo* trumped *Jornal* around

the turn of the century in terms of readership, yet *Jornal* has been known for setting the standard for Brazilian journalism and staying governmental censorship. Produced out of Brazil's cultural capital in Rio de Janeiro by Editora JB, *Jornal's* content and style are directed at an educated and elite readership/viewership.

Valor Econômico is a premier business newspaper published by the major groups Globo and *Folha de São Paulo*. *Valor* has an impressive readership of C-level business executives. In addition to its own, professional editorial team the newspaper has agreements with media outlets such as the *Financial Times*. *Valor* is the Brazilian publication participant of BNG, the exclusive pan regional package encompassing the leading Latin America business newspapers. Its average net circulation is about 55,000, with its readership being 81 percent male and 45 percent from the upper-middle class (Publicitas, 2011).

Table 1 below provides a brief overview of this study's scope:

Table 1. *Scope of Brazilian National News Coverage of Dilma*

Newspaper	Number of Articles	Average Word Count	Number of Articles Post Election
<i>Folha</i>	242	423	58 (24%)
<i>Jornal</i>	262	388	63 (24%)
<i>Valor</i>	70	273	17 (24%)
Totals	574	361	138 (24%)

Note. The average word count for *Jornal* excludes the two abnormally long articles.

Tankard (2001) offered an empirical approach to applying framing theory. He suggested researchers evaluate 11 framing mechanisms for identifying and measuring news frames, including headlines, subheads, photos, photo captions, leads, source selection, quote selection, pull quotes, logos, statistics and charts, and concluding statements and paragraphs. With this approach, and using a comparative narrative analysis (Berger, 2005; Berger, 1997), each news article (=verbal unit of analysis) and each visual aid (=visual unit of analysis) were carefully considered in terms first of content and second its relation to other articles to see what patterns emerged. A visual aid is defined as a photograph, a still from a video clip embedded in a story or a chart. This inductive approach allowed for the manifest or *explicit* frames of news articles plus the *latent* or deeper, perhaps unintended frames of the news discourse to be decipherable, since "... frames are embedded across a body of discourse and speakers, rather than cleanly identified within a single article" (Reese, 2010, p.29).

The comparative narrative analysis technique allows for consideration of the holistic communicative process, for communication is "a dynamic process that involves frame-building (how frames emerge) and frame setting (the interplay between media frames

and audience predispositions)” (Vreese, 2005, p.51). The communicative process during elections is particularly interesting, given the social, political and economic forces actively at play (inter)nationally. Because democracies participate in elections on regular, scheduled bases, news frames emerging from election media can be considered generic rather than issue-specific (Vreese, 2002; Vreese, 2005). And “...generic frames teach us about journalism and render cross-national differences visible” (Vreese, 2005, p.59).

This qualitative analysis, then, went beyond a mere topical or categorical assessment; in the Rojecki (2005) and Esser and D’Angelo (2006) traditions, connections to larger ideologies were made to give *voice* and *view* to some frames embedded within or alluded to by the news stories, seaming text and image (Lawrence, 2010, p.269). Given that the researcher, the instrument in qualitative research, is not native Brazilian should have aided in unmasking news frames at least through sensitivity to cultural norms and resonances. “Cultural resonances contribute to the fact that [news media] devices are often perceived as familiar, so that the frames to which they refer can remain unnoticed” (Van Gorp, 2007, p.60).

Again, this study aimed to understand how the Brazilian national online press verbally *and* visually framed Dilma Rousseff during her first successful presidential campaign. Emerging verbal and visual news frames from differently produced national news media should provide some indication about the state of journalism and the current levels of democracy within Brazil.

Analysis Overview

The following table should provide some perspective with regard to the visuals included in this study:

Table 2. *Scope of Brazilian Visual News Coverage of Dilma*

Newspaper	Unique Visual Aids	Unique Dilma Visual Aids	Unique Dilma/ Lula Visual Aids	Visual Aids Post Election
<i>Folha</i>	45	16 (36%)	1	24 (53%)
<i>Jornal</i>	22	4 (18%)	7 (32%)	16 (73%)
<i>Valor</i>	19	10 (53%)	0	4 (21%)
Total	86	30	8	44 (52%)

Note. Percentages are calculated horizontally.

When considered separately, each news medium offered unique insights into Dilma and her campaign. For instance, *Jornal* gave the most comprehensive coverage regarding her Bulgarian roots, noting that Mr. Rousseff emigrated from Bulgaria during World War II, married a Brazilian and had three children, including Dilma. One *Jornal* photo even shows a female Rousseff Bulgarian family member holding a Bulgarian newspaper with

Dilma on its cover. Interestingly, it is the business medium *Valor* that gave the most visual representation of Dilma. Of the 19 visual aids accompanying the 70 articles in the sample, 10, or 56%, were of Dilma. Conversely, *Jornal* offered the least visual *sole* representation of the candidate, providing only *four* visual representations of her prior to her election. The number is even more consequential when compared with the fact that 76% of the amount of *Jornal* articles in the sample accompanies the four visuals. In effect, then, *Jornal* gives the most verbal attention to the candidate overall, but the least visual.

Collectively, the comparative narrative analysis indicated three news frames or, to restate and apply, three *organizing principles* that seem socially *shared* and *persistent* over a time, that work *symbolically* to meaningfully *structure* Dilma during her presidential campaign. The online news frames connect with larger metaframes or ideologies within Brazilian society. The first and largest news frame is the *Lula blessing*. Ms. Rousseff was manifestly *and* latently, verbally *and* visually framed as Lula's primed successor. The second is the *Softer side of politics*. *Folha*, *Jornal* and *Valor* analysis indicates a demonstration of female empowerment coupled with a call for female political involvement. The third is *A new hope*. Ms. Rousseff was latently framed, at least verbally, as a success story for women, minorities *and* democracy.

News Frame One: The Lula blessing

Perhaps one of the easiest ways to begin detangling this frame is to consider the alternative scenario: Had Lula *not* given his blessing, would Dilma have won? The likelihood is slim, given that she was up against a seasoned politician who had been successful in various elected offices. In addition, it took a run-off election to win, even with Lula's blessing. Further, when one considers the numbers, Serra, Dilma's contender, actually won the presidency's *external* vote.

Folha, *Jornal* and *Valor* news coverage manifestly *and* latently frame Ms. Rousseff as Lula's primed successor. Clear examples of the manifest framing include:

The candidate *chosen* to succeed President Luiz Inácio Lula da Silva *four years ago*, Dilma Rousseff assumed the presidency of the Republic January 1 with the challenge to prove to allies and the opposition that she'll create a government with her own mark. (*Valor*, 1 November 2010, emphasis added)

With the exception of "speed bumps" that ended up taking the presidential election to a run-off, the victory of Dilma Rousseff was conducted with great expertise by *the manager of the entire process*: President Lula. (*Folha*, 1 November 2010, emphasis added)

The PSDB felt in its skin what "the Lula factor" means in a presidential campaign. (*Folha*, 1 November 2010)

Dilma's platform will give emphasis just to the continuation of the Lula government. (*Jornal*, 4 August 2010)

One *Jornal* article headlines that Serra "is deathly afraid" of Lula's presence in the campaign. (12 August 2010)

Of all the media, *Jornal* gives the most Lula-Dilma visual representation, with 22% of its visual representation of the candidate being visuals of Lula and Dilma. At least visually, then, the newspaper shows Dilma with the former president; a vote for her is a vote for Lula.

Perhaps one of the easiest ways to begin detangling this frame is to consider the alternative scenario: Had Lula not given his blessing, would Dilma have won?

While the manifest framing is obvious, the latent framing is subtle and ties into larger ideologies, including paternalism and patrimonialism. Brazilian government has traditionally been both. Regarding paternalism,

Brazil has a history of patron-client relationships that are very paternalistic as well as position oriented. Part of this tradition stems from its turbulent history, with democratic periods following imperial Portuguese rule in colonial times and sandwiching (military) dictatorships. In a sense, this is similar to a "good ol' boys" system; people in positions of power invite their friends to join them ... In the United States, this idea is similar to what we term nepotism or networking. In Brazil, this concept is understood as social capital. (Bourdieu, 1986, pp. 241-258)

A patrimonial society is one in which a leader receives an inheritance or legacy from a father or other type of ancestor or connection. It can also be any form of political domination or authority based on personal and bureaucratic power exerted by a (royal) household. The Roman Catholic Church, for example, can be considered a type of patrimonial organization. Consider these references and how they flesh out this frame:

According to the [TV] program, Dilma doesn't have experience and only contends for the Palácio do Planalto [or the presidential workplace] *because of her political godfather*, President Lula. (*Valor*, 29 October 2010, emphasis added)

Elected to work and thanks to *the godfather*, Dilma Rousseff inherits this complex and delicate arrangement that sustains *Lulaism*. (*Folha*, 1 November 2010, emphasis added)

These actions [of having Lula join Dilma in her presidential campaign] follow the strategy... of pasting *the image of Lula*—whose

government has achieved a 79 percent approval rating—to his candidate. (*Folha*, 31 August 2010, emphasis added)

“For the first time after five elections, *my little photo* is not in the ballot box, but in the moment you choose 13 and the little picture of Dilma appears, you will be *voting a little bit for me*,” affirmed Lula. (*Valor*, 29 October 2010, emphasis added)

The principle puller of votes to the Dilma presidential campaign, President Luiz Inácio Lula da Silva... (*Jornal*, 5 October 2010)

In addition to *verbal* messages connecting Lula and Dilma, *visual* aids do as well. Consider, for instance, the majority of the visual aids from the *Jornal* sample. Again, 32% of this newspaper's images, compared with negligible percentages from *Folha* and *Valor*, pair Lula with Dilma. However, *Folha* and *Valor* latently frame Dilma as having received Lula's blessing through religious visual cues. One example is an ad stating “7 Reasons to Vote for Dilma” that runs in both online newspapers. The ad was put together by the Universal Church, which, although only the fourth-largest evangelical church in Brazil, is the nation's largest multinational organization (Berkley Center for Religion, Peace & World Affairs, 2012).

In other instances, religious undertones in terms of deference to a father or higher being run deep in the *Lula blessing* frame. Also briefly consider:

[Dilma's parents] gave her a solid moral and religious foundation... In her youth, Dilma studied in a public school of nuns in Belo Horizonte and participated in social projects maintained by the brotherhood. (*Folha*, 13 October 2010)

Folha provided an accompanying photo of Dilma as a young girl with her family. It called attention to the added subtext that she had a strong religious upbringing to indicate religious undertones were growing in importance in the election.

In the *Lula blessing* frame, conditions were offered to “keep things as they are” for Brazilians:

... proposals of Dilma's government signaled that, if elected, she would *give continuity* to the projects of President Luiz Inácio Lula da Silva's government. (*Valor*, 12 August 2010, emphasis added)

In at least four areas, Dilma has visions distinct from the president: external politics, financial balance, public functionality and regulatory agencies. In the majority of cases, however, her governmental plan, reflected not only in the 13 publicly-made promises but also in ideas and plans defended in interviews a pronouncements, represents the *continuity* of current management. (*Valor*, 29 October 2010, empha-

sis added)

Dilma's "mark of continuity" (marca da continuidade...) or maintaining of the Lula status quo, something 80% of Brazilians favored according to approval ratings, received nods from powerful groups. The groups who voted for her because of this form of the *Lula blessing* included the business elite (*Valor*, 31 August 2010), leftist governors (*Valor*, 29 October 2010) and the Universal Church (*Valor*, 1 November 2010).

The *Lula blessing* frame also buffered some campaign flack for Dilma from her main competitor:

Lula counter-attacks Serra and accuses him of "going below the belt" against Dilma... [yet] Serra avoids attacks on Lula, because of his high popularity. (*Folha*, 8 September 2010)

Manifestly and latently, verbally and visually, news coverage framed Dilma during her bid for presidential office as recipient of the *Lula blessing*. This frame is also evidenced through the *lack* of visuals associated with Dilma. *Folha* visual aids referring to Dilma were primarily representations of others speaking in support of Dilma. One interpretation of the lack of *Folha* Dilma visual aids can signify how Dilma was the choice of the people, further latently attaching her to Lula's preceding platform that helped him win his first presidential election (Cantrell, 2004). Foundational to these reports are the encouragement and empowerment of at least one woman. Comparative narrative analysis of news coverage, hence, also revealed the latent news frame the *Softer side of politics*.

News Frame Two: The Softer Side of politics

Dilma was not the only female running for Brazil's presidency during the 2010 election; she was one of two women (the other was former-Senator and -Environment Minister Marina Silva) among the top three contenders. Yet news coverage at least of Dilma latently framed a *Softer side of politics*, one that demonstrated female empowerment coupled with a call for female political involvement.

One way the *Softer side of politics* surfaced was through news articles juxtaposing Mr. Serra's nitpicking and namecalling campaign tactics against Ms. Rousseff's "above the mud" approach. For instance, news reports show that Mr. Serra used scare tactics:

Serra said that invasions from the MST [Movimento Sem Terra, or Landless Movement] will increase, if Dilma is elected. (*Valor*, 26 July 2010)

Dilma's response was to call her opponent's bluff:

Dilma affirmed also that the opposition... repeated the "tactic of fear" used in the 2002 election... According to Dilma, these accusations

are part of the opposition's strategy to "trip up" the elections. (*Folha*, 12 August 2010)

Several articles highlighted how Mr. Serra was raising campaign complaints against Dilma:

Serra enters two requests for direct response against Dilma in the Superior Electoral Court. (*Valor*, 13 October 2010)

The Superior Electoral Court denies Serra's three requests for direct response against Dilma. (*Valor*, 24 September 2010)

Dilma's response to Mr. Serra's campaign antics was unique to politicking:

When commenting on the attacks that she was suffering from her principal opponent in the election campaign, Dilma Rousseff said that her campaign would be run until its completion by "*tolerance*." "My campaign will be marked by *tolerance*. I will not enter into hate. I will *win with love*." (*Valor*, 24 September 2010, emphasis added)

The objective is to combat what Dilma classified as "campaign performed *above* calumnies and defamations." (*Valor*, 5 October 2010 emphasis added)

Somehow, Dilma succeeded in doing just that. Even in the face of campaign and governmental corruption charges (for which Dilma's predecessor Erenice Guerra stepped down from office), Dilma rose in the polls. She blended her own pizzazz with Lula's familiar and successful 2002 campaign slogan or tactics of "peace and love," and the tougher side of the Iron Lady surfaced:

In electoral advertisements, the PT [Workers' Party, Dilma's party] *deviated* from the "*Little Dilma peace and love*" of the first [election] phase and *thickened* the direct vote climate of the dispute. (*Folha*, 13 October 2010, emphasis added)

The PT candidate *defends* her *new tactic* as a form of defense from what could be considered attacks from the PSDB campaign. (*Folha*, 13 October 2010)

Her tough side was also *visually* represented through such images of her wearing a hard hat while out among Petrobras folk, as *Valor* reported (24 September 2010). One of the two black-and-white photos in the sample - a headshot of the candidate behind a pile of large microphones appearing to speak sternly - also seemed to give a masculine edge to the female presidential candidate (*Valor*, 24 September 2010). In another photo, Dilma was shown in a gray polo or work jumpsuit with the Petrobras logo of PB and a white hard hat. This image of Dilma was particularly important, because it showed her dressed

down, or more approachable *like* the predominantly male Petrobras workforce, or as one of the guys (see *Valor*, 1 November 2010). This contrasted starkly against other photos of Serra who, while photographed with Petrobras workers, stood out in his long-sleeved business shirt and tie, with no hard hat (see, for example, *Folha*, 13 October 2010). The press even called attention to where he was located in the photo by saying he was the one wearing the tie.

The latent news frame the *Softer side of politics* continued evident during the second phase of the presidential election, when the press noted that Serra and Rousseff both vowed to debate “less aggressively” (*Folha*, 29 October 2010). The news media also made slight but positive reference to some of Dilma’s feminine qualities and welcomed her “innovative” approach to campaigning:

Dilma affirms that she is not “aggressive, but rather “assertive...”
(*Folha*, 13 October 2010)

The PT candidate would have, “in her condition as a woman, *sensibility*” to create the Ministry of the Family, one of the principle flags of the PSDC... The candidate has “social *sensibility*,” to assert the advances achieved by the workers of the constituency. (*Valor*, 21 October 2010, emphasis added)

[After delivering a] *positive* agenda..., the female candidate *innovated* by opening the meeting to discussion and granted interviews with general ideas about education... In *another innovation*, Dilma left to speak with reporters from the mounted pulpit in the garden of her office. (*Folha*, 4 August 2010)

Further, the press spoke to the Iron Lady’s physical strength, citing how she was able to overcome lymphatic cancer. In at least one instance, *Folha* provided a *visual* comparison of her health to her older, male counterpart, showing a skeletal schematic on the left-hand side of a chart with Serra’s skeletal silhouette on the right (29 October 2010).

Concurrently, news coverage addressed her platform for health care issues in Brazil on at least two levels. One was abortion, and the other was health care, in general. Of course, the Serra campaign repeatedly threatened that were Dilma to be elected, “health would not improve” (*Jornal*, 31 August 2010).

News coverage of Dilma showed her as a candidate who brought new approaches to Brazilian presidential campaigning. Her different tactics showed old campaigning techniques and won the popular vote. Again, news coverage latently framed a *Softer side of politics*, one that showed a demonstration of female empowerment coupled with a call for female political involvement. The call ushered in a new era of leadership in Brazil, *A new hope*.

News Frame Three: A New Hope

Again, Ms. Rousseff might have been tutored and chosen by Lula to be his presidential successor, but she had never run for political office. To have a race for president in one of the world's fastest growing and developing democracies and economies be one's first bid at campaigning is fairly ambitious. Couching this personal circumstance within the context of Brazil's ironic feminist movement status makes for intriguing study. News media coverage of Dilma's first and successful presidential bid latently framed her as a success story and rallying cry for minorities and democracy in and out of Brazil.

Initially, press coverage cited "prejudice against women" (*Folha*, 8 September 2010) and used Lula's defensive comments to point to the disadvantaged state of women in Brazil in a "pan-Dilma" way:

"To try to taint, with lies and defamations, a *woman* of Dilma Rousseff's quality is to practice a crime against Brazil. And, in particular, against the Brazilian *woman*," said Lula. (*Folha*, 8 September 2010)

Press coverage solidified Dilma as an intelligent, viable, poised potential international leader:

Theoretician Dilma... Without presenting the master's thesis or doctoral dissertation these articles are rare examples of the economic thought of the PT female candidate. (*Folha*, 8 September 2010)

...[T]he challenges ahead are enormous and the next government can count on an external scene that may not be too favorable. "Dilma, however, has full capacity to administer and overcome the difficulties so that Brazil will continue to grow." (*Valor*, 1 November 2010)

Dilma appeared in photos with international leaders. (*Folha*, 8 September 2010)

A win for a woman at the Brazilian polls, then, was seen (inter)nationally as an advancement for women, for minorities and for democracy.

The press not only reported that Dilma appeared with leaders, but also provided photos of her appearing with various leaders as well as national leaders. The papers also provided images of Serra and Dilma together during their campaigns, primarily before and after debates. Generally speaking, each image is much more kind to Dilma than to Serra, providing a more appealing or friendly image of her than him. Consider, for instance, *Folha*'s photo of Dilma turned to Serra, grinning, standing closer to him, as evidenced by her arms folded closely at her sides. Then, compare this with Serra's body language in the same photo, as he stands looking at the camera, his arms extended

away from himself to shake Dilma's hands (29 October 2010).

Although press coverage did not focus largely on Dilma's gender during the campaign, mention of it increased in news reports following her election. That a woman had run for and won the top position of the land immediately seemed important. For instance:

It [or Dilma's victory at the polls] constitutes probably a *sign of advanced politics* the fact that this aspect [gender] had not been a focus of exploration in the election campaign. (*Folha*, 1 November 2010, emphasis added)

The press indicated that the people, primarily *men*, wanted this new day in Brazil:

Dilma's advantage continues anchored in the *masculine* electorate. Among the men, she has 54% compared with 38% for Serra. Already in the feminine vote there's a technical tie; the PT's female candidate has 46% and the PSDB candidate has 43%, said Datafolha. (*Folha*, 29 October 2010, emphasis added)

Tens of journalists, hundreds of militants, voters of the PT female candidate and onlookers crowded together through the narrow market corridors, trying to accompany the female candidate. (*Folha*, 27 September 2010)

Brazil demonstrates that she *wants* a woman as president. (*Valor*, 5 October 2010, emphasis added)

Upon accepting her win, news reports showed a "pan-Dilma" victory at least for Brazilian women. Consider these statements:

In the part [of her acceptance speech] of acknowledgements, Dilma adopted Barack Obama's slogan, "Yes, we can." "I would very much like that the mothers and fathers of little girls look today in their eyes and say to them: '*Yes, a woman can.*'" (*Folha*, 1 November 2010, emphasis added)

She repeats the slogan of Obama and says that *women also can govern*. (*Folha*, 1 November 2010, emphasis added)

Beyond Brazil's borders, Dilma's victory was also seen as a huge gain:

The victory confirms the continuity of the policies that are being enacted in the environment of Mercosul and Unasul [União de Nações Sul-Americanas, or the Union of South American Nations] for the well-being of our peoples and the Latin-American community. (*Valor*, 1 November 2010)

To the president of Bolivia, the victory of the PT female candidate represents a celebration of democracy. "It's a triumph of Latin-American democracy," said Morales. (*Valor*, 1 November 2010)

Perhaps the most revealing photo of the news frame *A new hope* was the photo of Dilma being interviewed by two female journalists (see *Jornal*, 1 November 2010). In it, Dilma is angled so that the viewer of the photo sees her from her right side, her face a bit hidden as her head is tilted to the female journalists, her hands folded in her lap. Meanwhile, the viewer clearly sees the two female journalists from the front, obviously engaged in the interview process. The focus almost seems to be on the female interviewers rather than the interviewee.

A win for a woman at the Brazilian polls, then, was seen (inter)nationally as an advancement for women, for minorities and for democracy. Dilma's victory was latently framed among news reports as *A new hope*. This is particularly ironic, given Dilma's platform of continuation; *Folha*, *Jornal* and *Valor* articles emphasized that voting for Dilma meant behavior approving of Lula's policies while balancing that Brazil's new head of state is not a puppet.

Discussion and Conclusion

Using framing theory, comparative narrative analysis of almost 600 Brazilian national news articles and 90 visual aids from three constructed weeks of three newspapers' coverage of Dilma Rousseff during her 2010 presidential bid indicates three news frames. The first and largest news frame, the *Lula blessing*, appears manifestly, or topically, as well as latently, or interpretatively. It also percolates through analysis of the visuals accompanying (or not) the news stories. The second news frame, the *Softer side of politics*, emerges latently. The third news frame, *A new hope*, also percolates when considering social, political and cultural contexts. In other words, these three news frames served as organizing principles that seemed socially shared and persistent, at least during the election time period, and worked symbolically to meaningfully structure at minimum Dilma's presidential victory.

What might the news frames indicate about the state of journalism and the current levels of democracy within Brazil?

Regarding the *Lula blessing*: News reports evidence that Lula chose and groomed Dilma to be his successor. At critical times during her campaign, he interceded to show Brazilians he was in favor of her being Brazil's next leader and to encourage Brazilians to trust in her, since they like and trust him, and he trusts her. It might be arguable, given Brazil's tradition of patriarchy and patrimony that, in fact, both *are* very much alive, given Lula's unquestionable influence and Dilma's history of working well with the former president. It might also be arguable that Lula's blessing within Brazilian society also constitutes a hegemonic order, or "things as they are." The largest argument against these notions is that a *woman* won office. In addition, specific steps are in motion to move Brazil from backwardness:

The first and most important initiative is substituting Brazil's patrimonialist and aristocratic society and State for a democratic one. Secondly, and in order to create regional integration in all levels, Brazil and South American countries have been engaged in bi-national and multi-national cooperation. Thirdly, Brazil has taken a set of initiatives to enhance regional trade and upgrade the importance of South American markets. Finally, Brazil has become increasingly active in international fora. (Oliveira, 2010)

Further, at the time of writing this study, current news reports are citing the Gender Revolution occurring in Brazilian politics through President Rousseff's appointment power; 10 members of her cabinet, or 26%, are female. In fact, *O Globo* newspaper dubs the head of state's most powerful staffers "the PT Amazons" (Glüsing, 2012). The second and third news frames, the *Softer side of politics* and *A new hope*, evidence elements of these initiatives.

For example, through the *Softer side of politics*, it is clear that at least Dilma as a political leader demonstrated a larger degree of press freedom. This is crucial and essential in an emerging democracy, particularly one that operates a partly-free media culture. She did this through her policy of openness, which the Brazilian national press termed "innovation." She also did this through her new approach to politicking, seeming to stay above traditional mud slinging. It is also interesting that while the news media touched upon Dilma's feminine qualities in isolated remarks prior to the election, the majority of comments about the candidate's gender surfaced *after* election. That she was the first female president of Brazil only became voiced when she *was* the first female president. Generally, no "could be" was insinuated. This raises at least two interesting questions: Why was gender a non-issue until after victory? And, had Dilma *not* won, would it have meant a setback for females in political power in Brazil? These questions rise in importance, given the history of the feminist movement in Brazil, coupled with ironically low female political participation.

Through the third news frame, *A new hope*, it is clear that Dilma, specifically, and Brazilian women, in general, are stepping into the (inter)national limelight. During her campaign she was photographed with international leaders, setting the stage for her future ranking and association with them. This also primed Brazil for future relationships and negotiations.

Perhaps more importantly, the new hope engendered by a female serving as president enriches another dimension of democracy within Brazil, that being racial democracy. In brief, racial democracy is the notion that all races in Brazil are equal. Brazilian sociologist Gilberto Freyre introduced the concept in the 1930s in an effort to unify the diverse Brazilian people. Even though critical scholars critique the notion claiming it to be a myth (Chaka, 2005; Sheriff, 2001; Stam, 1997), racial democracy remains a critical component of Brazilian national identity (De Sousa & Nascimento, 2008) and way of life (Htun, 2005). In fact, race is such a dynamic and seemingly indefinable term that it has been stretched to include issues of class and gender. With this understanding, that Dilma won

the presidential seat also suggests a healthy expansion of opportunity for all dimensions of the Brazilian people. In other words, the governmental denotation of “democracy” is increased through Brazil’s continued practice of democratic elections, *and* the social connotation of “racial democracy” is expanded through her win. Social justice issues at least *seem* to be on the up in Brazil.

Another point worth noting in brief about the news coverage of Dilma’s presidential candidacy is how it approaches what in the United States is understood as the horse race. Stating who is ahead of whom and by how much has not been a typical form of election reporting in Brazil. Could this more U.S.-type of political reporting also be an indication of greater press freedom in Brazil?

Social justice issues at least seem to be on the up in Brazil.

Larger implications from the news coverage of Ms. Rousseff’s candidacy must be investigated. For example, given that Brazil has a partly-free ranked press and has continued to elect socialists to power in a transitioning democracy, what *does* Ms. Rousseff’s victory insinuate for Brazil’s state of media opening? Also, Dilma’s campaign successfully adopted social media (Paryzer, 2012). How might a complementary study of progressive media inform this study? What might those findings indicate about election practices in an emerging democracy? Investigating alternative media venues in conjunction with or apart from mainstream media, as has been called for (Lawrence, 2010, p.268), could also reveal key insights into the state of politics and social justice issues within Brazil.

References

- Berger, A. A. (1997). *Narratives in popular culture, media, and everyday life*. Thousand Oaks, CA: Sage.
- Berger, A. A. (2005). *Media analysis techniques* (3rd ed.). Thousand Oaks, CA: Sage.
- Berkley Center for Religion, Peace & World Affairs. (2012). Universal Church of the Kingdom of God. Georgetown University. Retrieved from <http://berkeleycenter.georgetown.edu/resources/organizations/universal-church-of-the-kingdom-of-god>.
- Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp.241-258). New York: Greenwood Press.
- Cantrell, T. H. (2004) Democracy here, democracy there, and journalists in between: The media’s role in the 2000 American and 2002 Brazilian presidential elections. Paper presented at International Association for Media and Communication Research Conference, Porto Alegre, Brazil.
- Cantrell, T. H., & Bachmann, I. (2008). Who is the lady in the window? A study of international and national press coverage of first female government heads. *Journalism Studies*, 9(3), p. 429-446.

Carragee, K. M., & Roefs, W. (2004). The neglect of power in recent framing Research. *Journal of Communication*, 54(2), 214-33.

Chaka, M. R. (2005). *The land of miscegenation: Is the racial democracy theory in Brazil a myth?* Unpublished doctoral dissertation, Morgan State University, MD.

Coleman, R. (2010). Framing the pictures in our heads: Exploring the framing and agenda-setting effects of visual images. In P. D'Angelo & J. A. Kuypers (Eds.), *Doing news framing analysis: Empirical and Theoretical Perspectives* (pp.233-262). New York: Routledge.

De Sousa, L. C., & Nascimento, P. (2008). Brazilian national identity at a crossroads: The myth of racial democracy and the development of black identity. *International Journal of Politics, Culture, and Society*, 19(3-4), 129-143.

Entman, R. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication*, 43(4), 51-58.

Esser, F., & D'Angelo, P. (2006). Framing the press and publicity process in U.S., British, and German general election campaigns: A comparative study of metacoverage. *The Harvard International Journal of Press/Politics*, 11(3), 44-66.

Fahmy, S., Kelly, J. D., & Kim, Y. S. (2007). What Hurricane Katrina revealed: A visual analysis of the hurricane coverage by news wires and U.S. newspapers. *Journalism and Mass Communication Quarterly*, 84, 546-561.

Follath, E., & Gluesing, J. (2012, Aug. 10). From poverty to power: How good governance made Brazil a model nation. *Speigel*. Retrieved from <http://www.spiegel.de/international/world/good-governance-series-how-brazil-became-a-model-nation-a-843591-2.html>.

Forbes. (2012). The world's most powerful people. Retrieved from www.forbes.com/powerful-people/list/.

Freedom House. (2011). Freedom of the press: Brazil. Retrieved from <http://www.freedomhouse.org/report/freedom-press/2011/brazil>.

Glüsing, J. (2012, Jan. 19). Rousseff's gender revolution: Women take power in Brazilian government. Retrieved from http://www.spiegel.de/international/world/0_1518_809834.00.html.

Hall, S. (2003). The Whites of their eyes: Racist ideologies in the media. In G. Dines & J. M. Humez (Eds.), *Gender, race, and class in the media* (2nd ed., pp.135-158). Thousand Oaks: Sage.

Hester, J. B., & Dougall, E. (2007). The efficiency of constructed week sampling for content analysis of online news. *Journalism & Mass Communication Quarterly*, 84(4), 811-824.

Hulteng, J. L. (1985). *The messenger's motives: Ethical problems of the news Media* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Htun, M. (2002). Puzzles of women's rights in Brazil. *Social Research*, 69(3), 733-751.

Htun, M. (2005). Racial quotas for a racial democracy. *NACLA Report on the Americas*, 38(4), 20-25.

Lawrence, R. G. (2010). Researching political news framing: Established ground and new horizons. In P. D'Angelo & J. A. Kuypers (Eds.), *Doing news framing analysis: Empirical and Theoretical Perspectives* (pp.265-285). New York: Routledge.

Lawson, C. (2002). *Building the Fourth State: democratization and the rise of a free press in Mexico*. Berkeley: University of California Press, 381.

- Lewis, S. C., & Reese, S. D. (2009). What is the War on Terror? Framing through the eyes of journalists. *Journalism & Mass Communication Quarterly*, 86(1), 85-102.
- Lungaretti, C. (2009, June 30). Folha à direita da Veja [Folha to the right of Veja]. Observatório da Imprensa, 544. Retrieved from <http://www.observatoriodaimprensa.com.br/news/view/folha-a-direita-da-veja>.
- Messaris, P., & Abraham, L. (2003). The role of images in framing news stories. In S. D. Reese, O. H. Gandy, Jr., & A. E. Grant (Eds.), *Framing public life* (pp.215-226). Mahwah, NJ: Erlbaum.
- Oliveira, M. A. G. D. (2010). Sources of Brazil's counter-hegemony. *Revista Brasileira de Política Internacional [Brazilian Journal of International Politics]*, 53(2), 125-141.
- Paryzer, A. (2012, March 11). How digital softened Brazil's Iron Lady. Presentation given at SXSW in Austin, Texas. Retrieved from http://schedule.sxsw.com/2012/events/event_IAP9570.
- Patterson, T. E. (1993). *Out of order*. New York: Vintage.
- Phillips, T. (2010, Oct. 31). Dilma Rousseff wins Brazil's presidential election." *The Guardian*. Retrieved from <http://www.guardian.co.uk/world/2010/nov/01/dilma-rousseff-wins-brazil-president>.
- Porto, M. P. (2007). Trends in Brazilian election news coverage. Paper presented to the 57th Annual Conference of the International Communication Association (ICA), San Francisco. Publicitas. (2011). Retrieved from www.publicitas.com.
- Reese, S. D. (2003). Framing public life: A bridging model for media research. In S. D. Reese, O. H. Gandy, Jr., & A. E. Grant (Eds.), *Framing public life* (pp.7-31). Mahwah, NJ: Erlbaum.
- Reese, S. D. (2010). Finding frames in a web of culture: The case of the War on Terror. In P. D'Angelo & J. A. Kuypers (Eds.), *Doing news framing analysis: Empirical and Theoretical Perspectives* (pp.17-42). New York: Routledge.
- Riffe, D., Aust, C. F., & Lacy, S. R. (1993). The effectiveness of random, consecutive day and constructed week sampling in newspaper content analysis. *Journalism Quarterly*, 70, 133-139.
- Rojecki, A. (2005). Media discourse on globalization and terror. *Political Communication*, 22(1), 63-81.
- Sherrif, R. E. (2001). *Dreaming equality: Color, race, and racism in urban Brazil*. New Brunswick, NJ: Rutgers University Press.
- Shoemaker, P., & Reese, S. D. (1996). *Mediating the message: Theories of influences on mass media content* (2nd ed.). New York: Longman.
- Smith, M. P. (2008, Aug. 28). Reaping success in Brazil. Retrieved from <http://www.readership.org/blog2/2008/08/reaping-success-in-brazil.html>.
- Stam, R. (1997). *Tropical multiculturalism: A comparative history of race in Brazilian cinema & culture*. Durham, NC: Duke University Press.
- Tagg, J. (1988). *The burden of representation: Essays in photography and histories*. London: Macmillan.
- Tankard, J. W. (2001). The empirical approach to the study of media framing. In S. D. Reese, O. H. Gandy & A. E. Grant (Eds.), *Framing public life* (pp. 95–106). Mahwah, NJ: Lawrence Erlbaum.

Van Gorp, B. (2007). The constructionist approach to framing: Brining culture back in. *Journal of Communication*, 57(1), 60-78.

Vreese, C. H. de (2002). *Framing Europe. Television news and European integration*. Amsterdam: Aksant Academic Publishers.

Vreese, C. H. de (2005). News framing: Theory and typology. *Information Design Journal + Document Design*, 13(1), 48-59.

Ward, C. (2010, Dec. 13). Maclean's, 123(48/49), 88-89.

Tania Cantrell Rosas-Moreno (Ph.D., The University of Texas at Austin) is an assistant professor in Loyola University Maryland's Department of Communication. Her research interests include international communication, political communication, diversity issues and Brazil. She has published in top communication journals, including Journalism Studies, Journalism and Mass Communication Educator and Observatorio.



Vol. 3, No 1, Winter 2013. 39-60

Animation, Documentary or Interactive Gaming? Exploring Communicative Effects of Environmental Messaging Online

Astrid Gynnild and Paul C. Adams

This paper explores the news potential of visual genres such as animation and interactive gaming by examining the effectiveness of environmental messaging online. In a qualitative, cross-cultural and cross-disciplinary study, students majoring in journalism and petroleum engineering encountered an animation video, a documentary-style video and an interactive game-like approach. The study supports the idea that interactive gaming might be especially well suited for news dissemination in fields dominated by abstract predictions and much uncertainty. The study also indicates that accountable, non-biased facts and a somewhat humorous approach are important for young people to engage actively in environmental news issues.

Introduction

Over the past 25 years, environmental communication has been increasingly explored and investigated in countries such as Canada, the United States, United Kingdom and Scandinavian countries. Researchers, governments, environmental organizations, news media, and activists have undertaken multiple approaches to communicate risks of climate change, on a variety of platforms (Allan, Adam & Carter, 1999; Boyce and Lewis 2009; Corbett 2006; Hansen 2010; Friedman and Friedman 1988; Frome 1998; Keating 1992; Ward 2003; Ward 2008). A common goal has been to increase public awareness and motivate changes in attitudes and actions. The growing engagement is profoundly visible in social media (Robelia, Greenhow & Burton, 2012), in particular on YouTube, which is increasingly targeted for pro-environmental messages. On YouTube, more than 450,000 video posts are tagged "environmental videos" (as of September 17, 2012). Filtered by idealistic or non-profit environmental videos, there are more than 66,000 articulations of future effects of global warming, consumption, and non-renewable energy.

This ad-hoc communication on the world's largest video sharing website and the world's third most visited website not only supplements, but cross-references, the wealth of environmental news dissemination on other public sites, adding popular voices to those of journalists and environmental researchers.

However, even though a growing number of journalists, bloggers, social activists, and non-profit organizations put much effort into covering the green beat, there is a discrepancy between the prevalence of news and warnings about the environment, and flagging audience interest in the same issues. A number of studies indicate that the risks of global warming and fossil fuel dependency are uniquely difficult to communicate (Wilson 2000; Hansen 2000; Allan et al 2000; Sheppard 2005; Vervoort et al 2010). The findings are supported by a Swedish study where 14 environmental journalists were questioned about their coverage of the beat (Berglez, 2011).

The experienced communication difficulties are due both to the complexity of environmental issues, and to the many uncertainties related to long-term forecasts. According to Berglez' investigations, climate issues were to some extent considered nontransferable to internal media logic. Reporters found that abstractions and scientific predications about the environment were particularly hard to transform into media discourse. Within the existing news frames, they stretched their creative muscles in order to find ways to visualize abstract data, and to build in elements that the audience in some way could personally identify with. However, there was a dilemma, pointed out by Wilson (2000), in the misalignment between small-scale news frames and large-scale science foci: Whereas most people are less interested in climate change in general than in effects on their immediate surroundings, researchers perceive climate science to be better suited to large scale predictions.

Given the extant migration from news media to social media (Baresch et al 2011), including three billion daily views on YouTube (retrieved from Social Media Observatory, September 17, 2012, <http://www.socialmediaobservatory.com>), in particular young people might be characterized as sophisticated users of new technology and as vast consumers of visual imagery. Even before YouTube was invented, studies indicated that by the age of 18, young people have watched television for more than 25,000 hours and played on average 10,000 hours of video games (Bleed, 2005). Today's youth are very receptive to news alerts circulating in social media networks (Baresch et al 2011; Olsen and Elgesem 2011; Pew 2010). This fact explains how, for instance, some videos posted on YouTube go viral almost instantly. At the same time, recent reception studies indicate that people between 18 and 26 tend to be bored by mainstream media's news coverage (Hargreaves and Thomas, 2002; Meijer, 2007; Vaage 2011).

Over the last decade, much research has focused on the fact of declining readerships for established news media. However, less is known about why this is the case, and little is known about how changes in media impact on consumers' environmental attitudes and actions. In particular, does the nature of a communication platform carrying environmental messages influence young people's decision making in regard to climate risks? Several studies in disciplines such as geography have applied aggregate approaches to gain more knowledge about collective action and environmental attitudes. But the impact of online messaging on individuals is so far under-researched across disciplines.

Thus, this study systematically analyzes the challenges to communicating environmental risk, focusing on the individual rather than the collective level. We take as a point of departure that contemporary news consumers are active users of a host of different media platforms. The perspective is in alignment with McQuail et al.'s gratification theory from 1972, where a main hypothesis is that audiences actively negotiate with media messages, and that they relate to media as sources of influence among other sources. According to a study of link sharing on Facebook (Baresch et al 2011), close to half (49%) of the participants posted links during a three month period. Their study revealed that video social network sites (18%) were most frequently linked to. No wonder, probably, since 35 hours of new footage is uploaded every minute on YouTube alone. Every 60 days, more videos are uploaded to YouTube than the three major US television networks have produced during the last 60 years. These statistics do not, however, necessarily imply that either *consumers* or *producers* of digital media messages have developed advanced skills or expertise in *visual literacy*. Bleed (2005) defines visual literacy as “the ability to interpret, use, appreciate, and create images and video using both conventional and 21st century media in ways that advance thinking, decision-making, communication, and learning” (Bleed, 2005). After several decades of news production studies, a good deal is known about principles for visual storytelling in established media. But we believe that to communicate meaningfully and effectively with their targeted recipients, news professionals as well as citizen journalists would benefit from extending their awareness of how various visual and textual approaches might contribute to innovative and exciting visual storytelling.

How can data about environmental change and risk be collected and digitally conveyed in the most effective way?

Research questions

In light of the above aspects of online communication, this study seeks to contribute new insight regarding the effects of three different visual genres in a particularly challenging field of online messaging. Fossil fuel extraction and energy production issues were chosen due to the complexities and uncertainties associated with global environmental change scenarios, and due to the fact that there seems to be little alignment between the rapidly increasing volume of environmentally focused visual imagery online and relative lack of audience interest in the same topic.

After extensive searches for visual imagery online aligned with research literature, we found ourselves reflecting on several challenges:

RQ1: How can data about environmental change and risk be collected and digitally conveyed in the most effective way?

RQ2: How can various environmental scenarios be presented so as to influence people to pay attention, potentially also change attitudes and habits, and join constructively in collective action?

RQ3: Moreover, in the wilderness of environmental messages pervading social media and the Internet-do established principles of journalism such as accuracy, objectivity, multiple sources and a focus on human consequences of an issue still matter?

These were the questions that prompted this exploratory, cross-cultural and interdisciplinary study of online environmental communication.

Methodology

A main aim of our approach was to “understand, and explain, the meanings, beliefs and cultures that influence the feelings, attitudes and behaviors of individuals” (Rabiee, 2004). The aim is compatible with focus group research (Fern, 2001; Greenbaum 1997). Focus group methodology was chosen as the qualitative approach also based on their previous use to ascertain attitudes, knowledge, and norms relative to recycling (Green et al, 2002), and recommendations for evaluation of community interventions favoring sustainability (McKensie-Mohr, 2011, p. 44). Thus, three visual environmental representations were presented and discussed in six focus groups conducted at major universities in Texas and in Norway.

The focus groups were selected through a “purposive, although not necessarily representative sampling of a specific population, this group being ‘focused’ on a given topic” (Richardson and Rabiee, 2001). Due to the topic we wanted to investigate, we asked journalism students and petroleum engineering students to participate in the study. The idea was that these students are most likely going to be powerful stakeholders in natural resource management debates of the future. They are resourceful young people who are going to occupy very different professional positions, both nationally and sub-culturally, but are linked by shared ties to highly oil dependent economies, those of Texas and Norway. In total, responses from 32 undergraduate students were included in the study, half of them journalism majors and the other half petroleum engineering majors.

We started out the investigation with a pair of short videos downloaded from YouTube and an interactive web application from the website of an international non-profit organization. The three environmental representations took distinctly different approaches to combining visuals—including animation, icons, live video footage—with verbal cues in the form of “voice-over” narration, printed captions, and category labels.

Both video clips were made by GreenpeaceUK, and are quite typical examples of environmental videos when it comes to number of hits and viewer characteristics. The animated video “Go beyond oil” (retrieved September 17, 2012, from <http://www.youtube.com/watch?v=LqaXcY21D5g/>) is two minutes long, was added in 2010 and was viewed 4,371 times (as of September 17, 2012). So far the clip has obtained 56 likes, three dislikes, 28 favorites and 26 comments. According to YouTube’s own matrix the video was most popular among girls between 13 and 17 years of age, and among men and women ages 45-54.



The video clip "Go beyond oil" employs an animation technique in conjunction with a voice-over narration.



The documentary-style video "Stop deepwater drilling for oil in the Arctic" employs printed texts and sound rather than voice-overs.

The other clip was a documentary-style video “Stop deepwater drilling for oil in the Arctic” (retrieved September 17, 2012, from [http:// www.youtube.com/watch?v=uVZffYNauSs/](http://www.youtube.com/watch?v=uVZffYNauSs/)) and was also added in 2010. Length 1:36, number of views 4,929 (as of September 17, 2012), 27 likes, five dislikes, 17 comments and 13 favorites. This video was most popular among men ages 35-64.

The interactive web application included in the study is called the “Ecological Footprint Calculator” (retrieved September 17, 2012, from <http://www.footprintnetwork.org/en/index.php/GFN/page/calculators/>), which is one of several ecological footprints available online. In this game-like application hosted on the website of the Global Footprint Network, the player’s resource consumption is calculated interactively and expressed in terms of the number of planets that would be needed if everyone enjoyed his or her level of consumption. The Ecological Footprint is based on a complex data-driven metric based on scientific data from 241 countries and regions.



In the footprint calculator, a user-created avatar walks on the sidewalk. The calculator displays every user choice in the form of landscape elements in a simulated three-dimensional space.



In the 100 percent complete version, the player’s total resource consumption is displayed and calculated interactively.

The focus groups were a mix of males and females, where the journalism focus groups were dominantly female and the petroleum equivalents were dominantly male. Group size varied between five to seven participants. The students did not get any information beforehand, either about the video clips or the footprint calculator, except that all presentations dealt with questions of climate change, energy sources and consumption. The “questioning route” was kept consistent in each focus group for purposes of comparison, and evolved from general to specific issues and from positive to negative frames (Krueger and Casey 2000).

Even though qualitative data analysis is more suitable for identifying attitudes and meanings than searching for objective “truths” as is often the case in quantitative analyses, it is important to minimize potential bias. Thus, the data was analyzed according to the steps of framework analysis, as outlined by Krueger (1994) and Ritchie and Spencer (1994).

The five key stages of framework analysis include familiarization (listening to tapes, and reading transcripts), identifying a thematic framework (writing memos about ideas and concepts and beginning to develop categories), indexing (sifting the data, sorting out quotes, comparing), charting (lifting out and rearranging quotes) and the final stage, mapping and interpretation. One of the advantages of framework analysis is its flexibility in handling evolving patterns in an exploratory approach such as focus group interviews. In parallel with providing a necessary framework of concepts during the initial indexing and charting stages of the data, the technique is open enough to incorporate sudden changes or unexpected findings so that the framework model can be adjusted during the analytic process (Krueger, 1994; Ritchie & Spencer, 1994; Rabiee, 2004; Dixon-Woods, 2011).

Results

Information Overload And Mental Fatigue

The visual imagery presented to the participants evoked both emotional and cognitive reactions. The capacity of visual imagery to elicit emotions has been highlighted in numerous studies, whereas other studies have pointed out the effectiveness of visual imagery in influencing sustainable change of behavior. Among others, Sheppard emphasizes how visual triggers to behavioral responses might be explained by a close interrelationship between cognition, affect and behavior (2005).

Thus, in this section we provide a conceptual overview of the affective and cognitive themes that emerged from the group conversations. We will go from the general to the more specific. Next, these themes are brought into alignment with gratifications theory, as outlined by McQuail et al (1972). The section concludes with a grounded, assertive list of how the video-clips, and the footprint calculator in particular, could have been improved to be more effective in raising awareness, and potentially also change attitudes and environmental behavior among a broader spectrum of online users. In the analysis, data is compared cross-culturally and cross-disciplinarily and an overview is provided

with quotes illustrating the conceptual abstractions of the analysis.

It emerged from the data that a dominant *cognitive state* among students, across countries and disciplines, is that of *information overload*. The overwhelming amount of environmental messaging in both online and offline media contributes to *mental fatigue*. This exhaustion is verbally expressed through statements of boredom and being tired of hearing about the subject. After watching the videos students repeatedly report that they “have heard it all before” and “seen it all before,” there is “nothing new,” “it is all routine,” and “I’m just not interested in the topic.”

To protect themselves from further mental fatigue, release from the state of information overload is sought through a *set of deflection strategies* from which each individual might apply one or more strategies at a time. Typically, young people might choose to *overlook* environmental issues in the media, either by *not watching*, *not buying* newspapers, *not searching* for environmental information and *not embedding or linking*, in case they do access some of it. News and information they do not like, or do not wish to become aware of, is simply blocked out so that it appears not to exist.

Yet another aspect of the deflection strategy set is *rationalization*, which involves ways of sorting out issues or aspects that can not be proved, statements that in some way or other contain aspects of uncertainty, for instance about global warming or consumption. By means of probability calculus, rationalization protects the individual from having to increase his or her awareness or change his or her attitudes. As one of the students puts it (Four types of subjects are NE, NJ, AE, and AJ):

I don't think it helps much. I'm getting pretty tired of environmental debates. I don't feel that they undertake the appropriate measuring that I would insist is needed, and I don't believe that [environmental debates] are the solution. I believe that the Earth fixes a lot of this stuff itself...In a geological context it goes in waves no matter what, for millions of years. What we are doing in a time span of fifty years is only a drop in the ocean. It's nothing, in that perspective (NE).

However, behind the expressions of information overwhelm and mental fatigue, feelings of *helplessness* and *powerlessness* associated with environmental changes and risks come to surface. These feelings are remarkably more articulated among journalism students than among petroleum students:

Lots of info, lots to do and lots of demands...We're supposed to do so very much...I believe you think a little bit about it, but it is only a mouse piss in the ocean. We are recycling a tin can, but what about the politicians and the timers on all the public buildings? I can buy this 10 w lightbulb, but what if the lights in the whole building are on all night (NJ)?

A key explanation to the general disinterest in environmental scenarios appears to be that climate change and related issues have been discursively associated with societal structures *outside of individual control or influence*. Overall, students are disappointed with politicians and other people in power, who are viewed as primarily paying lip-service to environmental concerns rather than finding practical solutions. Alongside this helplessness runs a thread of perplexity about individual versus collective solutions. This finding is in alignment with other studies of environmental messaging (Tickel 2002; Sheppard 2004).

The data indicates that Norwegian students, across disciplines, are more concerned about *lack of collective action* than the American students, since their explanations about “how things are done” emphasized collective, governmental solutions while Americans are socialized to be more suspicious of such solutions and place their faith in ad-hoc, individual responses. The general governmental reluctance to take action on behalf of the population serves as an explanation, at least in Norway, for individual disinterest in the topic. In the United States, the inability of individuals to make a difference may cause it to be understood as an area where things simply cannot be improved.

You can't do much about it anyway. Either you are a super-environmental freak, or you are not into it at all.

The misalignment between governmental visions and leadership actions leaves young people confused and sensing themselves to be environmentally helpless: According to Norwegian journalism students “It gets tedious because I don't know where to start... (NJ)”, “You can't do much about it anyway. Either you are a super-environmental freak, or you are not into it at all (NJ)”, “Part of the problem is that people don't know how to take action, even though they know they should (NJ).”

Layers of Untapped Curiosity

Beneath the layers of information overload, mental fatigue, and deflection strategies, however, we assert that there lies a latent layer of untapped curiosity. Our study supports the idea that *interactive gaming* might have a large potential for engaging online audiences in learning experiences (Bogost et al, 2010). It appears that interactive gaming can be especially well-suited for *participatory scenario communication*, that is, “descriptions of possible futures that reflect different perspectives on past, present and future developments “ (Vervoort et al, 2010).

Among journalism students there was virtual unanimity that the ecological footprint calculator, which in this study provides an example of what Vervoort et al (2010) would call a serious game, would potentially be the most effective way of raising awareness and motivating people to change environmental attitudes and behavior. This finding is in alignment with Sheppard (2005), who demonstrated how landscape visualization may help communicate climate change in a compelling manner due to its capacity for presenting models, and thereby making future scenarios real to the audience.

Offensive Videos Close Communication

Before delving into the experience with the rapidly evolving genre of interactive gaming, we will look more closely at the reception of the animation and the documentary-style clip retrieved from YouTube. Why did they fail in communicating their environmental message? Why didn't they go viral?

When initially presented with the three selected visuals, students did not know anything about the background of the imagery, except on what sites they were posted and the fact that the two video clips never took off from YouTube. In this way, the conversations and reflections about the footage material were kept explorative and as unbiased as possible. Through open-ended questions, participants were invited to discuss whether they thought the visuals might be useful in raising people's awareness of environmental issues and if they might change environmental attitudes and behavior. We also asked which of the visuals the participants liked the best and why, and what they learned from the imagery, if anything.



Petroleum students claimed that they got excited about the icebergs for purely professional, engineering reasons.

It appeared that even though participants did not have a well-developed vocabulary of visual literacy, their intuitive sense of each visuals' persuasive appeal coincided across national and disciplinary cultures and is supportive of earlier studies of social network sites (Boyd and Ellison 2007; Wallsten 2010).

The documentary-style video, "Stop deepwater drilling for oil in the Arctic," employs a documentary cinema technique with moving camera footage overlaid by print that describes the risks of deepwater drilling in the Arctic. The video cuts together actual

footage taken from helicopters in the Arctic with still photography, and employs printed rather than spoken text. This approach requires viewers to split their attention between reading and looking at the images. It emerged that *the lack of consistency between text and visuals* in this clip was *cognitively disturbing*. Since there was no audio narrative, only strips of text superimposed on the images, participants got occupied with reading the text and missed part of the visuals in the clip.

Moreover, the *repetition of formulations*, a common grip in advertising, did not contribute to carry the message. On the contrary, the textual presentation was associated with something “unserious and cheap” and “unprofessional”, as if it were “cut and pasted in a bedroom.” Argumentatively, the clip was stamped “propaganda for insiders,” both by Norwegian and American participants due to a lack of “objective information.” In addition, the credibility of the clip was considerably reduced by the perceived *one-sidedness* of the message. Emotionally and cognitively, the video’s focus on general, global effects, rather than focusing on how the drilling would affect an individual “you”, made it utterly uninteresting, according to most journalism students.

Petroleum engineering students, by contrast, were stirred up by the incorporated glimpse of a polar bear on the arctic ice. One participant exclaimed: “There is always a polar bear showing up in such videos, always (NE)!” Another participant said they showed a polar bear “just to make you feel bad (AE).” At the same time, the glimpse was approached analytically. Rational arguments were that the animal footage was a cliché, an unnecessary element. The polar bear reduced the seriousness and believability of the clip. In short, petroleum students felt offended by the glimpse, rather than empathetic with the bear. Emotionally, the sight of the bear provoked a defensive state of mind. The glimpse clearly contributed to the negative reception of the clip.



The graphics and the vivid use of colors contributed to making the animated video fun to watch.

The phenomenon might be explained by visual media's unique capacity to elicit emotions, as they engage both the right and the left hemisphere of the brain at the same time. A video speaks in tandem to the logical and analytical parts of the brain, and to the emotional, intuitive and empathetic parts (Berk, 2009). Thus, even though respondents are trying to keep affective aspects at a distance, emotions tend to influence logic and thinking; or as Berk observed, a "student who is offended by a video clip will withdraw, turn off and harbor anger (Berk 2009, p. 7)."

Another visual element that stirred emotions and triggered discussion among petroleum students was the appearance of an iceberg followed by the text: "Welcome to the Iceberg Alley. As the name suggests, icebergs are the region's main feature. Here, small icebergs have to be towed away to avoid collisions with oil rigs. For larger icebergs, the rigs have to be moved, and quickly" (retrieved September 17, 2012, from <http://www.youtube.com/watch?v=uVZffYNauSs/>).

On the one hand, the iceberg glimpses were considered surprising because the issue of moving them was considered new. On the other hand, several petroleum students in Norway and the U.S. explained that they got excited about the icebergs, not out of any kind of environmental sympathies, but for purely professional, engineering reasons: They claimed to be intrigued more than frightened by the dangers of an iceberg potentially colliding with an oil platform, presumably because it was considered an interesting technical challenge.

In sum, the documentary-style clip about drilling in the Arctic fell short in persuasive appeal due to the competitive relationship between text and imagery, the repetitive verbal "bombardment" on top of the image, the general one-sidedness of the message, and the "unnecessary" application of emotionally laden symbols such as the polar bear and also a non-sympathetic glimpse of George Bush. Altogether these aspects made students, particularly petroleum engineering students, feel overloaded and offended, and they quickly turned off.

"Who Believes in Windmills and Sunshine?"

The second video, "Go beyond oil," employs an animation technique in conjunction with a voice-over narration, arguing that dependence on oil causes pollution and climate change. The animation technique resembles paper cut-outs and minimizes visual detail while emphasizing color and movement.

The animation connected more with most recipients both cognitively and emotionally than did the documentary-style video. Cognitively, it was considered good at holding attention. A key argument was *originality*: The animation technique in itself made the clip stand out from the crowd; the imagery was "different from what we normally see." More specifically, the graphics, design, and the vivid use of colors contributed to making it *fun* to watch. Several students emphasized that they were having a good time during

the two-minute presentation. The clip triggered positive emotions, especially among journalism students. It was associated with terms like “thought provoking,” “real life consequences,” and “more eye-catching.” It also scored positive points because of its solution-oriented approach, pointing out clean energy and windmills as future sources of energy. The animated story’s call for action was viewed positively.

However, cognitively, the animation was under particular scrutiny by the petroleum students. It was repeatedly emphasized that the students themselves, not Greenpeace, were experts of the field. In other words, a *lacking credibility of sources* counts negatively. Greenpeace’s estimate, claiming that temperatures are likely to rise by six degrees, was intensively disputed. Thus, the *believability* of the animated clip as a whole was considered to be low as well:

Six degrees is a very large estimate. Most say between two and four. Six is at the very outer edge of how much it can rise. Six would be totally devastating to us. This [information] is not directed towards students who have some idea of what’s going on. It’s aimed at middle school kids or ordinary people who find it exciting to learn something new that they know nothing about. But when I am sitting through this again it becomes a bit boring (laughter)...honestly (NE).

Emotionally, petroleum students from both countries were annoyed by the “propaganda” in the videos, which was perceived as an attack on the oil industry. They perceived the underlying message to be part of a blame-game where there was a “we” and a “they”, and where the oil industry was the number one villain. In the videos, it was pointed out, oil was associated with something “dirty” and “evil.”

In general, at the moment when feelings of attack or blame are triggered, viewers of a video are in reality turned off. At an argumentative level, such emotions might be covered by irony or sarcastic comments, such as who would believe in wind turbines and sunshine changing the world, when “we can not have wind turbines because the sea birds might crash into them, and they look ugly and they make noise.”

The defenseless animals in the documentary-style video, a polar bird and an oil-polluted seabird, were assessed a sort of *affective cliché triggers* whose foremost purpose was to provoke feelings of guilt and shame among viewers. The *guilt and shame complex* was considered yet another issue that made respondents shut out the environmental warnings, although most participants thought the animation communicated better than the documentary.

The Quest for Learning Through Exploration

Although all three visuals employ a range of techniques, the interactive features of the ecological footprint calculator make it distinctively different from the video clips. The footprint calculator queries users for information about their lifestyles, then uses this information to update an animated image of the user and his or her home, shopping

places, garbage, vehicles, and so on. The calculator displays every user choice in the form of landscape elements in a simulated three-dimensional space, where a user-created avatar walks on a sidewalk beside a grocery store, garbage cans, a dwelling and a vehicle—all of which vary in size and details depending on user-driven choices. The calculator eventually presents a pop-up window with several images of the planet, indicating how many earths would be required if every person on the planet consumed at the same level as the user.

The images in the footprint calculator are similar to those of a popular software product, “The Sims,” a strategic life-simulation computer game. A basic difference, however, is that the data of the ecological footprint calculator stem from a data-driven metric that provides comparable datasets collected once a year from 241 countries, territories and regions. The scientific data are used to quantify the relationship between human affairs and the planet’s finite resources. The calculator from the Footprint Network has been accessible online since 2003, and attracts more than a million visitors a year (personal communication). However, no exact statistics of hits are publicly available.

During the calculator trial runs, the focus group participants became notably curious and energized. They all agreed that they were drawn into the game and that interactivity was fun. The entertainment value was of great importance. Journalism students in particular were enthusiastic because the calculator related to them as individuals, it was concrete, and they could influence the outcome of their footprint by reducing their consumption of food and goods in the later part of the game. Spontaneous utterances were heard on the recording as students clicked through the footprint calculator, and were reflected in references to “cool virtual effects,” a “personal” approach, and the idea that it “speaks directly to you.”

The *cognitive, exploratory aspect* of the game approach was highly valued: “It provoked my thoughts (AE),” “it made me curious (AE),” “I got to know what I can do more or less of (AJ),” “the clicking makes you alert (NE).” One of the students expressed what many others conveyed indirectly: “I don’t really like to be told (AE).”

In the conversation following the calculator game, it once more appeared that journalism students were more positive and open towards the game per se than were the petroleum students. The latter found the idea of gaming intriguing and fun, but were highly suspicious of the facts and numbers that came up. For instance, where did it come from that an equivalent of 2-1/2 Earths (Norwegians) and five Earths (Americans) were needed to keep up their daily consumption?

A common complaint was that the calculator actually did not let them examine the way they wanted to live, but only their short-term situation as students. Inconsistencies and lack of more alternatives were pointed out as weaknesses of the game. If there had been more alternatives or categories to choose from during the play, so as to get more accurate profiles, it was felt that the calculator would have been even more relevant.

However, several of the groups chose not to use all of the details that were built into the calculator and instead selected the option that employs the most general information. These groups subsequently complained about the calculator's lack of precision, indicating that if more precision were built-in, it might not be used. The educational and learning potential of the game approach was stressed by several subjects: "[people] learn all of their wasteful habits (AJ)," "...this could help people change several of their ways of life and they could change...and I think it is pretty useful (AJ)," "I learned that I am not as environmentally concerned as I thought I was (NJ)."

However, only one out of 32 students said she would change her behavior after taking the game test. Interestingly, she was also the only person who said she was already tuned into environmental issues.

There are evidently a host of communicative challenges to be resolved on the path from raising awareness to prompting action and actually changing behavior through visual imagery online. Comprehensive studies of network sites indicate that many participants on large social network sites such as YouTube and Facebook are not really interested in new knowledge or challenging their opinions or attitudes. Rather, they are predominantly searching for and communicating with people who hold similar worldviews, and people they are befriending tend to be a part of their extended social network (Boyd and Ellison, 2007). But to the extent that the new generation of social networkers might be more open minded, in what ways could the environmental messaging under the lens be improved to have a somewhat better chance to influence people who are not already "members of the tribe"?

Recipient Suggestions on How to Get Viral

Whereas the students in the focus groups were very clear in their attitudes towards environmental issues in the media, they were just as clear as to what would be needed for videos or other visuals to reach out to larger online audiences.

The key solution is *recommendation*, which implies that users are supplied with links from trustworthy people in their social networks. The linkers are often bloggers with large audiences, friends or significant others who serve as observation posts, informal news anchors in the vast ocean of online messaging. These linkers sort and select what they like in their fields, and make this information easily available to others. The wish for social filtering was identified also by Baresch et al (2011).

Easy *accessibility* of the visuals through linking and embedding is the practical side of recommendation. Linking and embedding across platforms helps visibility. In particular, students were concerned that important environmental messaging would need to be picked up by TV stations and used either as news or as ads; "[the visuals] should be right there, so that you wouldn't have to search for them (NE)." As long as video clips exist for instance on YouTube alone, they are perceived almost as raw data that needs to be picked up and contextualized on other sites to get any impact.

The respondents' informal analysis of recommendation as the clue to make a visual go viral, is also supported by Wallsten (2010). In a study of online viewership and media campaigns during the U.S. election in 2008, he found that "bloggers and members of the Obama campaign played crucial roles in convincing people to watch the video [‘Yes we can’].” Bloggers and campaign members appeared to “occupy a unique and influential position in determining whether an online political video goes viral” (Wallsten 2010, p. 174), while journalists had little influence on the level of online discussions. The term “viral video” refers to *clips that rapidly increase their popularity online through processes of linking and embedding* – via email, text messaging, blogs and other means. Viral videos are increasingly “results of people sharing links with each other,” because they find the clips entertaining (Berk 2007; Miller 2011).

Moreover, to actually be picked up and recommended by authoritative linkers and embedders, the visual content would need to be personalized in an appealing way (Berk, 2007; Wallsten, 2010; Miller, 2011; Huang, 2009). Students agreed that appealing videos are entertaining videos. Such clips are fun to watch, they make you get into a good mood, and as pointed out by some, usually learning gets easier when it happens in an entertaining way: “Of course they can make whatever they want, but it might be that people won’t bother watching documentaries either, so then they should make it with humor and music and stuff that people want to watch (NE).”

Visuals with humor are attractive, and videos would need to contain some empathetic elements that can help build a relation between the message and the consumer. As pointed out by Berk (2007), humor helps taking the edge off controversial issues that otherwise might make people close off. By applying humor, respondents are smoothly and gently being detached from emotions that might otherwise have closed the door to any new learning.

The teaching and learning element was repeatedly emphasized during the group reflections; it became evident that the respondents are always looking for something new to learn, at the same time as they despise “moralizing,” “one-sidedness” and “propaganda.” Thus, pursuing a “blame game” like in the drilling-in-the-arctic-sea-clip, turns students off. The engineering students in particular, claimed expertise arguments for their criticism. The need for problem-solving challenges was frequently pointed out. As evolving experts in the energy field, they are annoyed by “all the people who don’t know what they are talking about (NE).” One of the silliest things in the media, in their view, is environmental news without a sufficient body of facts. An American petroleum student says, “Yeah, I think for me the video, like, maybe if they had more statistics and facts in it, it would be more effective (AE).”

Yet another dimension that creators of environmental messaging should think about in order to get through in the virtual sphere, is that of target group (Miller, 2011). A Norwegian petroleum student said:

They have to agree with themselves who they want to reach out to.
It’s a bit like lobster-and-canary-type of things. [The clips] were a

little scientific, a little professional, a bit militant against business, a little funny, a little hopeful, all in a big sauce. If they want to get more clicks, they [the videos] must be more funny and have some action. If they want to provide a sense of feeling for the environment among those who know the technology, they should be much more academic and have a discussion about these issues, good and bad aspects and solutions to what they see as the problem....Do not try to make science in two minutes (NP).

The Untapped Potential of Gaming

The videos in this study were chosen to reflect different mixes of positive and negative appeals, different types of visualization, and different uses of sound. The ecological footprint calculator employs animation and therefore is also strongly visual. While this is only a small sample of possible appeals, it included sufficient variation to open up a discussion of pro-environment communications in general and to assess the attitudes of the focus group members relative to such communication and to members of the other focus groups.

In some ways, the chosen environmental messages may not be directly comparable in their potential for raising awareness among people who are not genuinely interested to begin with. The Global Footprint Network has collaborative partners in more than 20 countries. The calculator has been used for educational purposes since 2003, and there is a growing numbers of users.

According to McQuail et al (1972) uses and gratifications theory, people choose media to meet their individual needs. More specifically, they use media to fulfill specific gratifications. McQuail et al built the theory on former uses and gratifications approaches by media researchers, and identified four reasons why people negotiate actively with media messages: (a) *Surveillance* (people seek information about things that might affect them or help them accomplish something), (b) *diversion* (emotional release), (c) *personal identity* (self-understanding and value reinforcement), and (d) *personal relationships* (media is used as a social means of information in conversations).

The four reasons for negotiating actively with media messages speak directly to the findings in our investigation. Whereas the footprint calculator scores high on at least three of the four criteria in the uses and gratifications theory, both the animation and the documentary score low on at least three of the same criteria. Why does the game score high? The most striking feature is that of *diversion*, or emotional release. Respondents think it is fun to play, and they get curious about consumption habits they weren't aware of. Moreover, since they all experience the interactive game differently, they get something to talk about; the game serves as a social utility of information, which potentially *strengthens their personal relationships*. The calculator might also contribute positively to their self-understanding, and thus support their values and personal identities. To some extent it appeared that the calculator served surveillance purposes, too, it provided new information about things that might affect people.

By contrast, the documentary did not support surveillance needs, personal identity, or personal relationships. The animation was fun and original in its design and thus provided some emotional release, but scored low on the other criteria. This being said, it is likely that documentaries and animations with a different content would have been more appealing to respondents. Thus, the findings in this study are in alignment both with McQuail et al.'s uses and gratifications theory from 1972, and with Dan Gillmor's *mediactive* stance from 2010. Gillmor claims that the best way to address the vast information overload of our time is to take an active approach to media. People should be *active users* of the media to better get a grip on when the news we get is accountable and when it is not.

The positive responses from Norwegian and American students suggest that applying a *gaming* approach to complex societal issues might have a great, untapped potential in both social media and the news media, even though the design and experienced fit of the current calculator had some shortcomings.

The term "online games" embraces games in all its forms, from casual games to "serious games," which are both oriented towards special issues, and newsgames (Bogost et al, 2010), which actually comprise informative, entertaining and educational approaches to new learning. The footprint calculator qualifies for the term newsgame, as it provides users the opportunity to play with complex sets of scientific data on a non-profit news site.

Whereas play has been considered almost antithetical to knowledge acquisition during the last century, Thomas and Brown (2011), claim that play and games are probably the most under-estimated aspect of productive learning cultures of our time.

Both journalists and researchers are increasingly exploring the potential of newsgames in online media (see for instance Bogost et al 2010; Gee 2007). However, building a sustainable game with relevant categories and alternative outcomes still presents some time constraints that make the idea challenging to deal with in low-cost newsrooms.

Conclusion

Students from two of the most important oil producing regions in the world, Norway and Texas, appeared to be visually literate, critical representatives of tomorrow's decision-makers in two crucial fields of any sustainable democracy. But in general, they are overloaded by environmental messaging online. In particular, they are overloaded by what they conceive as propaganda, suspicious of information sources, wary of emotional appeals, and unsure how to change their lives to respond to such appeals in any case. However, the students are clearly solution-oriented, and in reality, they want to contribute not only to raising awareness about environmental issues in society, but also to finding new solutions.

Thus, this study suggests that newsgames might be especially well suited for exploring complex individual and collective challenges such as global consumption. A game can

help players to experience the issue both by being a part of it and by maintaining agency in some outcome. While playing is fun by itself, the high energies and good moods that come out of playing make the people involved more inclined to open up for new learning.

Despite the indications that interactive web applications communicate environmental impacts more effectively than videos, it was also clear that established principles of good journalism such as thoroughness, accuracy, fairness, independence and transparency remain important in online contexts. Thus, environmental messages that build on a variety of sources and are relevant, appropriate and focused on the individual's choices in everyday life are more likely to impact awareness, attitudes and actions than one-sided, assertive messages that might evoke feelings of guilt or shame.

In conclusion, we found that young resourceful people are more open to new learning and to changing their attitudes when environmental messages include a combination of accountable facts, active and engaged participation, and a somewhat humorous approach. The seriousness of the topic of communication does not negate the communicational utility of fun.

References

- Allan, S., Adam, B. and Carter, C. (2000). Introduction: The media politics of environmental risk. In *Environmental risks and the media*, ed. S. Allan, B. Adam and C. Carter, 1-26. New York and London: Routledge.
- Baresch, B. et al. (2011). Friends who chose your news: Analysis of contents links on Facebook. Paper presented at the 12th Symposium of Online Journalism, University of Texas, Austin.
- Berk, R.A. (2009). Multimedia teaching with video clips: TV, movies, YouTube, and MTV in the classroom. *International Journal of Technology in Teaching and Learning*, 5(1), 1-21.
- Berglez, P. (2011). Inside, outside, and beyond media logic: journalistic creativity in climate reporting, *Media, Culture & Society*, 33(3), 449-465.
- Bogost, I. et al. (2010). *Newsgames: Journalism at play*. Cambridge, MA: The MIT Press
- Boyce, T. and Lewis, J. (eds.) (2009). *Climate change and the media*. New York: Peter Lang.
- Burgess, J. and Green, J. (2009). *YouTube: Online video and participatory*. Cambridge: Polity Press.
- Boyd, D.M. and Ellison, N.B. (2007). Social network sites: definition, history, and scholarship, *Journal of Computer-Mediated Communication*, 13(1), 210-230.
- Corbett, J. B. (2006) *Communicating nature: How we create and understand environmental messages*. Washington: Island Press.
- Dixon-Woods, M. (2011). Using framework-based synthesis for conducting reviews of qualitative studies. *BMC Medicine*, 01, 9-39.
- Fern, E (2001). *Advanced focus group research*. Thousand Oaks: Sage.
- Friedman, S. and Friedman, K. (1988). *Reporting on the environment: A handbook for journalists*. Bethlehem, PA: Department of Journalism and Communication, Lehigh University.

Frome, M. (1998) *Green Ink: An introduction to environmental journalism*. Salt Lake City: University of Utah Press.

Gee, J. P. (2007). *What video games have to teach us about learning and literacy*. New York: PalgraveMacmillan.

Global Footprint Network (2012, September). Ecological Footprint Calculator (retrieved September 17, 2012 from <http://www.footprintnetwork.org/en/index.php/GFN/page/calculators/>

[Green, L., Fullilove, M., Evans, D. & Shepard, P. \(2002\). "Hey, mom, thanks!": Use of focus groups in the development of place-specific materials for a community environmental campaign. *Environmental Health Perspectives*, 110, 265-269.](#)

Greenbaum, T.L. (1998). *The handbook for focus group research*. Thousand Oaks: Sage

GreenpeaceUK (2010). Go beyond oil. *YouTube* (retrieved September 17, 2012 from <http://www.youtube.com/watch?v=LqaXcY21D5g/>

[GreenpeaceUK \(2010\). Stop deepwater drilling for oil in the Arctic. *YouTube* \(retrieved September 17, 2012 from <http://www.youtube.com/watch?v=uVZffYNauSs/>\)](#)

Hansen, A. (2000). Claims-making and framing in British newspaper coverage of the 'Brent Spar' controversy. In *Environmental risks and the media*, ed. S. Allan, B. Adam and C. Carter, 55-72. London and New York: Routledge

Hansen, A. (2010). *Environment, media and communication*. London and New York: Routledge.

Hargreaves, I. and Thomas, J. (2002). *New news, old news; an ITC and BSC research publication*. London: Broadcasting Standards Commission/Independent Television Commission.

Huang, E. (2009). The causes of youths' low news consumption and strategies for making youths happy news consumers. *Convergence*, 15(1),105-122.

Keating, M. (1992). *Covering the Environment: A handbook on environmental journalism*. Ottawa: National Roundtable on Environment and Economy.

Krueger, R. A. and Casey, M.A. (2000). *Focus groups: A practical guide for applied research* 3rd Edition. Thousand Oaks: Sage Publications.

Miller, M. (2011). *YouTube for business*. Indianapolis: Que Publishing.

McQuail, D., Blumler, J. G., & Brown, J. (1972). The television audience: A revised perspective. In D. McQuail (Ed.), *Sociology of Mass Communication*, 135-165. Middlesex: Penguin.

Mc-Kenzie-Mohr, D. (2011). *Fostering sustainable behavior: An introduction to community-based social marketing*. Gabriola Island, BC, Canada: New Society Publishers.

Olsen, L. E and Elgesem, D. (2011): Ungdoms forhold til nyheter – en studie basert på mediedagbok. Paper presented at Nordmedia11, August 12, Akureyri, Iceland.

Pew Research Center for Excellence in journalism 2010. The state of the news media. An annual report on American news media (retrieved September 17, 2012, from <http://www.stateofthemedias.org/2010>)

Rabiee, F. (2004). Focus-group interview and data analysis. *Proceedings of the Nutrition Society* 63, 655-660.

Richardson and Rabiee, F. (2001). A question of access – an exploration of the factors influencing the health of young males aged 15-19 living in Corby and their use of health care services. *Health Education Journal* 60, 3-6.

Ritchie and Spencer (1994). Qualitative data analysis for applied policy research. In A. Bryman and R.G. Burgess eds. *Analysing Qualitative Data*, 173-194. London: Routledge.

Robelia, B. A. Greenhow, C. & Burton, L. (2012). Environmental learning in online social networks: Adopting environmentally responsible behaviors. *Environmental Education Research* 17, 553-575.

Sheppard, S R. J. (2005). Landscape visualization and climate change: the potential for influencing perceptions and behavior. *Environmental Science and Policy* 8, 637-654.

Vorvoort, J. M. et al. 2010. Stepping into futures: Exploring the potential of interactive media for participatory scenarios on social-ecological systems. *Futures* 42, 604-616.

Vaage, O.F. (2011). Norsk mediebarometer 2010. Oslo: Statistisk Sentralbyrå.

Wallsten, K. (2010). "Yes we can": How online viewership, blog discussion, campaign statements, and mainstream media coverage produced a viral video phenomenon. *Journal of Information Technology & Politics*, 7(2), 163-181.

Wilson, K. M. (2000). Communicating climate change through the media: Predictions, politics and perceptions of risk. In *Environmental risks and the media*, eds. S. Allan, B. Adam and C. Carter, 201-217. New York and London: Routledge.

Ward, B. (2003). *Reporting on climate change: Understanding the science (3rd. ed.)*. Washington: Environmental Law Institute.

Ward, B. (2008). *Communicating on climate change: An essential resource for journalists, scientists, and educators*. Narragansett, RI: Metcalf Institute for Marine and Environmental Reporting, University of Rhode Island Graduate School of Oceanography.

Astrid Gynnild is an associate professor at the IMKS, University of Stavanger, Norway, and an associate professor II at the Department of Information Science and Media Studies at the University of Bergen, Norway. A former reporter, editor and newsroom developer, Gynnild received her Ph.D. from the University of Bergen (2006) with a grounded theory about productive aspects of journalistic work processes, "Creative cycling of news professionals." From 2009-2012 she was a post-doctoral research associate at the same university, specializing in digital news innovation. Her current research projects are focused on the innovative dynamics of online journalism and new technology, including visual journalism, computational journalism and new cultures of learning. Gynnild is the author of several books about journalism, and the author of a number of internationally published articles and book chapters. She is also the co-editor of Grounded Theory: The Philosophy, Method, and work of Barney Glaser (BrownWalker Press 2011). She is a fellow of the Grounded Theory Institute and the editor of the Grounded Theory Review, and chair of the Journalism Division at Nordmedia2013. In the academic year of 2011-2012 she was a visiting research scholar at the University of California at Berkeley.

Paul C. Adams is an Associate Professor in the Department of Geography and the Environment at the University of Texas at Austin. He holds a Ph.D. from the University of Wisconsin-Madison (1993) and has taught previously at Virginia Tech, SUNY-Albany, and Texas A&M University. Over the past decade he has held visiting research and teaching fellowships at McGill University and the University of Montreal (Canada) and the University of Bergen (Norway). He is the founder and current Chair of the Communication Geography Specialty Group of the Association of American Geographers. He is the author of three books, The Boundless Self (Syracuse University Press, 2005), Atlantic Reverberations (Ashgate, 2007) and Geographies of Media and Communication (Wiley-Blackwell, 2009) and is co-editor of Textures of Place (University of Minnesota Press, 2001). His articles have appeared in the Annals of the Association of American Geographers, Progress in

Human Geography, Political Geography, and elsewhere, and he has edited special issues of the Geographical Review (1997), Ethics, Place and Environment (2007), and Aether (2008).



Vol. 3, No 1, Winter 2013. 61-75

Through the Lens: Visual Framing of the Japan Tsunami in U.S., British, and Chinese Online Media

Rosellen Downey, Erika Johnson, and Bailey Brewer

This study analyzed the visual framing of the March 2011 Japan tsunami in Chinese, British, and U.S. online media, using a census sample (N = 242). It examined subject roles, nationality of subjects, presence and number of human subjects in relation to nation of coverage and nation being covered through chi-square analysis. Geographic proximity determined coverage as China's Xinhua site provided the largest number of photos of the disaster during the initial three days of the disaster's onset. This study contributes to a general lack of visual framing research, as proximity may have an effect on audience interpretation.

Introduction

Journalists must consider how visuals can play a role in shaping events for those affected directly by tragedy and the general public, and how shaping events can impact public policy, restoration, and even history. This becomes especially imperative when covering natural disasters. Furthermore, international coverage can affect framing due to elements of politics and economics, especially with regards to relations between countries. The present study focuses on geographic proximity and how certain nations provide news coverage and facilitate issue interpretation.

Visual framing may have a great impact on the public's perception of natural disasters and government response to times of domestic or global crisis.

Public understanding and interpretation of an event is also of importance with regards to this study. Jackson's study illustrates why studying the interpretation of natural disasters is important (2011). For example, Jackson notes that visual storytelling interprets impact and meaning of natural disasters for victims. However, Jackson also emphasizes that visuals can frame events for the wider public, describing news coverage of Hurricane Katrina in 2005. Images of poverty in the New Orleans Superdome, for example, framed

the event as a politicized topic of discussion in the public sphere.

Studying the 2011 tsunami in Japan from a visual perspective adds to Jackson's emphasis on how visual memories are formed in the minds of the public after exposure to news coverage of a major natural disaster. The tsunami, which hit the Japanese coast on March 11, 2011 received a great deal of attention and interpretation from international news organizations via online media. However, the type or kind of visual interpretation from various media outlets around the world is not understood, given the recent impact of this major world event. Thus, this study examined numerous variables of interest related to visual framing, including nation of news source, nation of coverage, presence of human subjects, amount of subjects, role of subjects, and nationality of subjects.

Literature Review

Framing

This study fills a gap in research, as framing scholarship lacks studies on visual elements as related to framing. In his analysis of framing studies in mass media scholarship, Matthes (2009) found that text or textual elements were more often studied in framing scholarship than visuals. Matthes writes that this is problematic because the role of visual elements is important to framing theory, as written content is inherently affected by visuals. But what is framing and what are its effects?

Tewksbury and Scheufele (2009) and Entman (2003) explain framing as a process by which journalists present certain issues in the news with selected images and words to emphasize or promote a certain interpretation. Specifically, Tewksbury and Scheufele (2009) note that the primary effects of framing include "cognitive responses that reveal audience issue interpretation," and not attitude changes (p. 20). These insights demonstrate that visual framing may have a great impact on the public's perception of natural disasters and government response to times of domestic or global crisis. Moreover, framing differs from agenda-setting theory in terms of their effects; agenda-setting occurs when exposure to news raises the accessibility of, or attention to an issue, whereas framing occurs when exposure makes certain elements (such as an image) applicable to an issue (Tewksbury & Scheufele, 2009). Thus, through visual framing, certain pictures or visuals can become linked to issues in society, such as natural disasters. The examination of photographs in this study may reveal how different visual elements online become connected to nations being covered and nations providing coverage.

Entman (2010) also notes that cultural resonance is unique to framing; frames trigger elements of schemas formed from past experiences in the mind to connect certain attributes to issues in society. Since the precedence of crises allows the public to easily internalize visual connections to devastating events, this article shows what kinds of visual connections exist.

Not only is framing defined as a phenomenon resulting in applicability of images (rather than textual content alone) to certain issues, but is also described in the literature as relating to political or civic interpretation (Entman, 2010). Natural disaster events can be politicized when governmental figures respond to such events with media strategies or plans for reformation or repair in mind. Garragee and Roefs (2004) and Yang (2009) claim that power issues in framing (i.e., appearance of an authority figure versus a civilian) need to be studied in future scholarship, as framing sponsorship is an important aspect for the development of the theoretical framework.

Visual Framing and Natural Disasters

This project is important due to limitations in existing research about the framing of visual images, visual content analysis and multimedia coverage of natural disasters. Like Matthes (2009), Borah (2009) posits that visual framing research is lacking in existing research in comparison to textual analysis. Additionally, Fahmy, Kelly, and Yung Soo (2007) state that a large amount of studies have been conducted on the number of times these photographs appear in the media, but these particular studies have focused on war or terrorism. Thus, it is apparent that a study about the visual framing of natural disasters will fill a gap in existing scholarship.

Furthermore, some scholars posit that it is important to analyze photograph choice and visual meaning independent of textual analysis because knowledge of the impact of photographs can add depth to the understanding of the coverage of a natural disaster. According to Faux and Kim (2006) this is because visuals (unlike text) have meanings with many layers that are not clearly defined. Faux and Kim (2006) theorize that images of natural disasters are sometimes used to create a pseudo reality, showing multiple perspectives at once and not serving as an objective record of an event.

Much current research on visual framing of natural disasters has found that the framing process can be largely controlled by media outlets (Fahmy et al., 2007; Yusuf & Eckler, 2010; Littlefield & Quenette, 2007). For instance, the findings of Littlefield and Quenette (2007) show that the media hold a specific place in society when reporting about natural disasters and that media sources occasionally use this placement to create their own perspective and reality in the public consciousness. For example, through textual analysis, Littlefield and Quenette (2007) found that the media could exclusively blame organizations and figures in authority positions, which is often unfounded. These results show that media outlets themselves can play a big role in the framing process by perhaps letting biases enter into the reporting of natural disasters.

They write that the media has power over interpretation as various outlets differ in coverage. These findings indicate that both the visual and textual portrayal of natural disasters in different outlets can have a strong and lasting effect on the public.

Scholarship also indicates that news sources can be autonomous in selecting and vetting photographs for display or publication. Fahmy et al. (2007) found that images covering Hurricane Katrina featured on the front pages of newspapers exhibited print

outlet independence from wire services. Front-page images had significantly different frames than photos from wire services.

Despite these findings, Yusuf and Eckler (2010) found that a “groupthink” journalistic perception of Hurricane Katrina shaped coverage of the event; international journalists in this study felt that the domestic coverage of Katrina did not meet expectations in terms of diversity, skepticism, or accuracy. Yusuf and Eckler (2010) suggest that the role of the journalist in interpreting natural disasters and other major crises can be ambiguous because such events are relevant locally, domestically, and internationally. Journalists and media sources initiate the process of framing to navigate their various roles. For instance, one possible role is that of the “good neighbor” where the news outlet aspires to serve the local audience (Yusuf & Eckler, 2010, p. 280). This “good neighbor” role may not apply to international news outlets’ coverage of natural disasters, as natural disasters are often most important to domestic audiences and stakeholders. Thus, the following hypothesis and research questions will be used to guide the research, which emphasize geographic proximity to the Japan tsunami. This hypothesis is further broken down into several variables in the methods section of the paper.

H1: Geographic proximity will be related to disaster portrayal.

RQ1: Does geographic location of the news outlet relate to the portrayal of natural disasters?

RQ2: Does geographic location of the disaster relate to the portrayal of the disaster?

The next section discusses how subjects of photos are portrayed, indicating audiences of importance and interpretation.

Political Power, Human Interest and Framing

Many extant studies have addressed visual framing from a human-interest perspective versus an economic or political one (Peng, 2004; Schwalbe, Silcock, & Keith, 2008; Wojdyski, 2009). In contrast to Fahmy et al. (2007) and Littlefield and Quenette (2007), and in accordance with the findings of Yusuf and Eckler (2010), these studies emphasize how the news media work to represent certain groups or figures in society in times of crisis or politicization.

Wojdyski (2009), Peng (2004), and Schwalbe et al. (2008) discovered that human-interest frames are prevalent versus soldier-focused or other official-focused frames. For instance, among online sources analyzed for Iraq War coverage in 2007 (e.g. photo galleries, audio slideshows, etc.), Wojdyski (2009) found civilian human-interest frames were the most common. Soldier-focused frames occurred less frequently. This finding is of interest to the current study, as photos were coded for role of subjects pictured. Grabe and Bucy (2008) also studied subject roles. Examining visual frames of political elites, rather than those of citizens or victims, Grabe and Bucy (2008) found in an analysis

of visual frames surrounding presidential candidates that Democratic and Republican candidates have both used the populist frame. The populist frame refers to one that depicts a candidate as an average man or woman (visually framed by such elements as casual dress, large and approving audiences). Grabe and Bucy (2008) found within the 2004 Kerry/Bush election that the two candidates were represented visually with similar amounts of ordinary (or average) qualities, as well as mass appeal. These findings demonstrate that political figures can be framed to receive certain types of attention in the media and that political power plays a role in the process of framing. This also relates to the present study because it makes it clear that examining governmental roles in visuals is an important area of study in addition to examining everyday people and other roles. The researchers used the following research question to guide their research on roles:

RQ1: Do roles of human beings in photos differ between NPR, BBC, and Xinhua online coverage and between Japan and other countries?

Furthermore, Wojdyski (2009) found that while 80% of stories analyzed involved U.S. soldiers and more than half included a family member of a U.S. soldier, but less than 25% depicted Iraqi civilians. This is of interest to the present study as the researchers coded for nationality of person(s) in photos and asked this question of the data:

RQ2: Does the nationality of human beings shown in photos differ between NPR, BBC, and Xinhua online coverage and between Japan and other countries?

Peng (2004) and Schwalbe et al. (2008) similarly found that human-interest frames are frequently used, especially across time. Using census sampling, Peng (2004) conducted a content analysis of photographic news coverage of China in *The New York Times* and the *Los Angeles Times* across a 10-year time span. For the news media outlets combined, Peng found a 70% increase from 1992 to 2002 of sheer number of photos and an increase in the number of human-interest and economic related photos. This supported Peng's hypothesis that such would occur due to changing relations between the U.S. and China during that time. Summarizing previous literature, Peng explained that trade with foreign nations and domestic economic developments are "constant predictors" of international media coverage over all other predictors (Peng, 2004, p. 12). Schwalbe et al. (2008) also found a shift in photo type during the initial two weeks of the 2003 U.S. invasion of Iraq. Images during the first week were largely political; during the second week they were more human-interest focused (Schwalbe et al., 2008).

While the literature has not examined amounts of human subjects in photos to operationalize visual framing variables, the researchers think that examining the presence of human subjects versus landscapes and amounts of human subjects helps with understanding human interest frames or the importance given to individual versus group human suffering. Therefore, these research questions are examined in the present study:

RQ3: Does absence or presence of human beings in photos of flooding differ between NPR, BBC, and Xinhua online coverage and between Japan and other countries?

RQ4: Does the number of people shown in photos differ between NPR, BBC, and Xinhua online coverage and between Japan and other countries?

The method section details what variables were examined based upon these research questions, as well as conceptual and operational definitions.

Method

Variables

The research questions dealt with two primary concepts: geographic proximity and disaster portrayal. Conceptually, geographic proximity can be defined as the location of the host country in which the disaster occurred and the physical location of the news outlets that cover the disasters. Thus, independent variables are defined as: IV1: Nation providing coverage; IV2: Nation being covered.

Disaster portrayal, which is the other concept presented in this study, refers to the slant of disaster news coverage, resulting in certain framing or frames for audience interpretation of the events. The researchers also formed a subset of research questions based upon these primary questions, which resulted in the following dependent variables defining how portrayal was measured (see appendices to see specific operations for these variables): DV1: Role of people/person in the photo; DV2: Nationality of person/people in photo; DV3: Presence or absence of people in photos; DV4: Number of people in the photo.

Research Approach

Based on the literature (Fahmy et al., 2007; Grabe & Bucy, 2008; Jackson, 2011; Matthes, 2009; Peng, 2004; Schwalbe et al., 2008; Wojdyski, 2009; Yang, 2009), content analysis is the most valid way to analyze visual framing for this study. Survey or experimental methods would likely only succeed in showing how participants interpret the events rather than how news outlets actually create the frames of the events.

The codebook was pre-tested for intercoder reliability in order to ensure that results of the content analysis were reliable. Coders were trained on a random sample of $n = 21$ photos (seven per news outlet) from the Japanese tsunami for the intercoder reliability pre-test. Every seventh photo was chosen to be a part of the pre-test. The number seven was chosen from a simple random sample method (drew numbers out of a "hat").

Using Holsti's formula to calculate, intercoder reliability for variables was as follows: Nation providing coverage, 100%; Nation being covered, 100%; Presence or absence of people in the photo, 85.7%; Nationality of people or person in photo, 90.4%; Role of

people or person in photo, 66.6%; Number of people in photo, 80.95%.

Wimmer and Dominick (2006) explain that when using Holsti's formula for published content analyses a minimum reliability coefficient of ".80 or greater is acceptable in most situations" (p.169). All but one intercoder reliability coefficient in this study fell into this category. The one outlier, "role of person or people in photo," unfortunately stood at 66.6%. To adjust for this, coders discussed various roles to ensure that "role" was more clearly defined in overall coding before proceeding with official content analysis.

Approximately half the sample of photos of the Japanese tsunami came from China (54.5%), while the U.S. provided 24%, and Britain provided 21.5%.

Sampling frame. A census sample of photos covering the Japanese tsunami from NPR, BBC, and Xinhua's websites was collected, covering the onset of the disaster and two days following (March 11-13, 2011). Within these parameters, NPR had a total of $n = 58$ photos; BBC, $n = 52$ photos; and Xinhua, $n = 132$ photos, providing a total of $N = 242$. The three media outlets were chosen because of their availability of multimedia. NPR represents the United States, BBC represents Britain and Xinhua represents China. Xinhua was specifically chosen from a variety of Chinese outlets because its captions and cutlines were in English, making identification of nationality easier to determine. China was specifically chosen as a country to represent Eastern nations. Fahmy et al. (2007) wrote about prominence, or impact, and proximity, or geographic relevance, as important news values. These values or news practices relevant to framing were examined in the research through these geographic sampling parameters.

Apparatus. A census sample was collected, because it was reasonable given the parameters of the study, which was limited in resources, such as time and an ability to compensate coders. The census was gathered via the NPR, BBC and Xinhua websites. Coders performed simple searches using the term "Japan tsunami," but photos were vetted by date to make sure that each one fit into the time constraints of this study. Coders obtained the earliest photo from the search results of this event and continued to collect every photo under the census terms for three days; search results were sorted by date and the first available photo was chosen from the oldest date. Every photo found from the tsunami for three days was content analyzed. Images were only coded once; if an image was repeated, it was not coded a second time.

Methodology in existing literature provided rationale for treating photos as the unit of analysis. For example, Parry (2008) used photo images as the primary coding unit while conducting content analysis of linguistic framing of captions and headlines in news coverage of the 2006 Israel-Lebanon conflict in *The Guardian* and the *Times*. Thus, videos, infographics and maps were not used for analysis. Based on Peng's (2004) method of using cutlines to provide context for photos that were stand-alone or within a text news article, the researchers exercised the same practice for their visual content analysis.

To compare observed and expected frequencies for the independent and dependent variables and to look for association, crosstabs and chi-square analysis were used, with the aid of SPSS statistical software. This non-parametric type of test was used because the data was coded using categorical or nominal levels of measurement, as parametric types of tests deal with higher levels of measurement.

Results

Approximately half the sample of photos of the Japanese tsunami came from China (54.5%), while the U.S. media source provided 24%, and Britain provided 21.5%. Japan was the nation most frequently covered, appearing in $n = 205$ photos, while “not Japan” accounted for the remaining $n = 37$ photos. A person or persons were present in approximately 66% of the photos. Likewise, persons of Japanese nationality were most frequently pictured ($n = 109$), followed by photos with no human being pictured ($n = 82$). A total of $n = 51$ photos pictured people of a nationality other than Japanese, or “unknown.”

Statistics

		Nation providing coverage	Nation being covered	Presence of Absence of Ppl in Photo	Nationality of Ppl in Photo
N	Valid	242	242	242	242
	Missing	0	0	0	0
Mean		2.3058	1.2934	.6612	4.8926
Median		3.0000	1.0000	1.0000	3.0000
Mode		3.00	1.00	1.00	3.00
Std. Deviation		.83336	.84030	.47430	2.56469
Variance		.694	.706	.225	6.578
Range		2.00	5.00	1.00	10.00
Minimum		1.00	1.00	.00	1.00
Maximum		3.00	6.00	1.00	11.00

RQ1: Do roles of human beings in photos differ between NPR, BBC, and Xinhua online coverage and between Japan and other countries?

A chi-square test was run for nation providing coverage (IV1) and role of person/people in photo (DV1), and significance was shown with $c^2(10, N = 242) = 20.07, p < .05$. China had the most counts for the “civilian” (62.1%) and “civilian and other” (58.7%) categories. Britain’s results showed a lack of photos solely containing a government authority (those

with a government authority along with a person(s) of another role were coded as “other” for all media outlets). Roughly 34% of the total photos in the sample were of landscapes and no human beings were present.

Nation being covered (IV2) and role of people/person in photos (DV1) was very significant with $\chi^2(5, N = 242) = 49.08, p < .01$, chi-square test results showed. A total of 33.3% of cells had counts less than five. However, this percentage only accounted for four out of a total 12 cells for the two variables of interest for this chi-square. In the civil servant category, 55.6% were pictured in photos depicting Japan, while the remaining 44.4% were pictured in photos depicting other nations. In the civilian category, 58.6% were pictured in photos depicting Japan, while the remaining 41.4% were pictured in photos depicting other nations.

RQ2: Does the nationality of human beings shown in photos differ between NPR, BBC, and Xinhua online coverage and between Japan and other countries?

For nation providing coverage (IV1) and nationality (DV2) $\chi^2(4, N = 242) = 12.15, p < .05$ was found using chi-square analysis. China provided the most photos of landscapes, accounting for 47.6% of the landscape photos. U.S. had 22% of the landscape photos and Britain had 30.5%. China had $n = 57$ (52.3%) photos of Japanese citizens, the United States followed with $n = 33$ (30.3%) and Britain had the least with $n = 19$ (17.4%). China had $n = 36$ (70.6%) photos of people who were not Japanese, Britain had $n = 8$ (15.7%) and the U.S. had $n = 7$ (13.7%).

A chi-square was also run for nation being covered (IV2) and nationality (DV2) with $\chi^2(2, N = 242) = 132.18, p < .01$, making it statistically significant. A total of $n = 79$ (96.3%) of the landscape photos depicted Japan, while $n = 3$ (3.7%) landscape photos were of other countries. A total of $n = 17$ photos depicted people of a nationality other than Japanese within Japan. All photos containing a Japanese citizen ($n = 109$) were taken within Japan. There were no photos of Japanese citizens outside Japan.

RQ3: Does absence or presence of human beings in photos of tsunami differ between NPR, BBC, and Xinhua online coverage and between Japan and other countries?

Chi-square analysis pertaining to nation providing coverage (IV1) and presence of person/people in photos (DV3) was significant, $\chi^2(2, N = 242) = 6.00, p = .05$. Overall, there were approximately two-times as many photos with people than without. A total of $n = 93$ of China's photos had people in them, while $n = 39$ did not. Britain had an approximately equal number of landscape photos ($n = 25$) and photos with people in them ($n = 27$) (i.e. “Yes” and “No” categories were roughly equal). Approximately twice as many U.S. photos contained people (the “Yes” category) versus those that did not (the “No” category). Of photos containing people, 58.1% were provided by China, 25% by the U.S. and 16.9% by Britain.

For nation being covered (IV2) and presence of people (DV3), the results were statistically significant, with $\chi^2(1, N = 242) = 12.95, p < .01$. A total of $n = 126$ (61.5%)

photos depicting Japan contained people, while $n = 79$ photos did not contain people (38.5%). A total of $n = 34$ (91.9%) photos depicting other nations contained people versus $n = 3$ (8.1%) photos that did not.

RQ4: Does the number of people shown in photos differ between NPR, BBC, and Xinhua online coverage and between Japan and other countries?

Addressing the first portion of the question, a chi-square test for nation providing coverage (IV1) and number of people in photo (DV4) showed that results were not significant $\chi^2(6, N = 242) = 9.24, p = .16$.

China provided the most visual coverage and Japan was the nation most frequently covered.

Significant results were found regarding nation being covered (IV2) and number of people in photo (DV4), $\chi^2(3, N = 242) = 15.94, p < .01$. A total of $n = 80$ photos depicting Japan included no people, $n = 68$ were of small groups, $n = 40$ were of large groups/crowds and $n = 17$ were of a single individual. A total of $n = 3$ photos depicting other countries ("Not Japan" category) included no people, $n = 17$ were of small groups, $n = 9$ were of large groups/crowds, and $n = 8$ were of a single individual.

Discussion

All chi-square tests were significant except for the one evaluating nation providing coverage and number of people in photos. Nation being covered and role of people in photos was significant, but 33.3% of cells had counts less than five. All other chi-squares had significant Pearson values with fewer than 20% of cell counts less than five.

Overall, China provided the most visual coverage and Japan was the nation most frequently covered. Also, people of Japanese nationality were the most frequently pictured, followed by landscape photos. People of other nationalities were the least photographed. This was to be expected considering the natural disaster of focus in the study occurred in Japan and China is the closest country providing coverage with regards to geographic proximity. By approximately two-thirds to one-third, people were present in more photos than were not. In other words, approximately a third of the photos were of landscapes. An explanation for this could be as simple as news agencies wanting to show scope of the destruction, thus requiring a landscape image. Another reason could be an inability of photojournalists to get close enough to the disaster zone to capture people and/or objects.

China provided the most photographic coverage overall, therefore this in itself could account for its greater number of civilian photos. China provided the most photos of Japanese as well as non-Japanese citizens, and the most landscape photos, compared to U.S. and British coverage. China also provided the greatest number of photos in the role categories of "civilian" and "civilian and other."

It is likely that China had the most photographs in the sample because of its geographic proximity to Japan. This could also explain China's greater number of photos with people in them than without. As was reflected in Peng's study (2004) of U.S. coverage of China and an increased human-interest frame in correlation with increased trade and political relations between the two nations, a similar explanation could be true for China's coverage of Japan. Alternately, this could be due to differing practices of the news site; for example, several of the photos coded from Xinhua were captured still shots from video coverage, rather than unique photographic frames.

It is likely that China had the most photographs in the sample because of its geographic proximity to Japan.

All photos depicting those of Japanese nationality were pictured within Japan. It is interesting to note that there was no coverage of how Japanese people living elsewhere reacted to the disaster. The census only covered the initial three days of the disaster, therefore the media focus could have been on immediate coverage of the disaster's scope, warnings and alerts, etc. rather than Japanese people elsewhere in the world getting in touch with relatives, etc.

For nation providing coverage and number of people in photo, no significant relationship was found. It can be inferred from this that there were not significant differences between numbers of people shown between news outlets. However, for nation being covered and number of people in photo, a significant difference was found in numbers of people portrayed in photos representing Japan versus the other countries. Interestingly, a total of $n = 80$ photos depicting Japan included no people, $n = 68$ were of small groups, $n = 40$ were of crowds and $n = 17$ were of a single individual. Thus, when human subjects were featured, small groups were most prevalent for coverage of Japan.

One of the main issues that occurred during the coding sessions were problems pertaining to the search limitations of the websites for NPR, BBC and Xinhua, which were used to collect photos for the $N = 242$ item sample. For instance, a census of photos was taken for this study, using the first three days of the disaster as the time parameters. The photos were put into chronological order but as time went by it became apparent the websites would occasionally reorganize the order of their photos. These three websites also tended to use a photo more than once.

Another problem that emerged during the research process was that the census sampling method gave the study greater frequency of photos from China relative to the U.S. and Britain. Therefore, the frequencies were more reflective of agenda-setting outcomes rather than framing outcomes. If the study were to be replicated, it is suggested that researchers use a quota sampling method to ensure that density of characteristics could be analyzed rather than frequency of characteristics.

Furthermore, this study originally intended to contain two weeks worth of photos. It is recommended that future researchers generate a larger sample size to get more temporally based results, or to see how framing may have changed over time. For

example, a larger sample and sampling time period would have given this study more insight into whether China continued to cover the Japanese tsunami with such intensity or if their coverage would have waned over time. Also, a good portion of the photos that appeared in the initial search results were repeated throughout the pages and therefore had to be skipped in accordance with the methodology of this study.

China is the closest country providing coverage with regards to geographic proximity.

In the future, researchers should attempt to avoid using the Internet as a collection method for their sample, unless an adequate Internet news photo database is created, comparable to LexisNexis. This is related to the findings of Matthes (2009), as he found that textual analysis is conducted more frequently than visual analysis in framing research. It is possible that limited access to databases for photographs deters researchers from analyzing photos through quantitative content analysis. A comparable news photo database would need to be searchable by date and news outlet as well as account for the issue of repeated photos.

Future research should attempt to build off this exploratory research and work on making valid operationalizations of concepts posed in this project. That is, coding categories should validly measure the concepts. In addition, complementary research approaches could be used to measure audience interpretation such as a survey method.

References

- Bulla, D., & Borah, P. (2006). The visual framing of the Indian Ocean tsunami and Hurricane Katrina: A comparison of newspaper coverage in three countries. *International Communication Association*, 1-46.
- Entman, R. M. (2010). Media framing biases and political power: Explaining slant in news of campaign 2008. *Journalism*, 11(4), 389-408.
- Entman, R. M. (2003). Cascading activation: Contesting the White House's frame after 9/11." *Political Communication*, 20, 415-432.
- Fahmy, S., Kelly, J. D., & Yung Soo, K. (2007). What Katrina revealed: A visual analysis of the hurricane coverage by news wires and U.S. newspapers. *Journalism & Mass Communication Quarterly*, 84(3), 546-561.
- Faux II, W. V., & Kim, H. (2006). Visual representation of the victims of Hurricane Katrina: A dialectical approach to content analysis and discourse. *Space & Culture*, 9(1), 55-59.
- Garragee, K., & Roefs, W. (2004). The neglect of power in recent framing research. *Journal of Communication*, 54, 214-233.
- Grabe, M., & Bucy, E. (2008). The struggle for control: Visual framing, news coverage, and image handling of presidential candidates, 1992-2004. *International Communication Association*, 1-42.
- Jackson, J. H. (2011). Envisioning disaster in the 1910 Paris flood. *Journal of Urban History*, 37(2), 176-207.

Littlefield, R. S., & Quenette, A. M. (2007). Crisis leadership and Hurricane Katrina: The portrayal of authority by the media in natural disasters. *Journal of Applied Communication Research*, 35(1), 26-47.

Matthes, J. (2009). What's in a frame? a content analysis of media framing studies in the world's leading communication journals, 1990-2005. *Journalism & Mass Communication Quarterly*, 86(2), 349-367.

Parry, K. (2008). A visual framing analysis of British press photography during the 2006 Israel-Lebanon conflict. *International Communication Association*, 1-35.

Peng, Z. (2004). Picturing china: A content analysis of photo coverage in the New York Times and Los Angeles Times. *International Communication Association*.

Schwalbe, C. B., Silcock, B., & Keith, S. (2008). Visual framing of the early weeks of the U.S.-led invasion of Iraq: Applying the master war narrative to electronic and print images. *Journal of Broadcasting & Electronic Media*, 52(3), 448-465.

Tewksbury, D. and Scheufele, D. A. (2009). News framing theory and research. In J. Bryant, & M. B. Oliver (Eds.), *Media effects: Advances in theory and research*, (pp. 17-33). New York: Routledge.

Wimmer, R. D., & Dominick, J. R. (2006). *Mass media research: An introduction*. Belmont, CA: Thomson Wadsworth.

Wojdyski, B. (2009). The interactive newspaper: Online multimedia and the framing of the Iraq War. *Conference Papers -- International Communication Association*, 1- 37.

Yusuf, K., & Eckler, P. (2010). International journalists' expectations from the US media coverage of Hurricane Katrina. *Journalism*, 11(3), 277-292.

Appendices

Codebook

Nation Providing Coverage: NPR -U.S.; BBC - Britain; Xinhua-China

Identify the nation providing coverage. If the photo is from NPR, choose U.S., if the photo is from BBC, choose Britain and if the photo is from Xinhua, choose China.

(1) U.S.

(2) Britain

(3) China

Nation Being Covered: look to cutline, headline, or caption for nation of focus. Identify the nation covered. Regardless of nationality of the subject of the photo, code for which country the photo was physically taken in. If unclear from photo, cutline, headline, caption or surrounding text, then code for "unknown." If there is a photo of any other nation besides these four please code it as "other."

(1) Japan

(2) Not Japan

Presence of people in photos: Is there a person or are there people present? Yes/No. This is defined as any person pictured or seen by the naked eye, even if they are far off in the distance.

(1) Yes

(0) No

Nationality: Use caption or any other textual information to allow for a decision of Japanese, not Japanese, or none. Anyone referred to as "resident" or "residents" should be coded for the country marked in that article. "None" should be marked for photos that include no human subjects.

(1) Not Japanese

(2) Japanese citizen

(0) None--landscape photo/no human subjects

Role: Categories are written below. Select the role of the subject(s) in the photo. Choose only one. For combinations of people other than "civilian and other," code as "other." For example, a civilian pictured with an aid worker would be coded as 2, while a politician and aid worker would be coded as 5.

(1) Civilian

(2) Civilian and other (other includes unknown)

(3) Government authority (Military Personnel or politician)

(4) Domestic civil servant

(5) Other

(6) None--landscape photo/no human subjects

Number of people in the photo: Count number of people seen by the naked eye, unless a caption or other contextual information tells the number of people. If you are unsure of an exact number, estimate to the best of your ability. If you can only see a hand, hat, limb, etc., count as a person. Also, if a body bag is pictured and it is assumed by visual cue and caption that there is a body within it, include that person within your total count for the photo.

(1) Single person

(2) Small group (2-10)

(3) Large Group/Crowd (11+)

(4) No people

Output

Output of Frequencies (using original, detailed coding scheme, before fewer, simpler categories were made to attain appropriate cell counts for crosstabs analysis)

Downey, Brewer and Johnson are recent graduates of the master's degree program at the University of Missouri School of Journalism. Johnson started her doctoral program at the University of Missouri School of Journalism in the spring of 2013 and is particularly interested in the priming effects of media on implicit attitudes. Brewer is a reporter at the San Fernando Valley Business Journal. Downey moved back to California to pursue a career in market research. She also continues to report for her Olympic news website.



Vol. 3, No 1, Winter 2013. 76-87

More Than Shovelware: A Call for Layered Stories for Online Journalism

Yanjun Zhao

This paper addresses visual text information presentation for online journalism. While most newspapers adopt a “shovelware” approach, a new technique—layering—could greatly enhance the reading experience with visual clues of story structure. Based on the differences between reading online and reading hard copies, the advantages of layering are discussed. An experiment was conducted to check the effectiveness of the layering technique. Results showed that a layered article, compared to the shovelware version, is rated as (1) better organized, (2) taking less time to read, (3) adding visual attractiveness to the page, (4) causing less fatigue, and (5) less boring reading experience. In light of the Internet users’ reading habits, online journalists should be equipped with layering technique.

Introduction

Online journalism is facing a challenge: how to write for the busy “surfer” who wants fast and accurate information? To deal with that challenge, online journalists shall consider three questions: What is the characteristic of the audience? What are their surfing habits? What can journalists do to adjust to their habits? This study focuses on visual display of text information, with a comparison between shovelware and layering approaches.

The visual design of online stories affects the effectiveness of informing the public (Hindman, 2007). However, the Internet’s potential of visual presentation of online text is underutilized. As noted by the web usability expert Jakob Nielsen, “there is still a lot to do for structured and elegant online articles” (Nielsen, 2009, p.4).

As a versatile medium, the Internet provides a huge potential for information design, namely the practice of crafting messages so readers get the information in a clear, logical, and structured fashion. The usability, or efficiency of the information design, directly influences the effectiveness of the reading experience. In fact, the visual text design of news stories should consider the web user’s reading habit (Lin, Salwen, Garrison & Driscoll, 2005; Garrison, 2005).

If there is a difference in how people read in print and online, this difference shall translate into different information design for visual online text presentation.

What can online journalists do to write to busy surfers who want fast and accurate information? There is still a lot to do for structured and elegant online articles.

This paper addresses the story page design for online journalism. There has been a lot of research focusing on the use of multimedia in online journalism. However, few studies (Poynter, 2007) have addressed the visual design of text for online articles. Therefore, the focus of this study is not the multimedia add-on for text. Instead, the focus of this study is the visual presentation of text for news articles. Specifically, it addresses the limits of shovelware (presenting the full text with no revision) and the potential benefits of layered stories (dividing an article into parts and presenting the organized parts). How effectively will the layering approach enhance the web reading experience?

Literature Review

Shovelware Issue

The visual presentation of text online has a big impact on the Internet users' online reading experience. In fact, web usability has been found to positively shape the effectiveness of online activities (Buente & Robbin, 2008). A neat, structured and logical design with key points will help the user to understand the message than does a huge block of text (Machin & Niblock, 2008).

Shovelware approach assumes that people will read online just like they read in print.

Currently, most online newspapers are presenting text in a very similar way to traditional print newspapers (Pryor, 2002). Most online journalism websites have an article just shoveled from the newspapers. This approach is called shovelware—transferring content from the newspaper to the web page with little or no revision (Foust, 2009). As pointed out by Pryor (2002), it was a pity that traditional media managers treat the Internet as a mere extension of print or broadcast. In fact, the Internet is a unique mass medium driven by new user expectations and experiences. This shovelware approach assumes that people would read an article online in the same way as they would read a print version. This assumption, however, ignored some crucial features of people's online reading style (Nielsen, 2009).

How People Read Online

The Internet, as a medium, suggests new patterns of message navigation. A Poynter research group (2007) conducted the largest research on people's reading habits, with

a focus on the differences between print and online reading. The researchers used eye-tracking devices to record how readers navigate through the paper and web sites. The research measured how much participants read, how much they remember after reading, as well as their reading habits. The research yielded a robust data set, with 582 reading session recordings and 102,000 eye stops to be coded and analyzed. Findings demonstrate that (1) people read more of a story online, and (2) print readers are more likely to read from top to bottom while screen readers are more likely to scan. The Poynter project contributed to the emerging research on web usability. Specifically, it helped to identify patterns of online users' web navigation, and potentials to improve web usability. It showed that people are less likely to read online articles line by line.

According to web usability research (Nielsen, 2009), the Internet users don't read on the web the same way as they read print copies; instead, they scan pages for individual words that attract them. More specifically, the web screen was generally "scanned" in a pattern of letter "F". In other words, the reader first briefly looks at the top line, followed by the left navigation bar area, with a last glimpse on the middle section of the page.

More over, people have less patience in reading long text from a screen (Nielsen, 2009). This might be due to the resolution difference between a screen and a print copy. Because the screen's resolution (72 ppi) is much smaller than the print resolution (300 ppi), reading an article from a screen is more exhausting to the eyes than reading the same article in print (Foust, 2009). A long online article is not likely to attract Internet users, especially future users who grow up with interactive media such as video games (Huang, 2009). This shovelware approach could explain the young generation's low news consumption.

How do people read online? They don't. They scan web pages.

When Internet users scan the web pages instead of reading them, it is necessary to present the information in a more "scanable" way. To help the digestion of the big-chunk text, bulleted lists, subheads and bolding provide quick guides of the main points of the article. The shovelware approach underutilizes the potential of the Internet, where text could be presented in a more structured, elegant way.

Online Journalism's Capacity

The Internet, as a medium, offers a lot of unique advantages in information design (Maier, 2010; Pavlik, 2000). One advantage is the greater audience control. Compared to traditional media, the Internet gives its users more power to choose the information they want. As pointed out by Jones (2009), "news on the web is almost entirely chosen by the viewer" (p. 180). Another advantage is the interaction between the user and the information. When the information is desirably presented, users could have easy and fast access to additional information to enhance the main points of story. This echoes the experience of John Temple, a newspaper publisher in the Poynter's eyetracking research (2007): "If you have a good story, they will read it, and they will go very deep into the

story.”

Foust (2009) proposed a “layering” approach for online journalism. Layering means “dividing text-based stories into several parts” (Foust, 2009, p.143) and an online story could be presented in small, easily understandable sections. A layered story is generally created by first breaking a conventional story text into parts, followed by giving each section a heading, and finished by putting the section headings into an icon where users can click and read the whole section. When an Internet user encounters a layered story, he will first see the section titles, then click any section and get a “deeper” look for that section. Long-term benefits of the layering approach could be more efficient information delivery, attracting more online users, and making online journalism more meaningful. When online news reading provides rich gratifications, readers will come to the online news site again and again (Spyridou & Veglis, 2008; Huang, 2007).

How effective would this layering approach help the online reading experience? Very few studies, if any, have examined its effectiveness. Therefore, this study will use empirical data to check the usefulness of the layering approach. The research question for this study is: To what extent does layering approach improve the online reading experience?

By dividing long articles into small sections, layering technique could make online stories more scannable.

This study will examine several aspects of the effectiveness of layering approach in reading: organization of the article, easiness to understand the story, reading speed, fatigue, boring design, and visual attractiveness of the web page. All these effectiveness measures are taken from a user’s perspective.

The major advantage of a layered story is similar to a map. With a layered article, the user sees the structure of the article, thus gets a quick idea about the gist of the whole article (Foust, 2009). This means when a news story is put in different sections, the reader will not get lost with the clear structure. This leads to the following hypotheses:

H1: The layered article design will be rated better organized than the shovelware article design.

H2: The layered article will be rated easier to understand than the shovelware article.

H3: The layered article design will be read faster than the shovelware article.

H4: The layered article design will be rated more visually attractive than the shovelware article design.

H5: The layered article design will be read with less fatigue than the shovelware article design.

H6: The layered article design will be rated less boring than the shovelware article design.

Method

The objective of this study is to compare the effectiveness of shovelware and layering approaches for online stories. This objective is accomplished by an experiment, which includes manipulation of message stimuli and comparison of outcome variables between randomly assigned audience subgroups with different treatments. An experimental design is the best way to investigate causal relationships. It should be noted that experimental designs suffer from certain methodological weaknesses such as unnatural settings, intrusive procedures, forced exposure, and unrepresentative samples (Atkin, 1995).

An experiment was conducted to compare shovelware and layering in reading efficiency.

A between-subject experiment was conducted where 63 participants read the same article with different information designs. Participants were randomly assigned into two treatment groups: a shovelware group read the article on a webpage with shovelware style, and a layer group read the article with a layered design. A control group read the article in a print version.

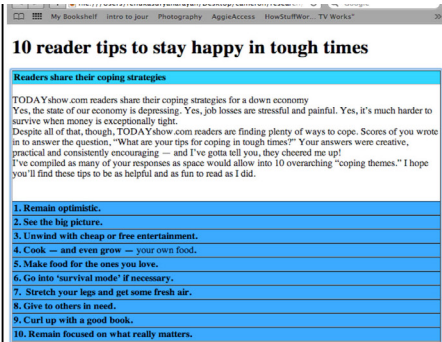
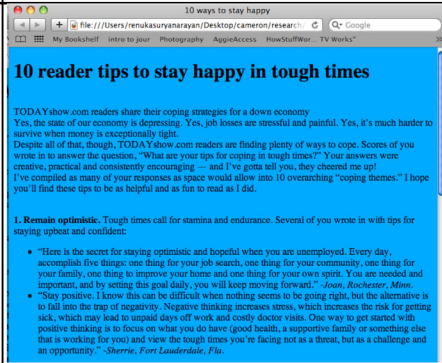
Participants were undergraduate students in an introduction to mass communication class at a Northeastern university. They were asked to view the stimuli in a way similar to their daily encounter of news articles. They didn't have to finish the whole article. After the exposure, participants indicated their response in a questionnaire.

Stimuli

An article titled "10 reader tips to stay happy in tough times" was designed in three ways. This article has 1,996 words and shows a sharp visual contrast between shovelware design and the layering design. For the shovelware group, a web page was created and the whole text content was put on one single page. For the layering group, the article was made with dynamic "spry" function in Adobe Dreamweaver. For the control print group, a PDF newspaper page was created with Adobe InDesign.

In the layered article stimuli, a dynamic webpage was made where the whole text was displayed by a "Spry Accordion" function in Dreamweaver. The content of the article consists of a brief introduction with 10 tips. In the layered article design, the ten tips were made into small bars, which provided the outline of the whole article. The blue bars could be folded and unfolded at a click. When a reader opens the article page, he only see the introduction part; the remaining ten parts of the article are folded in blue bars. Once the reader clicks another blue bar, the current bar will be folded, just like how an accordion would work. The following figures are the screen shots of the stimuli.

Figure 1: Stimuli

Layered article	 <p>10 reader tips to stay happy in tough times</p> <p>Readers share their coping strategies</p> <p>TODAYshow.com readers share their coping strategies for a down economy. Yes, the state of our economy is depressing. Yes, job losses are stressful and painful. Yes, it's much harder to survive when money is exceptionally tight.</p> <p>Despite all of that, though, TODAYshow.com readers are finding plenty of ways to cope. Scores of you wrote in to answer the question, "What are your tips for coping in tough times?" Your answers were creative, practical and consistently encouraging — and I've gotta tell you, they cheered me up! I've compiled as many of your responses as space would allow into 10 overarching "coping themes." I hope you'll find these tips to be as helpful and as fun to read as I did.</p> <ol style="list-style-type: none"> 1. Remain optimistic. 2. See the big picture. 3. Unwind with cheap or free entertainment. 4. Cook — and even grow — your own food. 5. Make food for the ones you love. 6. Go into 'survival mode' if necessary. 7. Stretch your legs and get some fresh air. 8. Give to others in need. 9. Curl up with a good book. 10. Remain focused on what really matters.
Print article	<p>10 reader tips to stay happy in tough times</p> <p>TODAYshow.com readers share their coping strategies for a down economy. Yes, the state of our economy is depressing. Yes, job losses are stressful and painful. Yes, it's much harder to survive when money is exceptionally tight.</p> <p>Despite all of that, though, TODAYshow.com readers are finding plenty of ways to cope. Scores of you wrote in to answer the question, "What are your tips for coping in tough times?" Your answers were creative, practical and consistently encouraging — and I've gotta tell you, they cheered me up! I've compiled as many of your responses as space would allow into 10 overarching "coping themes." I hope you'll find these tips to be as helpful and as fun to read as I did.</p> <ol style="list-style-type: none"> 1. Remain optimistic. Tough times call for stamina and endurance. Several of you wrote in with tips for staying upbeat and confident: <ul style="list-style-type: none"> • "There is the secret for staying optimistic and hopeful when you are unemployed. Every day, accomplish five things: one thing for your job search, one thing for your community, one thing for your family, one thing to improve your home and one thing for your own spirit. You are needed and important, and by writing this one thing daily, you will keep moving forward." — Joan, Rochester, Minn. • "Stay positive. I know this can be difficult when nothing seems to be going right, but the alternative is to fall into the trap of negativity. Negative thinking increases stress, which increases the risk for getting sick, which may lead to unpaid days off work and costly doctor visits. One way to get started with positive thinking is to focus on what you do have (good health, a supportive family or something else that is working for you) and view the tough times you're facing not as a threat, but as a challenge and an opportunity." — Sherrie, Fort Lauderdale, Fla. <ol style="list-style-type: none"> 2. See the big picture. A number of readers wrote about the importance of maintaining perspective and a positive attitude: <ul style="list-style-type: none"> • "I have always lived frugally so when I lost my job last year, I didn't sweat it so much. It has taught me how much money I <ul style="list-style-type: none"> (mortgage, etc.). Being unemployed has helped me to stop and take stock of my life." — Milore, Providence, R.I. • "If you can't find a job in your own field, take this chance to do something you have always wanted to do. Whether you are short on money or not, cut back to what you need, do less of what you want. Maybe your excess could bless someone who needs some help. Remember what is really important and choose to be happy." — D.C., Pickerington, Ohio 3. Unwind with cheap or free entertainment. Several readers talked about the importance of enjoying low-cost forms of recreation and entertainment, no matter how bad things get. Here are some ideas: • "Bring back game night for grown-ups. Movies are so expensive (that we couldn't do it every weekend like we used to, so we invite a few friends over, make some incredible dessert and we play games. Now it's been a challenge who brings the best desserts. (My mom cial at restaurants during lunch and have water with lemon instead of a drink. I also rent Redbox movies instead of higher-priced ones. I try to go out to a movie at least once a month and use my AMC MovieWatcher card for additional savings on snacks. I now have a ticket for a free movie also to enjoy." — Yve, Dallas 4. Cook — and even grow — your own food. Food isn't certainly concern people during times like these, but many of you are finding ways to bust the system: • "I go back to everything my grandmother knew. ... In the summer we plant a garden to cut back on the cost of fresh veggies and I've even learned to can and make my own apple sauce, breads and much more. Slowing down and cooking our own food has made a huge change in our family and our finances." — Stacy, Minnesota • "Our family sat down together and planned out a vegetable garden. After I bought the seeds my 2.5-year-old and I planted them together. Now the
Shovelware article	 <p>10 ways to stay happy</p> <p>10 reader tips to stay happy in tough times</p> <p>TODAYshow.com readers share their coping strategies for a down economy. Yes, the state of our economy is depressing. Yes, job losses are stressful and painful. Yes, it's much harder to survive when money is exceptionally tight.</p> <p>Despite all of that, though, TODAYshow.com readers are finding plenty of ways to cope. Scores of you wrote in to answer the question, "What are your tips for coping in tough times?" Your answers were creative, practical and consistently encouraging — and I've gotta tell you, they cheered me up! I've compiled as many of your responses as space would allow into 10 overarching "coping themes." I hope you'll find these tips to be as helpful and as fun to read as I did.</p> <ol style="list-style-type: none"> 1. Remain optimistic. Tough times call for stamina and endurance. Several of you wrote in with tips for staying upbeat and confident: <ul style="list-style-type: none"> • "There is the secret for staying optimistic and hopeful when you are unemployed. Every day, accomplish five things: one thing for your job search, one thing for your community, one thing for your family, one thing to improve your home and one thing for your own spirit. You are needed and important, and by writing this one thing daily, you will keep moving forward." — Joan, Rochester, Minn. • "Stay positive. I know this can be difficult when nothing seems to be going right, but the alternative is to fall into the trap of negativity. Negative thinking increases stress, which increases the risk for getting sick, which may lead to unpaid days off work and costly doctor visits. One way to get started with positive thinking is to focus on what you do have (good health, a supportive family or something else that is working for you) and view the tough times you're facing not as a threat, but as a challenge and an opportunity." — Sherrie, Fort Lauderdale, Fla.

The dependent variables in this study are all involved with the effectiveness of the design. The questionnaire measured all dependent variables, including organization of the article, easiness to understand, visual attractiveness of the article, fatigue in reading, boring reading experience, and reading time. Most variables were measured by 5-point Likert scale where higher number indicates higher level of the measured variable. Reading time was measured in seconds.

Results

Altogether, the participants who were exposed to the layered story considered the article to be less boring, faster to read, better organized, more visually attractive, and was read with less fatigue. There was no significant difference in easiness to understand.

Layering technique improved visual attractiveness of text, made online stories more structured, less fatigue in reading and faster speed.

H1 posited that the layered article design will be rated better organized than the shovelware article design. As Table 1 shows, the text organization scores for the three designs are significantly different, $F(60,2) = 47.655, p < .001$. The layered design ($M = 3.91$) was rated better organized than the shovelware design ($M = 2.33$). Thus, H1 was supported. Interestingly, the print version in the control group received the highest rating for organization.

The next hypothesis specifically investigates whether the layered article will be rated easier to understand than the shovelware article (H2). This hypothesis was not supported, and the data failed to indicate a significant difference in terms of easiness to understand, $F(60,2) = 2.311, p = .128$.

H3 tests whether the layered article design will be read faster than the shovelware article design. This hypothesis was supported. As Table 1 shows, the reading time for the three designs are significantly different, $F(60,2) = 25.899, p < .001$. The layered design ($M = 45.28$ seconds) was read faster than the shovelware design ($M = 72.52$ seconds).

H4 proposed that the layered article design will be rated more visually attractive than the shovelware article design. The analysis showed support for H4. As Table 1 shows, scores for visual attractiveness for the three designs are significantly different, $F(60,2) = 17.839, p < .001$. The layered design ($M = 4.14$) was more attractive than the shovelware design ($M = 3.04$).

H5 was about the fatigue in reading shovelware and the layered article. This hypothesis was supported by data analysis. As shown in Table 1 below, participants experienced different levels of fatigue with the three designs, $F(60,2) = 24.871, p < .001$. The layered design ($M = 2.43$) was read with less fatigue than the shovelware design ($M = 3.71$).

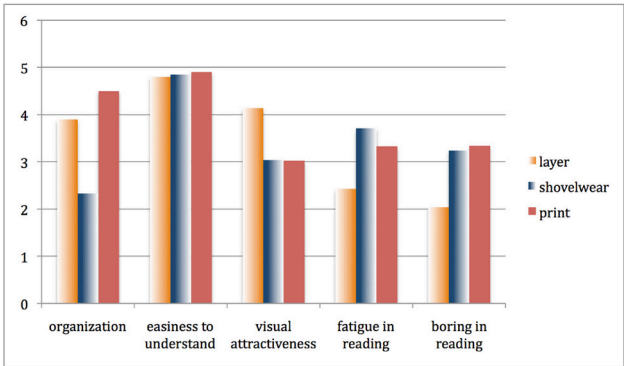
H6 posited that the layered article design would be rated less boring than the shovelware

article design. This hypothesis was supported. As Table 1 below shows, participants gave significantly different ratings for the boringness of the three stimuli, $F(60,2) = 36.54, p < .001$. The layered design ($M = 2.04$) was rated as less boring than the shovelware design ($M = 3.23$).

Table 1: Effectiveness of Layered, Shovelware, and Print Design

Variable	Layering	Shovelware		Print		F	p
	Mean (St)	Mean	St	Mean	St		
Better Organization	3.90 (.70)	2.33 (.913)		4.52 (.60)		47.66	<.001
Easiness to Understand	4.80 (.40)	4.85 (.35)		4.98 (.05)		2.131	.128
Reading Time	45.29 (9.78)	72.52 (13.79)		59.23 (12.86)		25.90	<.001
Visual Attractiveness	4.14 (.73)	3.04 (.97)		3.02 (.38)		17.84	<.001
Fatigue in Reading	2.43 (.67)	3.71(.46)		3.33 (.65)		24.87	<.001
Boring in Reading	2.04 (.22)	3.24(.54)		3.34 (.66)		36.54	<.001

The figure below shows the mean differences visually.



Discussion

Although scholars have highlighted the capacity of the Internet for future journalism (Maier, 2010), the focus has mainly been restricted to the use of multimedia for online journalism (Jacobson, 2012). This study extends the research on multimedia content by investigating the effects of the visual presentation of text, with a focus on layering technique. More specifically, this study experimentally manipulated the visual presentation of text online (shovelware v. layering) and examined its effects on the reading experience.

Practical implications: layering is an effective technique in online news editing.

As noted by Foust (2009) and Wurman (1999), information design is not only important; it is essential. To make the reading more convenient and efficient, the design for online articles should consider both the limits and the advantages of the new medium. This study reviewed online users' scanning reading style and examined the potential of a layering approach for online journalism. Findings in this study reveal that the layering technique does bring a more effective reading experience. Specifically, layering approach was considered a better organization of information, which translates in to less time devoted to reading. These findings are consistent with Nielsen's (1999) claim of people's scanning habit in online reading.

Furthermore, findings also reveal that layering technique showed higher visual attractiveness for the web page, less fatigue in reading, and a less boring reading experience. These findings echo the earlier research on structural interactivity (Spyridou & Veglis, 2008). That is, when online users are having more controls over the reading experience, they will enjoy the reading experience more. When there is less text, reading online is a less daunting experience.

A note shall be made for the variable "easiness to understand". This study did not find statistically significant difference between the shovelware design and the layered story design. However, this does not necessarily mean there is no difference in the two designs; it only means this study did not provide an empirical indication. A closer look at the scores in the three treatment groups pointed out that all the three groups have a high mean score. This variable did not bring much variance. In this regard, it is risky to conclude that there is no difference. The reason for the insignificant result for this variable could be the result of the fact that the stimulus article selected for this study is, overall, an easy read. It could be seen that all three groups showed very high scores for the easiness to understand variable. It is possible, in a future study, with a stimulus article that is harder to understand, that the difference between the two designs would be observable.

The findings bring an understanding of the effectiveness and efficiency of online news reading experience. The investigation starts with different reading patterns between reading online and reading in print. When people scan online articles, the text should be

edited in a way that fits the scanning pattern. Layering technique has been demonstrated as an effective online editing approach. More important, online journalism is not just multimedia contents. Text is still the most important vehicle for information delivery. Research on online journalism should identify the importance of text visual presentation in advancing online reporting.

Although this study offers some insight into the effects of text visual presentation for online news, it has some limitations. First, the experiment design has an internal validity issue. The lab setting and assigned reading experience were not as natural as the participants' common daily reading experience. However, given that the main purpose of this study was to measure the effectiveness of different text visual display, strict control of treatment setting is necessary. Second, the stimulus article was not a very complex article, which implies a very limited variation in different treatment groups. A more complicated article would provide more variation for different treatments.

Future research on text visual presentation should examine the effects of other manipulations of text online. In fact, there are a lot of ways the Internet could help with text presentation, such as the length of sentence, the use of links, even the font type of texts. Specifically, assuming online readers are less patient than in print readers, shorter sentences could improve efficiency. In addition, the use of links would help the readers to dig deeper into the story and have a better reading experience.

This study has both theoretical and practical implications for online journalism. We attempt to better understand the busy "surfer", and review his or her habits, then recognize what we can do to make the article more attractive and create an efficient reading experience for the Internet users. Layering approach will help achieve efficient information delivery. In the long run, this efficiency will attract a audience. Barriers for the layering approach could be more time spent on editing, more work in changing a shovelware story to a layered version, and staff trainings. But because the future of journalism is online, there is no point to ignore the advantages of layering approach.

Online journalism is still in its infancy (Foust, 2009). It is important for online journalists to understand the visual principles that underlie online writing, even though these principles are new and sometimes don't jump into our eyes. Online journalists are faced with great opportunities in shaping the future of journalism. The layering approach, with its clean and pleasant design, has strong potential to change the landscape of online journalism into a more meaningful world.

References

- Atkin, C.K. (1995). Survey and experimental research on effects of alcohol advertising. In: S.E. Martin (Ed.), *The effects of the mass media on the use and abuse of alcohol* (pp. 39-68). Rockville, MD: National Institute on Alcohol Abuse and Alcoholism.
- Buente, W., Robbin, A. (2008). Trends in Internet information behavior, 2000-2004. *Journal of American Society for Information*, 59 (11), 1743-1760.

Foust, J. (2009). *Online journalism: Principles and practices of news for the web*. Scottsdale, AZ: Holcome Hathaway.

Garrison, B. (2005). Online newspapers. In M. B. Salwen, B. Garrison, & P. D. Driscoll (Eds.), *Online News and the Public* (pp. 3-46). New Jersey: Lawrence Erlbaum Associates.

Huang, E. (2007). Use of rich media differs at newspaper, TV Web sites. *Newspaper Research Journal*, 28(3), 85-97.

Huang, E. (2009). The causes of youths' low news consumption and strategies for making youths happy news consumers. *Convergence: The International Journal of Research into New Media Technologies*, 15(1): 105-122.

Hindman, M. (2007). A mile wide and an inch deep: Measuring media diversity online and offline. In P. M. Napolis (Ed.), *Media Diversity and Localism: Meaning and Metrics* (pp.327-45). New Jersey: Lawrence Erlbaum Associates.

Jacobson, S. (2012). Transcoding the news: An investigation into multimedia journalism published on nytimes.com 2000-2008. *New Media & Society* 14 (5): 867-885.

Jones, A. S. (2009). *Losing the news: The future of the news that feeds democracy*. Oxford: Oxford University Press.

Lin, C., Salwen, M. B., Garrison, B., & Driscoll, P. D. (2005). Online news as a functional substitute for offline news. In Salwen, M.B., Garrison, B., & Driscoll, P. D. (Eds.), *Online news and the public* (pp. 237-255). New Jersey: Lawrence Erlbaum Associates.

Machin, D., & Niblock, S. (2008). Branding newspapers: Visual texts as social practice. *Journalism Studies*, 9(2), 244-259.

Maier, S. R. (2010). Newspapers offer more news than do major online sites. *Newspaper Research Journal*, 31(1), 6- 19.

Nielsen, J. (1999). *Designing web usability: The practice of simplicity*. Indianapolis: New Riders Publishing.

Nielsen, J & Pernice, K. (2009). *Eyetracking web usability*. Indianapolis: New Riders Publishing.

Pavlik, J. (2000). The impact of technology on journalism. *Journalism Studies*, 1(2), 229-37.

Poynter. (2007). Eyetracking the news: A study of print and online reading. Retrieved Sep.14, 2012, from <http://www.poynter.org/extra/Eyetrack/index.html#contact>

Pryor, L (2002). Old media firms dig a grave with shovelware. *Online Journalism Review*. Retrieved Sep. 15, 2012, from <http://www.ojr.org/ojr/technology/1017969861.php>

Spyridou, P. & Veglis, A. (2008). Exploring structural interactivity in online newspapers: A look at the Greek Web landscape. Retrieved from <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/rt/prINTERfriendly/2164/1960>.

Wurman, R. (2000). *Information design*. Cambridge, MA: MIT Press.

YanJun Zhao is an assistant professor in the Communication Department, Cameron University. She received her Ph.D. in Mass Communication from Southern Illinois University Carbondale. Email: yzhao@cameron.edu.