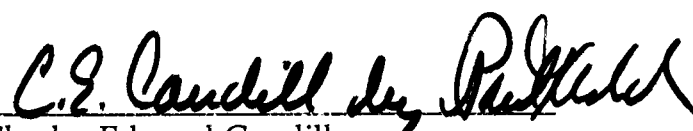
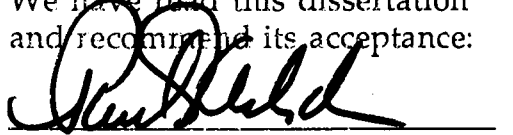
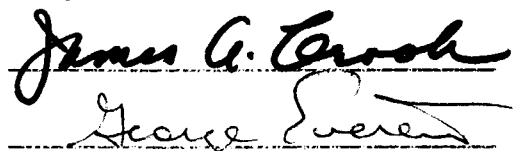
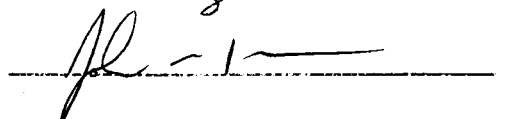


To the Graduate Council:

I am submitting herewith a dissertation written by John Mark King entitled "Visual Communication and Newspaper Reader Satisfaction." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Communications.


Charles Edward Caudill,
Major Professor

We have read this dissertation
and recommend its acceptance:


James G. Crook

George Everett

J. L. Mink

Accepted for the Council:


Associate Vice Chancellor and
Dean of The Graduate School

Visual Communication and Newspaper Reader Satisfaction

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

John Mark King

August 1995

DEDICATION

This dissertation is dedicated to my daughter, Kathleen Alma Dowell King, who entered the world and brightened it for me at 12:46 p.m. April 1, 1994; my wife, Danice Dowell King, who still has the utmost confidence in my abilities to succeed; and my mother, Kathleen Lillian Peach King, who left this world Sept. 23, 1994 and who taught me the joy of teaching and learning.

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A project of this scope and effort could not have been accomplished without help from my family. My wife, Danice, spent endless hours conducting phone surveys, coding data, proofreading and motivating. My daughter, Katie; my parents, Kathleen and Thomas T. King; my brother, Thomas W. King; and my in-laws, Alma and Jim Dowell, all provided continuing support and encouragement.

ABSTRACT

This research applied findings from experimental research to a natural setting to examine visual communication in newspapers and reader satisfaction. The research design included a content analysis of one daily newspaper with a visual design and one with a traditional design. A survey was conducted of 752 readers in three locations, including the publication towns and an equidistant town with subscribers of both newspapers.

Ten sets of hypotheses were formulated. Independent variables included readership of the visual or traditional newspaper, newspaper subscription and community of residence, daily television minutes, cable TV, weekly magazine minutes, readership of large visual newspapers, age, income, education and gender. Control variables were included.

Dependent variables included satisfaction with photo quality, desire for larger photos and more photos, satisfaction with graphics, satisfaction with writing and coverage, satisfaction with appearance, satisfaction with journalistic quality and personal utility and enjoyment.

Hypothesis testing showed that visual newspaper readership resulted in more satisfaction with maps, overall graphic quality and news coverage. Respondents rated the visual newspaper more modern, more appealing and better on overall appearance. However, visual newspaper readership had no impact on nine other appearance variables, a sharp contrast from previous experimental research findings.

Increased time watching television had negative effects on perceptions of overall graphic quality and exciting appearance. Cable TV in the home resulted in desire for multiple photo stories. More time spent reading magazines had little effect on the dependent variables. Readership of large visual newspapers resulted in less satisfaction with feature stories and lower ratings on appearance variables.

Ratings on nine of the appearance variables increased with age. Income and education increases resulted in more satisfaction with visual communication in general, less desire for visual change, but more critical stance toward appearance variables. Males desired more photos and were less satisfied with the appearance of the newspaper than females.

Exploratory research found that editor influence, maturity and home ownership, education, gender, readership of large visual newspapers, clipping coupons and equidistant town residence had more impact than other variables in the hypothesis testing.

The author suggested multi-variate research designs for future visual communication research.

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CHAPTER I.

INTRODUCTION

Purpose of the Research

This research was conducted to investigate the effects of use of visuals in daily newspapers in a natural setting by comparing the content of a newspaper that uses visuals extensively to a newspaper that takes a more traditional approach to visual communication. Then, indices of reader satisfaction of the two newspapers, measured through telephone surveys of subscribers of both newspapers, were constructed, analyzed and compared.

For the purposes of this study, visuals were defined as photographs, location maps, weather maps, information graphics or charts, story logos, editorial cartoons, comic strips, crossword puzzles, boxes, screens, reverse type, small decorative devices known as dingbats, illustrations and line drawings (Appendix A).

Previous visual communication research applied to newspapers has suggested that people are attracted to visuals in newspapers and positively evaluate papers that devote more space to visuals. Most of this research has been conducted with experimental methods with an emphasis on the receiver. Other visual communications studies have investigated visual communication from the perspective of the message, through content

analysis studies. This type of research has shown that newspapers are using more visuals and more color.

Much of the research has produced descriptive studies. Researchers have not examined use of multiple visual elements nor the ratio of visuals to total editorial space. Typically, researchers have measured the number of stories or visual elements rather than the space they occupy on the page. The amount of space devoted to different visual elements and the amount of visual space allotted to different types of stories may be a much better indicator of the use of visuals on newspaper pages because this type of measure provides a better indicator of how much of the newshole newspapers devote to visuals.

In terms of analyses, these types of studies have sometimes relied on frequency distributions to arrive at any conclusions. Most have not used multivariate approaches to assess the relationships among the elements of visual communication in newspapers and reader satisfaction.

Very few experimental studies have measured reader responses concerning satisfaction with visual communication. Most have examined reader responses such as recall of information, attention, understanding, comprehension and retrieval of information.

Reader satisfaction of newspapers in a real-life situation, the measure employed in the present study, is one indication of readers' response to newspapers' use and treatment of a variety of visuals. Findings from the present study cannot be generalized to all newspapers nor all newspaper readers since the subjects of the study were two small daily newspapers in

Kansas and their subscribers in three small towns. Results are most applicable to small daily newspapers, but implications for larger newspapers and emerging media technologies are discussed in the conclusion chapter.

The goal of this research was to provide greater knowledge about whether increased use of visuals results in increased reader satisfaction on several dimensions. This study examined the quantity of visuals and space devoted to visuals, but did not consider the quality of visuals. Understanding the impact of the quantity of visuals and the amount of space allotted for visual elements could be of value to visual communicators seeking to understand reader response to current visual trends in natural situations. This research could also be valuable to newspaper publishers and editors working to gain increased readership and visual communication educators seeking to teach visual communicators of the future.

Statement of the Research Problem

Stated simply, the research problem is that communications researchers have limited knowledge of the impact of visuals in newspapers on reader satisfaction. We have experimental research which suggests that readers like color graphics and photographs. Much of this research has been performed in controlled laboratory settings. Typically, respondents are shown color and black and white versions of newspapers, often as projected slides, for a few seconds and then asked to rate each newspaper on a wide variety of measures. This kind of study often does result in impressive mean

differences between the two versions of the paper, but such studies may suffer from internal and external validity problems. In some cases, researchers have not accurately measured what they intended to measure, and the results cannot be generalized due to unrepresentative sampling of readers.

Flashing a slide of a newspaper on a screen to measure how people react to the use of visuals may not measure how readers relate to their papers in a meaningful way. While such experiments allow statistical control, they cannot accurately measure readers' perceptions of visuals in real newspapers that readers read every day. To be sure, findings from experimental studies should not be ignored because they are often the first step to building hypotheses for field studies and they do allow isolation of variables not possible in field studies.

Other studies typically involve content analysis of newspapers to determine the extent of visuals being used. These studies often find that many papers are adopting the style of *USA Today* with a lot of color photographs and color graphics. Yet these studies don't explain much about how readers are reacting to visuals in their newspapers.

The problem is that the impact of visuals in newspapers on reader satisfaction is not fully known. This research problem is a significant one for visual communication researchers, professionals in the newspaper industry and visual communication educators. If new knowledge can be gained concerning how readers respond to different uses of visuals such as multiple picture stories, larger photographs and graphics in a more natural setting, then researchers would have a better understanding of the effects of visuals;

professionals in the newspaper industry would have a better idea of how to use visuals to the advantage of the newspaper and the community; and visual communication educators would have a better idea about how to teach visual communication to communications students.

Perhaps the answer to the question: "Do visuals matter to newspaper readers?" can be best addressed by using a research design which provides for a more naturalistic study and statistical procedures that still allow for adequate statistical control of the data. This study set out to do that by using multiple methods of research not widely applied to visual communications research in a natural setting.

The research design included a content analysis of two small daily community newspapers to determine differences in visual content and a survey of a total of 752 subscribers of the newspapers in three communities in close proximity to determine opinions about the visual content of the newspapers. The primary difference between the two newspapers was how the papers used visual elements such as photographs, illustrations, information graphics, maps, boxes, screens and editorial cartoons. Amount of visual space devoted to stories, the size of visual elements and the ratio of visual space to editorial (non-visual) space also differed between the two newspapers. One newspaper had a more visual approach to design and one newspaper had a more traditional (less visual) approach to design. Three demographically similar communities were chosen to provide a natural study of opinion differences among the residents of the three towns. The three towns included the town in which the visual newspaper was

published, the town in which the traditional newspaper was published and a town equidistant from the others with subscribers of both newspapers.

Also included were numerous variables measuring behaviors, community ties, affiliation with the newspapers, use of other media and demographics of the respondents to determine which of these independent variables contribute to the dependent variables such as measures of satisfaction with photo quality; desire for larger photos, multiple photo stories and more color photos and more news, feature and sports photos; satisfaction and desire for other graphics; satisfaction with writing and coverage; satisfaction with the appearance of the newspaper; satisfaction with the journalistic quality of the newspaper; and personal utility and enjoyment of the newspaper. Frequencies, chi square analyses, regression, factor analyses and multiple regression analyses were performed to test 10 sets of hypotheses and for exploratory research.

A Review of the Literature

The literature concerning visual communication and readers' response to visuals in newspapers has generally taken three approaches to the topic. Researchers have performed content analysis studies, experiments and surveys to examine how newspapers use visuals, how readers respond to visuals in newspapers and how newswriters view visual communication.

Generally, most of the studies can be further subdivided into research on general design and color; information graphics, maps and illustrations;

and photographs. The review of literature was organized in this manner to reflect the general research trends in visual communication and newspapers.

Content Analysis Studies

Stone, Schweitzer and Weaver¹ analyzed a sample of 100 jointly owned daily newspapers to determine which newspaper variables were associated with adoption of modern newspaper design.

The researchers found that geographic location was an indicator of modern design. Newspapers in the Southeast and Southwest were more likely to use modern design techniques, while newspapers in the Northeast, Midwest, the Plains States and the Middle States were more likely to take a traditional approach to design.

They also noted that the majority of smaller newspapers, those with fewer than five sections, were more likely to use traditional design. Modern newspaper design was also more likely among papers that had a higher percentage of street sales and a greater city zone circulation. Finally, this study found no evidence of a relationship between modern design and use of sensational design elements.

¹Gerald C. Stone, John C. Schweitzer and David H. Weaver, "Adoption of Modern Newspaper Design," *Journalism Quarterly*, 55: 761-766 (Winter 1978).

Lester² conducted a content analysis of 300 front pages of *USA Today*, the *Chicago Tribune*, the *New Orleans Times-Picayune*, the *New York Times* and the *Los Angeles Times* to measure types of visual elements used. He found that photographs were the visual element of choice for these large daily newspapers. There were 1,148 photos, 133 illustrations, 64 charts combined with an illustration, 40 maps, 16 charts, two charts combined with a photo, and one map combined with an illustration.

Geraci³ examined the content of pictures published in *USA Today* during one week in 1983 and compared them to categories of illustration tabulated in *The Continuing Study of Newspaper Reading*, which tracked the kinds of visuals used in 138 daily newspapers from 1939-1950. Results showed that percentages of various types of visuals in *USA Today* did not differ much from those used from 1939-1950.

Geraci also concluded that *USA Today* seems to be targeting men because of the large numbers of sports photos run in the newspaper, about three times the average from *The Continuing Study of Newspaper Reading*.

Gladney⁴ performed a content analysis of Tuesday and Wednesday editions of front pages and section fronts of the nation's 230 largest

² Paul Lester, "Use of Visual Elements on Newspaper Front Pages," *Journalism Quarterly*, 65: 760-763 (Fall 1988).

³ Philip C. Geraci, "Newspaper Illustration and Readership: Is *USA Today* on Target?" *Journalism Quarterly*, 61: 409-413 (Autumn 1984).

⁴ George Albert Gladney, "The McPaper Revolution?: *USA Today*-style Innovation at Large U.S. Dailies," *Newspaper Research Journal*, 13: 54-71 (Winter/Spring 1992).

newspapers to identify adopters and non-adopters of attributes of *USA Today*. He constructed a *USA Today*-ness index based on use of color; pictures and graphics; trivia and fluff; brevity, capsulization and promotion; and complexity and depth.

Gladney found that only two papers outdid *USA Today* on the index and that the average daily newspaper used less color, more photos and graphics, more celebrity coverage, less sports coverage, less weather coverage, fewer stories 6 inches or less in length, fewer summaries, longer lead sentences and longer page one stories. Overall, while there was evidence of papers adopting *USA Today* style, most papers were not doing so.

Barnhurst and Nerone⁵ conducted a longitudinal content analysis of front pages of three newspapers from 1885-1985 to track long-term design trends. The newspapers were the *San Francisco Chronicle*, the Springfield, Illinois, *State Journal-Register* and the *Peterborough Transcript* of New Hampshire. The researchers used a constructed week sample of seven issues of each newspaper, selected at 10-year intervals.

Results showed that from 1885 to 1985, the average number of items on the front page decreased from 49 to nine; the average number of stories decreased from 25 to six; the average number of words decreased from 12,000 to 4,400; and layout became more horizontal. Surprisingly, there was no

⁵ Kevin G. Barnhurst and John C. Nerone, "Design Trends in U.S. Front Pages, 1885-1985," *Journalism Quarterly*, 68: 796-804 (Winter 1991).

mention of changes in photographs nor information graphics over the 100 years.

The authors concluded that a design trend toward modern design occurred between 1975 and 1985 and that newspapers became more homogenous and less diverse in design, suggesting a definite trend toward uniformity of design. Newspapers using modern design were defined by these researchers as those with an average of about nine items on the front page, an average of six stories on the front page, an average of 4,400 words on the front page and layout with more horizontal orientation. Current definitions of modern design also include use of large dominant photographs, color, indexes, story teasers and large flags or nameplates on the front page and on section fronts, information graphics, multiple photos and stories designed in easily digestible modular packages, basically the design that *USA Today* uses. Barnhurst and Nerone report that *USA Today* came along after the trend toward modern design had been established, not before, suggesting that the national daily was a design follower rather than a trendsetter.

Tankard⁶ conducted a study to identify a list of common pitfalls to avoid with newspaper information graphics. "The approach was not that of a rigorous content analysis with an elaborate sampling scheme. Rather, the

⁶ James W. Tankard, Jr., "Quantitative Graphics in Newspapers," *Journalism Quarterly*, 64: 406-415 (Summer/Autumn 1987).

project was more like a biological field study, in which the researcher collects specimens and attempts to classify them."⁷

Smith and Hajash⁸ examined full issues of a consecutive week of 30 daily newspapers to assess use of information graphics throughout the newspaper, rather than just the front page. All other visual devices were excluded from the study. Results revealed 947 information graphics, with an average of 32 graphics per newspaper, five per edition. The average information graphic was about 4 inches square. Maps were the most frequent type of information graphics, constituting 46 percent. Bar charts, tables, line charts, lists, how graphics, pie charts and scatterplots followed in frequency.

Newspapers in the study averaged one information graphic for every 17 pages, a much lower frequency than *USA Today*, which contained 1.3 graphics per page, suggesting that, at least concerning information graphics, daily newspapers were no visual match for *USA Today* in 1988.

Ramaprasad, Ader, Henry and Hines⁹ content analyzed the use of information graphics during the Gulf War in the *Chicago Tribune*, the

⁷ James W. Tankard, Jr., "Quantitative Graphics in Newspapers," p. 411.

⁸ Edward J. Smith and Donna J. Hajash, "Informational Graphics in 30 Daily Newspapers," *Journalism Quarterly*, 65: 714-718 (Autumn 1988).

⁹ Jyotika Ramaprasad, Chris Ader, Jim Henry and Janet Hines, "Information Graphics During the Gulf War: Their Use, Information Type and Form in Two Newspapers and Two Newsmagazines," (paper presented to a meeting of the Newspaper Division of the Association for Education in Journalism and Mass Communication at the Southeast Regional Colloquium), Stone Mountain, Ga., 1992.

St. Louis Post-Dispatch, Time and *Newsweek*. The researchers found 254 information graphics on the Gulf War, about two per issue. Newspapers ran 34 percent of the graphics in color. Overall, the information graphics on the Gulf War were usually given prominent locations such as the inside page of the front section or the front page. The most common topics of the information graphics on the Gulf War were the war itself, weapons and Mideast weather maps.

Fosdick¹⁰ analyzed the content of three daily newspapers in Wisconsin and the *Christian Science Monitor* to identify the source of photos and whether the content of photos published over a two-week period in 1966 was hard news or soft news. He found that almost half of the photos were shot by local staffers and that 65 percent of all the images were soft news photos. Conversely, 35 percent were hard news photos.

Fosdick concluded that photojournalism students who entered the newspaper job market would be disappointed with their chosen careers, because they would be called upon to produce soft news photos rather than cover substantive issues with their visual reports. He said most newspapers

...still do not use photographs and picture layouts to creatively and dramatically report and interpret contemporary affairs for their readers. As a result, readers cluster around the tube for their visual reports of the world about them.¹¹

¹⁰ James A. Fosdick, "Picture Content and Source in Four Daily Newspapers," *Journalism Quarterly*, 46: 368-371 (Summer 1969).

¹¹ James A. Fosdick, "Picture Content and Source in Four Daily Newspapers," p. 371.

Trayes and Cook¹² content analyzed 16 major daily newspapers published in Chicago, Detroit, Los Angeles, New York, Philadelphia and Washington to examine newspaper picture usage in cities with the largest black populations in the United States. The sample was selected over a five day period in 1973. The researchers found that the average number of photos published was 46 per day; 56 percent had no credit lines; and 24 percent were produced by staff photographers. Ninety-two percent of the photos contained people; 67 percent of subjects in the photos were men; 81 percent of photos with people were whites; 10 percent were African-Americans. On page one, 97 percent of the photos contained people and 92 percent of these contained only whites.

Lester¹³ found that newspaper coverage of African-Americans improved from 1937 to 1990, but that coverage typically placed African-Americans in stereotypical (crime, sports and entertainment) content categories. Monday through Friday issues of the *New York Times*, the *Chicago Tribune*, the *New OrleansTimes-Picayune* and the *San Francisco Chronicle* were examined in five-year intervals from 1937 to 1983 and in 1990.

Results showed that frequency of African-Americans in photos increased strongly; stereotypical images increased; and race-blind images,

¹² Edward J. Trayes and Bruce L. Cook, "Picture Emphasis in Final Editions of 16 Dailies," *Journalism Quarterly*, 54: 595-598 (Autumn 1977).

¹³ Paul Martin Lester, "African-American Photo Coverage in Four U. S. Newspapers, 1937-1990," *Journalism Quarterly*, 71: 380-394 (Summer 1994).

which were photos that were not about African-Americans but contained African-Americans, peaked during the civil rights era and then dropped after that era.

Singletary¹⁴, in a 1978 study, also conducted a longitudinal examination of photos used on front pages over a 40-year period, 1936 to 1976. The sample of papers included the *Chicago Tribune*, the *Los Angeles Times*, the *New York Times*, the *Philadelphia Inquirer*, the *St. Louis Post-Dispatch* and the *Washington Post*. The sample included one week of issues for each month of 1936, 1956 and 1976. Of 3,141 photos examined, 1,249 (40 percent) were mug shots. In 1936, 59 percent of photos were mug shots. This category decreased to 30 percent by 1976. Photos of crime-corruption, accident-disaster, human interest and public affairs-politics increased the most. Vertical location of photos at the top of the page decreased from 84 percent in 1936 to 50 percent in 1976. Percentage of photos with articles decreased slightly from 98 percent in 1936 to 92 percent in 1976. Percentage of whites only in photos decreased from 95 percent in 1936 to 80 percent, 40 years later. Percentage of African-American subjects only increased from 1 percent to 4 percent from 1936 to 1976. Gender differences were also noted. In 1936, 69 percent of subjects in photos were males only. By 1976, that figure had decreased to 58 percent. But, females only in photos decreased from 17 percent to 12 percent. Photos containing both males and females more than doubled from 9 percent in 1936 to 21 percent in 1976.

¹⁴ Michael W. Singletary, "Newspaper Photographs: A Content Analysis, 1936-1976," *Journalism Quarterly*, 55: 585-589 (Autumn 1978)

Lester¹⁵ conducted an analysis of mug shots of front pages of five newspapers in 1986. Comparisons were made between *USA Today* and the *New York Times*, the *Chicago Tribune*, the *New Orleans Times-Picayune* and the *Los Angeles Times*. Results showed that of 1,148 photos, 520, almost half, were mug shots. In *USA Today*, 74 percent of the photos were mug shots. The four other papers all had less than 40 percent mug shots. Race of the entire sample was 83 percent white and 11 percent African-American. The largest content categories were politics, sports, and entertainment. Fifty-nine percent of the mug shots were not run with a story.

Kenney and Lacy¹⁶ selected a sample of 114 daily newspapers and conducted a content analysis to determine economic forces behind use of color in newspapers. This study counted the number of graphics and also took into account the space occupied by the graphics, to get a better indication of the amount of space the newspaper devoted to graphics in addition to the frequency of such visuals.

Results showed that the number of graphics, the percentage of the space on front pages allocated to graphics and color increased as competition from other newspapers increased. Television competition did not impact the number nor space of graphics nor color. Group ownership size did not appear

¹⁵ Paul Martin Lester, "Front Page Mug Shots: A Content Analysis of Five U. S. Newspapers in 1986," *Newspaper Research Journal*, 9: 1-9 (Spring 1988).

¹⁶ Keith Kenney and Stephen Lacy, "Economic Forces Behind Newspapers' Increasing Use of Color and Graphics," *Newspaper Research Journal*, 8: 33-41 (Spring 1987).

to influence the space devoted to graphics on the front pages. Group ownership size did appear to impact the number of graphics used on the front page but not the number nor space devoted to color.

Experimental Studies

An experiment by Price¹⁷ found that use of vertical headlines, vertical pictures and narrow (11 picas wide) body type did not increase readership and comprehension nor provide higher ratings of "interestingness" nor lower ratings on "pleasingness." The basic idea was that subjects who were exposed to more complex newspaper designs would rate such papers as more interesting and less pleasing and that more complex designs would increase readership and comprehension. The idea was not supported.

Siskind¹⁸ devised an experiment to test effects of traditional average-designed, contemporary average-designed, well-designed traditional and well-designed contemporary newspaper pages on reader preferences. She defined traditional papers as "...those which are symmetrically balanced and have column rules. Contemporary makeup consists of horizontal makeup and few

¹⁷ Henry Thomas Price, "The Effect of Newspaper Design Complexity on Readership, Comprehension, Interestingness and Pleasingness" (Ph.D diss., Michigan State University, 1972), abstract in *Dissertation Abstracts International* 33 (1972): 9295A-6296A.

¹⁸ Theresa G. Siskind, "The Effect of Newspaper Design on Reader Preferences," *Journalism Quarterly*, 56: 54-61 (Spring 1979).

stories per page. Although boxes may be used, column rules may not."¹⁹

Well-designed pages were defined as

...simple, utilizes abundant white space, has relatively few (five or six) stories per page, uses eye-catching photographs and other design elements, and is orderly and straightforward.²⁰

The test was administered by showing slides of the manipulated pages to 84 subjects. Nine-point, 20-item semantic differential scales were used to measure the dependent variables including informative-uninformative, unpleasant-pleasant, easy-difficult, unfair-fair, unimportant-important, irresponsible-responsible, clear-unclear, truthful-untruthful, messy-neat, bold-timid, modern-old-fashioned, tense-relaxed, dull-exciting, weak-powerful, authoritative-unauthoritative, valuable-worthless, boring-interesting, passive-active, incomplete-complete and accurate-inaccurate. Results, compiled by summing all the scales for each of the four designs, showed that the contemporary well-designed paper ranked first, followed by the contemporary average-designed paper, the traditional well-designed paper and the traditional average-designed paper.

¹⁹ Theresa G. Siskind, "The Effect of Newspaper Design on Reader Preferences," p. 55.

²⁰ Theresa G. Siskind, "The Effect of Newspaper Design on Reader Preferences," p. 55.

Click and Stempel²¹ tested their hypothesis that readers would prefer newspaper front pages with four-color halftones over those with only black and white halftones by selecting four pairs of newspapers with similar front pages for an experiment. The only major difference was that one paper had black and white photographs and the other had color photographs. However, they were not experimentally controlled papers since they were different newspapers with different content on the front page.

Respondents were 136 members of seven civic organizations in Ohio. Subjects saw different versions of the papers (in the form of slides projected on a screen) for 15 seconds and then filled out a 20-item semantic differential scale to evaluate the papers. Results showed that in 19 of the 20 scales, the papers with color photos were rated higher than those with black and white photos. T-tests revealed that 15 of the comparisons were significantly different. Thirteen were significant at the .001 level and two at the .05 level. The papers that used color photographs were rated significantly higher on pleasant-unpleasant, valuable-worthless, interesting-boring, fair-unfair, truthful-untruthful, unbiased-biased, responsible-irresponsible, exciting-dull, fresh-stale, easy-difficult, neat-messy, colorful-colorless, bold-timid, powerful-weak and modern-old fashioned. The only dependent variable in which the color photos scored significantly lower than the black-and-white photos was tense-relaxed.

²¹ J. W. Click and Guido H. Stempel III, "Reader Response to Front Pages with Four-color Halftones," *Journalism Quarterly*, 53: 736-738 (Winter 1976).

These findings represent some of the most dramatic effects of color photos in newspapers ever uncovered in experimental research on the topic. Even though the sample was not representative and the method of presentation not very realistic, these researchers did establish the basic measurement scales for several subsequent studies on the effects of color on newspaper pages which found similar, though not as powerful, effects.

Bohle and Garcia²² performed an experiment to test reader reaction to spot color and color photographs in newspaper design. To address the problem of artificiality in presenting newspaper pages as slides, the researchers made up sets of realistic looking newspaper pages including 15 front page versions, six lifestyle pages and three sports section front pages. The only differences among the individual pages in the sets were the kind and amount of color used on the pages.

Bohle and Garcia tested eye movement and overall opinions of the papers based on the color manipulations. A sample of 83 subjects, drawn from four cities and stratified by gender and race, was used in the test. Results showed that whether a photo was in color or black and white, initial eye movement was almost always toward the photo at the top of the page. After seeing the photo, readers were attracted to spot color the most, even if it was at the bottom of the page.

²² Robert H. Bohle and Mario R. Garcia, "Reader Response to Color Halftones and Spot Color in Newspaper Design," *Journalism Quarterly*, 64: 731-739 (Winter 1987).

The opinion questions were 20 semantic differential scales divided into five types including evaluative (pleasant-unpleasant, valuable-worthless, important-unimportant, interesting-boring), ethical (fair-unfair, truthful-untruthful, accurate-inaccurate, unbiased-biased, responsible-irresponsible), stylistic (exciting-dull, fresh-stale, easy-difficult, neat-messy, colorful-colorless), potency (bold-timid, powerful-weak, loud-soft) and activity (tense-relaxed, active-passive, modern-old fashioned).

"Readers clearly like color,"²³ the researchers concluded. Results showed that pages that use a great deal of color ranked higher on evaluative measures of important, interesting and pleasant than any of the other pages. Color did not have an impact on ethical measures. On the stylistic measures, color pages scored higher on easy, fresh, colorful and exciting. The pages that used the most color also scored highest on all the potency variables and higher on the activity variables of active and modern. "Color does make a page appear more interesting, pleasant, exciting and powerful."²⁴

It is possible that the strong opinion differences observed in the color studies might have been due to the relative novelty of color in newspapers at the time the studies were performed. However, the trend toward preference for color has appeared to continue in later studies, though not as strongly.

²³ Robert H. Bohle and Mario R. Garcia, "Reader Response to Color Halftones and Spot Color in Newspaper Design," p. 736.

²⁴ Robert H. Bohle and Mario R. Garcia, "Reader Response to Color Halftones and Spot Color in Newspaper Design," p. 739.

Garcia and Bohle²⁵ expanded their thoughts on the previous study in a report published by The Poynter Institute. The researchers reported that more educated respondents seemed to be less attracted to color than less educated respondents. Less educated respondents also rated color pages as easier than black and white pages. Respondents from cities in which colorful newspapers were published rated color pages higher. Older respondents rated color pages as easier than black and white pages, contrary to expectations.

One reason may be that older readers may find color helpful because it helps to organize the page, that is, tint blocks over type show the beginning and end of a story more clearly.²⁶

Garcia and Bohle also concluded that main photographs on the page had overwhelming attraction power, whether in color or black and white. However, spot color, especially tint blocks over type, could sometimes reduce the attractiveness of secondary black and white photos on the page.

Weaver²⁷ cautioned that editors should not jump on the color bandwagon based on this study and other proprietary Eye-Trak research done by researchers affiliated with the Poynter Institute. The Eye-Trak studies

²⁵ Mario R. Garcia and Robert Bohle, "Poynter Research Findings," in *Color in American Newspapers* (St. Petersburg, Fla.: The Poynter Institute For Media Studies, 1986), 32-42.

²⁶ Mario R. Garcia and Robert Bohle, "Poynter Research Findings," p. 42.

²⁷ David Weaver, "Two Research Reports are Helpful—But Don't Try to Edit by the Numbers," *ASNE Bulletin*, 26-28 (July/August 1991).

...can be criticized for using an obtrusive headband-camera device to record reader eye movements, for using prototype newspapers with mainly timeless features over a four-week testing period, for using only 30 subjects at each of three sites, and for using an unnatural setting (three test sites) for reading the newspaper.²⁸

Weaver concludes that

...editors cannot ignore the results of such systematic research and still claim to be well informed. Research, like color in newspapers, is a tool, not a rule. But in the end, editors will need to choose from these studies and their own local research what is of use to them at their specific newspapers, given their limitations, their knowledge of other particular readers, and their goals as journalists.²⁹

Editors should also take into account design expertise of their staff and reproduction quality of the pre-press and press operations before embarking on large changes in use of color.

Smith³⁰ replicated a study on newspaper design by Utt and Pasternack done in Tennessee and New Mexico. Smith performed this study in Florida,

²⁸ David Weaver, "Two Research Reports are Helpful—But Don't Try to Edit by the Numbers," p. 26.

²⁹ David Weaver, "Two Research Reports are Helpful—But Don't Try to Edit by the Numbers," p. 28.

³⁰ Ron F. Smith, "Black and White, UNread All Over? How Design & Color Affect Reader Judgment of Newspapers, " *Newspaper Research Journal*, 10: 75-85 (Winter 1989).

where students were regularly exposed to colorful newspapers. Smith wanted to test how design (traditional, modern and modular) and color affect reader judgment of newspapers. To do this he set up an experiment with 92 college students from Florida, all frequent readers of the *Orlando Sentinel* and the *St. Petersburg Times*, papers noted for strong graphics and good journalism.

Subjects were shown slides of front pages of 20 newspapers (three days during one week in January 1984). Slides were flashed for 10 seconds to get the readers' initial impression of the appearance of the paper. Subjects then rated the papers on 19, seven-point semantic differential scales. Independent variables were design (traditional, modern and modular), color, type of news photos (hard news or soft news); and participation in the Utt and Pasternack study (readers who were accustomed to non-graphic papers) or participation in the Smith study (readers who were accustomed to graphic Florida newspapers). Dependent variables were reader judgment on the 19 scales.

Results indicated that students in the Utt and Pasternack study preferred modern papers on measures such as pleasant, important, interesting and informative. However, they rated traditional papers as more valuable, accurate, hard-news oriented, timid, stale and dull. This suggests that readers accustomed to gray (traditional or modular) papers rate such papers high on important journalistic variables, even though they do describe them as stale and dull.

Florida students favored modern design on measures such as informative, responsible and pleasant. There were not significant differences on important, active, professional and worthless measures between the

modern, traditional and modular designs. This suggests that modern design does not change readers' opinions on important journalistic variables if they are accustomed to visual papers.

The Florida study also found that tests on spot color versus no-spot color revealed that papers that used spot color were rated higher on several attractiveness and utility measures such as interesting, readable, modern, good, colorful, bold, fresh and exciting. Tests comparing use of soft-news photographs versus hard-news photographs found that papers that featured soft-news photos on the front page were rated as more responsible, pleasant, readable, organized, modern, colorful, bold, exciting and fresh. Importantly, there were no significant differences in important journalistic variables such as important, informative, responsible, accurate, professional and valuable. Overall, color and modern design seemed to attract readers on several attractiveness variables without reducing important journalistic variables such as accuracy, importance and responsibility if those readers were accustomed to colorful, modern papers.

Wanta and Gao³¹ conducted an experiment with 203 high school students to determine how writing and design variables impact information recall, and perceived enjoyment, readability and attractiveness.

Stepwise regression analysis revealed that greater numbers of stories had a negative effect on enjoyment, and more pullout quotes increased

³¹ Wayne Wanta and Dandan Gao, "Young Readers and the Newspaper: Information Recall and Perceived Enjoyment, Readability and Attractiveness," *Journalism Quarterly*, 71: 926-936 (Winter 1994).

enjoyment and readability. Larger lead photos had a negative impact on readability. Increased numbers of photographs and larger graphics increased attractiveness. Knowledge recall was positively impacted by higher perceived enjoyment, more pullout quotes, more columns per story, and more jumps. Knowledge recall was reduced by lower human interest measures and lower grade reading-levels.

The researchers noted that R-squares that ranged from .05 for the enjoyment variable to .27 for knowledge recall mean that other variables not included in the study may help explain more of the variance among the dependent variables.

Tankard³² designed an experiment to determine the effects of chartoons (combination cartoons and charts-*USA Today* style), three-dimensional graphs and plain graphs on appeal to readers and recall. Six basic informational graphs were made up. A bar chart, a pie chart and a line chart were devised as plain and cartoon charts. Three other charts (bar chart, piece chart and line chart) were constructed as plain charts and three-dimensional charts. Two experimental groups of students were selected. Subjects were exposed to the manipulated charts (in the form of projected slides) for one minute. After viewing, subjects rated the graphs on five semantic differential scales (interesting-uninteresting, dull-exciting, pleasant-unpleasant, weak-strong and appealing-unappealing). Recall of content was

³² James W. Tankard Jr., "Effects of Chartoons & Three-Dimensional Graphs on Interest & Information Gain," *Newspaper Research Journal*, 10: 91-103 (Spring 1989).

measured by asking three multiple-choice questions of each graph. Results showed that cartoons and three-dimensional graphs were more appealing than plain graphs, but the flashier graphics did not provide any more information gain than the plain graphs.

Kelly³³ tested accuracy of recall between respondents exposed to information graphics with low data-ink ratio and high data-ink ratio. The data-ink principle, devised by Tufte, basically says that the ink in an information graphic should represent information drawn from the statistical or numerical information presented and not be cluttered up with chart junk.

Results showed that there were no differences in recall between respondents who had seen the low data-ink graphics and the high data-ink graphics, suggesting, as was suggested in the Tankard study on graphics, that decorative elements in the graphics did not diminish information gain.

Pasternack and Utt³⁴ found in an experiment with 70 subjects that 70 percent of the subjects read a large, dominant information graphic before they read the headline or text. A smaller graphic was read after the headline. The researchers also found that 55 percent read graphics to get the informational content of the story. The authors concluded that readers expect information

³³ James D. Kelly, "The Data-Ink Ratio and Accuracy of Newspaper Graphs," *Journalism Quarterly*, 66: 632-639 (Autumn 1989).

³⁴ Steve Pasternack and Sandra H. Utt, "Reader Use & Understanding of Newspaper Infographics," *Newspaper Research Journal*, 11: 28-41 (Spring 1990).

graphics to provide them with information, not just color and an attractive package.

Ramaprasad³⁵ carried out an experiment with 114 subjects to examine effects of information graphics on attention, information retrieval, understanding and recall. Results showed that there were no differences in attention between the experimental group, which saw an information graphic and the control group, which saw only text. There were also no differences in understanding the story nor on information retrieval. The total score on recall of specific information about the story was not significantly different between the graphic and no-graphic groups. However, the experimental group showed higher scores on questions which involved high visual support in the graphic. Conversely, the control group, which did not see the graphic, scored higher on questions based on the textual information.

David ³⁶ devised an experiment to test accuracy of information graphics that seemed to violate principles of accuracy of perception. Eight distorted graphics were tested against control graphics which were simple pie charts and bar charts in a within-subjects design. The researcher found that error rates, based on respondent estimates of quantities in the control and experimental graphics, were different statistically for five of the eight graphs.

³⁵ Jyotika Ramaprasad, "Informational Graphics in Newspapers: Attention, Information Retrieval, Understanding and Recall," *Newspaper Research Journal*, 12: 92-103 (Summer 1991).

³⁶ Prabu David, "Accuracy of Visual Perception of Quantitative Graphics: An Exploratory Study," *Journalism Quarterly*, 69: 273-292 (Summer 1992).

Error rates were higher in the experimental graphics, suggesting that distortions of charts, such as slicing up a heart for a Valentine's Day graphic rather than using a simple pie chart, may lead to distortions of size estimation.

David³⁷ extended this line of research in another study to determine if dispersing individual components of a pie chart from the center causes distortions leading to biased size estimates and if so whether these distortions are more pronounced for complex shapes compared to regular shapes such as circles.

He found that there was more error of size estimates among subjects who saw the complex shapes, such as a pie chart represented by the form of an apple with a bite taken out of it, than among respondents who saw simple circular pie charts. Furthermore, he found that dispersing the components from the center had no negative effects on accuracy. This was perhaps due to the fact that such charts often are accompanied by bold text giving the exact percentages.

Griffin and Stevenson³⁸ experimented to find if locator maps helped to increase reader understanding of geography in foreign news. Respondents in a post-test only experiment were exposed to stories that contained text

³⁷ Prabu David, "Accuracy of Perception of the Different Faces of the Pie," *Visual Communication Quarterly*, 1: 8-9 (Fall 1994).

³⁸ Jeffrey L. Griffin and Robert L. Stevenson, "The Effectiveness of Locator Maps in Increasing Reader Understanding of The Geography of Foreign News," *Journalism Quarterly*, 71: 937-946 (Winter 1994).

explaining the geographical location and a map, text only, map only and neither. Results showed that the redundancy condition, a story that contained text explaining the geographical location and a map, had the strongest effect on increasing geographic knowledge. Having neither the map nor the textual information provided the least geographical knowledge.

Ward³⁹ found that experimental subjects who read a story and sidebar graphic standing alone had higher comprehension scores than subjects who saw only a story, or those who were exposed to a story and a table. This suggests that illustrative devices within information graphics may actually aid understanding, a finding contrary to the popular conception of illustrations in information graphics as chart junk.

However, Kelly⁴⁰ found somewhat different results. Subjects who read more complex graphs had mean scores that were not significantly different from those of respondents who read less complex graphs. Labeling data points did increase accuracy over unlabeled data points. Finally, the more time subjects spent reading the graphics the more their accuracy of information increased.

³⁹ Douglas B. Ward, "The Effectiveness of Sidebar Graphics," *Journalism Quarterly*, 69: 318-328 (Summer 1992).

⁴⁰ James D. Kelly, The "Effect of Visual Attractiveness on the Accuracy of Information Recalled from Newspaper Graphs," (Ph.D. diss., Indiana University, 1990), abstract in *Dissertation Abstracts International* 51/05-A(1990): 1430.

Lott⁴¹ designed an experiment to determine if non-lead information graphics attract readers to stories, prolong reader interaction and increase reader knowledge. In an experiment with 300 subjects she devised five versions of a small information graphic with a 10-inch non-lead story placed at the bottom of a newspaper page. She found that versions of the pages with color had no more attraction value than those without color. Versions with infographics attracted readers more than versions with text only. Black and white and color versions with the infographic did not differ on knowledge-gained. Reader interaction (time spent) was longer with versions that combined an informational graphic with text. Finally, versions with information graphics all had higher scores on knowledge-gained than the text only version.

Griffin and Stevenson⁴² tested the effects of "how" graphics, graphics that show how a news event happened or explain a complex issue, on story comprehension. Story comprehension was measured by administering an eight-question test of the information in the story and graphic. The control group scored lowest on average, 2.3, since they did not see the story nor the

⁴¹ Pam Lott, "Informational Graphics: Are Non-lead Visual Displays Beneficial to the Reader?" (paper presented to a meeting of the Visual Communication Division of the Association for Education in Journalism and Mass Communication Annual Convention), Atlanta, Ga., 1994.

⁴² Jeffrey L. Griffin and Robert L. Stevenson, "The Effectiveness of 'How Graphics' and Text in Presenting the News," *Visual Communication Quarterly*, 1: 10-11, 16 (Spring 1994).

graphic. Subjects who saw the graphic only scored 5.2, and those who saw the text only scored 5.6. Respondents who saw both the story and the graphic scored highest, 6.9 correct. These findings suggest that text and information graphics support each other to increase understanding of complex events or issues, while text or graphics alone may not be as effective in increasing understanding.

Wolf and Grotta⁴³ conducted an experiment to measure the influence of photos of animated subjects on recall of information and attention drawing power. Results showed that respondents who had seen versions of a newspaper page with a portrait of a dancer more accurately recalled information from the accompanying story than those who saw a page with an animated photo of the dancer or a page with an unrelated photo, termed wild art. Among respondents who said they read the story because of the photograph, the page with the animated dancer photo was mentioned most frequently. These findings suggest that animated photos may not aid in recall, but they may aid somewhat in attention to stories.

Lain⁴⁴ took a look at reader response to mug shots from an experimental perspective and found that contrary to popular opinion, readers do form opinions of subjects based solely on simple mug shots and that these

⁴³ Rita Wolf and Gerald L. Grotta, "Images: A Question of Readership," *Newspaper Research Journal*, 6: 30-36 (Winter 1985).

⁴⁴ Laurence B. Lain, "How Readers View Mug Shots," *Newspaper Research Journal*, 8: 43-52 (Spring 1987).

opinions basically match opinions formed from reading stories without photos.

Wanta⁴⁵ conducted an experiment to test whether dominant photographs on newspaper pages have an agenda-setting effect. To test his theory that dominant photographs on a newspaper page would increase issue salience of the subjects featured in the photos, Wanta administered a pretest one week before his experiment and a posttest two days after the treatment. Three randomly assigned experimental groups were formed among 66 college students. Respondents were asked to rank and rate on a five-point scale their standing on 12 issues. Three of the issues (national defense, pollution and farmers) were used for treatment manipulations by altering the use and size of photographs.

Issue salience was the dependent variable. Different treatments of newspaper front pages served as the independent variables. The basic theory was that issue salience was a function of the size of photographs (dominant photos were 54-63.6 square inches and balanced photos were 13.5-16.5 square inches). A no-photo condition was also included. Results revealed that for the three issues tested, there were statistically significant increases (at less than .05) for the manipulated issues. Generally, as photo size increased, issue salience increased, supporting the agenda-setting effect.

⁴⁵ Wayne Wanta, "The Effects of Dominant Photographs: An Agenda-Setting Experiment," *Journalism Quarterly*, 65: 107-111 (Spring 1988).

Huh⁴⁶ devised an experiment to test the effects of photo size on newspaper pages on readers' attention, recall and comprehension of stories. After exposing subjects, 123 students, to different versions of newspaper pages with large photos, small photos or no photos, the researcher found that as picture size increased readership increased. A larger percentage of subjects who saw the small photo treatment reported that they read almost all the story than those who saw no photo. Students who saw the large photo treatment had the greatest recall of information about the accompanying story, followed by the small photo treatment and the no photo treatment.

Kelly and Rice⁴⁷ investigated independent variables that might have an effect on believability of digitized photos. Sixty college students were exposed to the same photo and story made up to appear as if it were published in the *New York Times* or the *National Enquirer*. They were asked if the story was credible and believable. Then half of the subjects saw a videotape about computer software used to digitally manipulate photographs, Adobe PhotoShop. A control group did not see the videotape.

Results showed that subjects rated the *New York Times* in general higher on believability. Stories and photos that appeared to be published in the *New York Times* were perceived as more credible than those that appeared to be published in the *National Enquirer*. Subjects who saw the

⁴⁶ Hyun-Joo Lee Huh, "The Effect of Newspaper Picture Size," *Visual Communication Quarterly*, 1: 14-15 (Spring 1994).

⁴⁷ James D. Kelly and Diona Rice, "Digital Imaging & Believing Photos," *Visual Communication Quarterly*, 1: 4-5, 18 (Winter 1994).

PhotoShop videotape did not score significantly differently on general newspaper believability, story credibility nor photo believability than those who did not see the videotape, suggesting that knowledge of digital imaging manipulation techniques did not affect believability of photos, but reputation of the publication did.

Finally, it was noted that photos in the *National Enquirer* were rated

...much higher than believability of the publication itself. This suggests that photographs have a credibility beyond that of the medium of photography itself and perhaps are as dependent on the nature of information they present as are words in a text story. People believe photos if they make sense—if the information they provide fits comfortably within their existing understanding of the world—not because they are exact renderings of reality. The fact that photos can lie...may be much more appreciated and accepted by readers than many photojournalists might like to admit.⁴⁸

The experimental studies included here provided the measurement scales for many of the questions included in the survey of the present study. This type of research has strengths and weaknesses. Major strengths of the experimental method are the ability to isolate variables and exert strong statistical control over the research design to obtain statistically significant findings between a control group and one or more experimental groups. Indeed, most of the variables used in the present study were shown to have

⁴⁸ James D. Kelly and Diona Rice, "Digital Imaging & Believing Photos," p. 5, 18.

an impact on visual communication in experimental studies. These findings from previous experimental studies were used to build many of the hypotheses in the present field study.

The primary problem with experimental design is external validity. Findings cannot be generalized to the sample population due to the controlled nature of the research design. Often, experimental studies isolate a few variables and omit many possible control variables which may influence reader perceptions and satisfaction with visual communication. Subjects are typically exposed to experimental newspapers in controlled settings to gain information about readers' preferences with visual communication in newspapers. Newspaper reader satisfaction may be particularly prone to this problem of external validity, since readers seem to have fairly strong attachment to newspapers. Moreover, there may be several independent variables that might influence newspaper reader satisfaction with visual communication not included in experiments.

This study set out to use similar measurement scales in a natural setting, using many of the variables typically used in experimental studies. The major weakness of such field studies is that it is difficult to control the independent variables because the researcher tries to find naturally occurring differences. The differences in visual communication between two real newspapers are not as pronounced as in experimental studies, which may result in less variance, as was the case in this study. The major strength of field studies is the ability to measure reader satisfaction in a real situation involving real newspapers. In field studies, the researcher attempts to find

naturally occurring variance with little or no manipulation by the researcher. While the variance is not as great as in experimental designs, field studies using quasi-experimental designs, may provide better representation of reader satisfaction because reader opinions are measured in their naturally occurring state.

Survey Studies

McCombs, Mauro and Son⁴⁹ replicated a newspaper readership survey to determine what content characteristics predict readership. Subjects were 357 randomly selected, adult readers of the Nov. 1, 1985 issue of the *Richmond News Leader*.

The paper was content analyzed for 203 items. Readership, the dependent variable, was measured by asking respondents whether they noticed, read some or read most of each of the 203 items. Listings, stock tables, comic strips and other short items were coded by read/noticed or not read/not noticed. Independent variables were demographics (age, gender) and 12 content characteristics (size of headline in points, page number, total space in column inches, topic, form, readability, use of pictures, use of jump, source of the story, position on page [upper/lower], front page of a section and use of color). Forty-five multiple regressions were carried out, but not reported, for

⁴⁹ Maxwell E. McCombs, John B. Mauro and Jinok Son, "Predicting Newspaper Readership from Content Characteristics: A Replication," *Newspaper Research Journal*, 10: 25-31 (Fall 1988).

the analysis. In general, the best predictors for readership of all items in the newshole were front page of a section, total space, upper half of the page, form and page number. Best predictors for readership of editorial items were placement on the front page of a section, source, page number and sports news. Analyses on news stories revealed that the front page of a section, local-staff sources, topic and pictures were the best predictors of news story readership. Photographs were a positive predictor of readership. "News stories with a picture have higher readership than those without a picture."⁵⁰ The authors concluded that editors should use section fronts to maximize reader attention and increase readership.

Gladney,⁵¹ in a national sample of 257 newspaper editors of large (140,000 or more circulation), medium (30,000-139,999) and small (less than 30,000) dailies, found that overall editors rated visual appeal fourth in a list of content standards. The three highest content standards were strong local coverage, accuracy and good writing. There were no significant differences among the different sized newspapers on their rankings of visual appeal. Forty-five percent of the respondents rated visual appeal as essential, with no significant differences among the newspapers of different circulation sizes.

⁵⁰ Maxwell E. McCombs, John B. Mauro and Jinok Son, "Predicting Newspaper Readership from Content Characteristics: A Replication," p.28.

⁵¹ George A. Gladney, "Newspaper Excellence: How Editors of Small & Large Papers Judge Quality," *Newspaper Research Journal*, 11: 58-72 (Spring 1990).

Connery,⁵² in a national study to determine what contributes to excellence at small daily newspapers, defined in this study as less than 50,000 circulation, found that visual communication was not rated highly. The sample totaled 74 journalism educators, editors of large dailies with circulation of more than 50,000 and Associated Press bureau chiefs. Effective design and makeup in newspapers was rated most important by only two respondents, second most important by three respondents and third most important by three respondents. Strong photojournalism was rated as most important by none, second most important by one respondent and third most important by four respondents. Overall, thorough community coverage was listed as most important by an overwhelming majority of respondents, 50. The study also identified the *Jackson (Tenn.) Sun*, the *Lewiston (Idaho) Morning Tribune*, the *Worthington (Minn.) Globe* and the *Columbia (Mo.) Daily Tribune* as four of the best small dailies in the nation.

Heller⁵³ carried out a study similar to the one done by Connery to identify some of the best designed small daily papers, identified as less than 25,000 circulation in this study. The study identified the criteria respondents listed for making their recommendations of well designed small dailies. The most common criterion was overall design, listed by 77 percent of the respondents. Front page design was listed by 62 percent; photography, 55

⁵² Thomas Connery, "Management Commitment & the Small Daily," *Newspaper Research Journal*, 10: 59-76 (Fall 1989).

⁵³ Robert Heller, "Nine Great Small Paper Designs," *Visual Communication Quarterly*, 1: 4-7 (Summer 1994).

percent; section design, 41 percent; typography, 40 percent; feature design, 33 percent; color use, 36 percent; information graphics, 20 percent; and illustrations, 18 percent. No statistical tests were performed to test the significance of the differences.

Noting that almost 70 percent of all daily newspapers in the United States had circulation less than 25,000, Heller's informal survey of 77 respondents in the business identified the Biddeford (Maine) *Journal Tribune*, the Concord (N. H.) *Monitor* and the Myrtle Beach (S. C.) *Sun News* as the top three small dailies in terms of their design. Sixteen papers tied for fourth place.

A study by Hartman⁵⁴ centered on how 18-35-year-old readers used *USA Today*, which he described as a news and entertainment digest, graphics and photo-oriented newspaper, and how editors viewed the impact of *USA Today* on their papers.

Hartman administered an 11-item telephone questionnaire to 323 18-35 year olds in a Midwestern university community to determine how young readers used the newspaper. Seventy-five percent did not read the paper. Among those who did, 14 percent spent 5-15 minutes reading the paper; 43 percent preferred the news section; 30 percent preferred to read the sports section; 34 percent said they read the paper for one-half information

⁵⁴ John K. Hartman, "USA Today and Young-Adult Readers: Can a New-Style Newspaper Win Them Back?" *Newspaper Research Journal*, 8: 1-15 (Winter 1987).

and one-half entertainment; 32 percent read the paper for three-quarters information and one-quarter entertainment.

Half of the readers agreed that other papers should emulate the style and content of *USA Today*. Thirty-nine percent said other papers should stay the same. Readership of *USA Today* appeared to be a function of age, income, education and gender. Demographic variables for categories of young adult respondents most likely to read *USA Today* were those 21-23 years old, those with graduate degrees, those with income under \$10,000 and those with more than \$25,000 in income. Males were more likely to read the paper than females.

Personal interviews with Midwestern editors were also conducted in this study to determine perceived impact of *USA Today* on their papers. Results reported were anecdotal. The researcher concluded that the editors were generally positive toward the new style paper. He recommended that editors who wanted to attract 18-35-year-old readers should follow *USA Today's* lead on content, design and style.

Perhaps the most extensive surveys about newspaper front-page design have been conducted by Sandra Utt and Steve Pasternack. Over the past 10 years, they have conducted three mail surveys to determine the appearance of newspaper front pages in the United States.

The first study by Utt and Pasternack⁵⁵ surveyed editors at 78 newspapers with circulation of more than 25,000. The mail survey had a

⁵⁵ Sandra H. Utt and Steve Pasternack, "Front Pages of U. S. Daily Newspapers," *Journalism Quarterly*, 61: 879-884 (Winter 1984).

return rate of 48 percent. The study found that front page layout was done at 56 percent of the papers by the news editor. About two-thirds of the papers used modular design format; the six column format was used by 88 percent; the mean number of front page stories was 5.74; the flag at 50 percent of the papers was between 10 and 12 picas tall, usually located beneath teasers; 72 percent of the flags did not contain a visual emblem; body type was 9 point at 78 percent of the papers and serif at 90 percent of the papers.

Two-thirds of front pages had two photographs, and 96 percent used a dominant photo. One third of the editors said they regularly use color on the front page; another 28 percent said they use color occasionally; 17 percent never used color. Papers with circulation of less than 50,000 were more likely to use color than larger dailies. An index was used on 94 percent of the front pages; digests appeared on a third of the front pages. Ninety-one percent did not use column rule lines. Finally, 81 percent of the editors said they were satisfied with the way their front pages looked, but only 53 percent said American newspaper front pages in general were attractive.

The second survey study by Utt and Pasternack⁵⁶ gathered responses from 93 newspapers, in a mail survey with a 58 percent response rate. This updated study found that 78 percent of the papers used a modular format for their front page, up from the previous study. Use of the six-column format had decreased from 88 percent to 82 percent. Seventy percent of the papers

⁵⁶ Sandra H. Utt and Steve Pasternack, "How They Look: An Updated Study of American Newspaper Front Pages," *Journalism Quarterly*, 66: 621-627 (Autumn 1989).

used between six and nine front page stories, up from an average of five or six. Teasers were used above the flag at 64 percent of the papers, and 58 percent of the flags had no visual emblem, down from 72 percent in the first study. Fifty six percent used 9-point body type, down from 78 percent, suggesting experimentation with other sizes. Use of serif type in body copy was up from 90 percent to 96 percent.

Fifty-seven percent ran an average of two photographs on the front page. Ninety-five percent used a dominant photo, but 68 percent ran one mug shot daily on the front page. Fifty-seven percent reported that they regularly ran four-color photographs on the front page. Twenty-seven percent used a color photo everyday. Papers in the 50,000 - 100,000 circulation size used color photos the most of any circulation group (60 percent). Two-thirds reported using spot color every day on page one. Fifty-eight percent ran an index; one-third ran both an index and digest.

Eighty-seven percent of the editors said their paper was more attractive than when the first study was done. Two-thirds of the editors thought readers were concerned about graphic design when deciding which paper to read. When asked if their papers used good color often, sometimes, rarely or never, the most common response by about 50 percent of the editors in each circulation category was sometimes. Even though they rated *USA Today* fairly low on attractiveness, half said they refer to the paper when considering design ideas. The authors concluded that the current trend in newspaper design is toward greater use of color, information graphics and pictures.

The most recent survey by Pasternack and Utt⁵⁷ noted many changes in the appearance of newspaper front pages. This mail survey included responses from 97 editors, a 58 percent response rate. The authors found that technology has taken hold; 99 percent used Associated Press Graphics; 100 percent used Macintosh computers and 96 percent had electronic picture desks. Use of color increased to the point that 75 percent used four-color photos each day; 63 percent always ran information graphics in color; 60 percent said they had increased use of spot color in the past five years.

Modular format had grown to 82 percent; 85 percent still used a six-column format; 44 percent had decreased the number of stories on page one; 80 percent began five or six stories on the front page. About half used two photos on the front page; all of the respondents used a dominant photo on the front page. Two-thirds used one information graphic per day on the front page; 78 percent said they used more infographics than they did five years previously. Eighty-seven percent of the editors reported that their papers looked better than five years before; 73 percent said they were satisfied with their paper's appearance; 56 percent thought readers cared about design. Interestingly, although 94 percent of the editors agreed that appearance can be critical in competitive situations when readers decide which paper to read, only 47 percent had ever surveyed readers' reaction to their newspaper's

⁵⁷ Steve Pasternack and Sandra H. Utt, "A Study of America's Front Pages: A 10-Year Update," (paper presented to a meeting of the Visual Communication Division of the Association for Education in Journalism and Mass Communication Annual Convention), Atlanta, Ga., 1994.

design. Overall, the authors concluded that newspaper editors were more concerned about visual communication than ever before.

Reaves⁵⁸ conducted a national survey of 511 visual editors to determine tolerance toward digital manipulation of photographs. Respondents were mailed a booklet that contained the questionnaire and several examples of digitally manipulated photographs. The survey simply asked on a five-point Likert scale whether the editors agreed with the computer editing change. The scale was strongly agree, somewhat agree, no opinion, somewhat disagree and strongly disagree.

The first set of manipulations involved moving or removing elements from photos. Twenty-nine percent responded that it was acceptable to remove telephone wires; 27 percent said it was okay to electronically zip up a boy's open zipper; 11 percent agreed to eliminate all people digitally; 10 percent agreed to eliminate one person; and six percent agreed to move people closer together.

The second set of manipulations involved editing technical changes. Conventional dodging and burning on the computer was acceptable to 86 percent of the respondents; 23 percent agreed to digitally blur the background to get less depth of field; 14 percent agreed to stretch a photo horizontally; 14 percent thought it was okay to drop out the background entirely, a practice

⁵⁸ Shiela Reaves, "What's Wrong With This Picture? Daily Newspaper Photo Editors' Attitudes and Their Tolerance Toward Digital Manipulation," *Newspaper Research Journal*, 13/14: 131-155 (Fall 1992/Winter 1993).

that was routinely done at U. S. newspapers in the 1950s; 13 percent agreed to clone part of a fence to extend it; and 3 percent agreed to change the color of a wall.

The third set of photos contained the most radical changes. Nineteen percent agreed with combining skywriting, planes and a building into one composite photo; 12 percent said they would be willing to combine portraits of celebrities in different locations in the same photo; 9 percent agreed to add sky and remove a branch from a war photo; and two percent had no problem adding Donald Trump's face to a model's body.

Clearly, electronic changes such as dodging and burning, which are standard practice in conventional darkrooms to handle film limitations to control brightness contrasts in scenes, were the most acceptable forms of manipulations to the respondents. While most disagreed with the other manipulations, a sizable minority in some cases indicated that they would be willing to alter the photos considerably.

Those who were less tolerant of the manipulations were respondents at papers of more than 100,000 circulation, those familiar with the computer technology, those who had a background in photojournalism, those who had an influence in photo editing, members of the National Press Photographers Association and those who participated in at least one photo seminar in the previous two years, those younger than 35 years old and college graduates. Years of experience in the field of photojournalism appeared to have no impact on tolerance levels.

This study shows that while most visual editors adhere to standard principles of not altering photographs, a fair amount do not. As the technology advances, the debate will likely center on whether manipulations done after the photograph has been shot, after the fact so to speak, are more unethical than similar manipulations accomplished in the camera by lens selection, shutter speed selection to alter perceptions of speed and motion, aperture selection to alter depth of field, framing or lighting and exposure manipulation to alter brightness and mood of the photographs.

Summary

The literature revealed some indications of findings concerning visual communication and newspapers on several levels. Overall the content analysis studies pointed to trends toward more modular design among newspapers, especially those in the Southeast and Southwest and in cities. Photographs remain the most common visual element, but information graphics are increasing, but not yet on average at the level of *USA Today*. Most papers have not yet adopted strict *USA Today* style visual communication, but the paper is having an effect on design choices at many daily newspapers across the country. There seems to be a definite trend toward uniformity of design among newspapers, and use of color in photographs, information graphics and spot color on newspaper pages is generally increasing.

Content of newspaper photographs has not changed dramatically since the period of 1939-1950, with the exception of increases in sports photos and a few other categories. African-Americans are becoming more visible in newspaper photos, but the coverage is becoming increasingly stereotypical. Mug shots, fairly prevalent in early studies, are showing good staying power. Several of the studies found that about half of the photos published were mug shots.

The experimental studies showed that newspaper readers like modular design, are attracted to color and generally rate color versions of newspapers higher on most appearance and journalistic quality variables. Photos on pages have strong eye drawing power, and dominant photos have overwhelming attraction power, outperforming all other visual elements including color.

Readers accustomed to modern, colorful newspapers rate them even higher than those not accustomed to such visual devices. Color does not appear to affect perceptions of newspapers on ethical standards.

Modern information graphics, with lots of chart junk, do not seem to affect reader information gain, recall nor information retrieval negatively. They do tend to increase attention to stories, suggesting that if they can entice readers into stories without losing knowledge, they should be used to better inform readers. However, information graphics should be used with care because of the possible pitfalls and because distorted graphics and complex graphics can affect accuracy of information. Newspapers that use *USA Today*

style charts that turn valentines and other irregularly shaped objects into pie charts are probably safe doing so if the percentages are labeled.

Maps may provide readers with better understanding of foreign events and issues, and sidebar graphics seem to attract readers to stories and result in better comprehension.

Photos of animated subjects seem to provide more attraction, but less recall of information. Mug shots may have the ability to form opinions among readers. Most importantly, large dominant photos do seem to trigger to the reader that they represent important issues, possibly resulting in the agenda-setting effect. Given that the research has clearly established that readers are drawn to large photos first on the page and that these types of visuals can have an agenda-setting effect, editors should select these images with care.

Overall, increases in comprehension, understanding and recall seem to be most pronounced when there is a redundancy of visual and verbal information, text with visuals. The debate over whether newspapers should be more visual or verbal should settle somewhere in the middle, based on this repeated finding.

The survey studies reflect many of the findings from the content analysis and experimental studies. Photos and section fronts are good predictors of readership of stories. Despite the research which shows the importance of visuals to readers, few editors consider visual appeal and photojournalism essential to newspaper success. Among visual editors

overall design, front page design and photography were the most important visual attributes, but color was much lower on the list.

Newspaper competition seemed to have the largest impact on increased space for graphics and color. Television competition did not seem to have an impact on these visual variables, while size of group ownership did have an impact on the number of graphics.

The three studies by Utt and Pasternack identified several trends in newspaper front page appearance including more color, a strong move toward modular design, more information graphics, fewer stories, more teasers above the fold, more indexes, more prevalent use of dominant photos and a very strong trend toward increasing utilization of computer technology to produce visual communication.

While few editors appeared to consider visual appeal essential, there did seem to be an awareness among editors, evident in some of the studies, that visual communication is becoming more important to readers. Yet, half have never polled their readers about their reactions to the newspaper's attempts at visual communication.

Finally, the study by Reaves confirmed that the new technologies may present ethical dilemmas for news workers. The happy news is that there was strong opposition to electronically altering photos, yet a sizable minority may be much more tolerant of photo manipulation. Clearly, more education, professional development opportunities and a better understanding of visual communication is needed to address professional concerns about image alteration and fabrication.

CHAPTER II.

METHODOLOGY

Research Questions

Several research questions come to mind as a result of the preceding literature review and discussion. Do newspapers that devote a higher ratio of visual space to non-visual or editorial space enjoy increased reader satisfaction with photo quality? Do newspapers that devote a lower ratio of visual space to non-visual space have readers who desire larger photos, multiple photo stories, more color photos and more news, feature and sports photos?

Do newspapers that appear more visual have readers who are more satisfied with graphics such as editorial drawings, maps and overall graphic quality? Do readers of newspapers that appear less visual have more desire for color graphics?

How do differences in visual content affect reader satisfaction with the overall appearance of the newspapers?

How does visual content impact satisfaction with news, sports and feature writing; news and sports coverage; satisfaction with the journalistic quality of the newspapers and personal utility and enjoyment of the newspapers?

How much do visuals contribute to newspaper reader satisfaction?

What impact do independent variables such as agreement with the editor, use and personal involvement with the newspaper, use of other media available in the community, community ties and demographics such as age, income, education and gender have on reader satisfaction with newspapers and desires for graphic changes? How much do these variables and the visual content contribute to newspaper reader satisfaction and desire for changes in the appearance of the newspapers?

Hypotheses

Visual Newspaper vs. Traditional Newspaper

Ten sets of hypotheses that follow were formulated to investigate the research questions in a systematic, testable manner. The first set, hypotheses 1a-h, center on differences between the visual newspaper and the traditional newspaper on the dependent variables. In hypothesis 1a, the basis for the prediction was the idea that a newspaper that devoted more of its space to visuals would have readers who rated it higher on dependent measures of satisfaction with the photo quality overall and satisfaction with news photos, feature photos and sports photos than a newspaper that devoted a smaller ratio of visuals to editorial (non-visual space). The thought was that since readers of the visual newspaper got a heavier diet of visuals they would be more satisfied with the quality of the photos than readers of a traditional newspaper who received a less visual presentation in their newspaper.

H1a: The newspaper that has a higher ratio of visual space to editorial (non-visual) space will score higher on measures of satisfaction with photo quality.

Continuing with the logic in hypothesis 1a, hypothesis 1b predicts that the readers of the newspaper with the higher ratio of visual space to total editorial space will have less desire for larger photos, more multiple photo stories, more color photos, more feature photos, more news photos and more sports photos. It was reasoned that those desires were probably already being met more so by the visual newspaper than the traditional newspaper.

H1b: The newspaper that has a higher ratio of visual space to total editorial space will score lower on measures of desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

A similar idea was the basis for hypothesis 1c. If readers of the visual newspaper saw more visuals than readers of the traditional newspaper they should rate the visual newspaper higher on measures of satisfaction with editorial drawings, maps and overall graphic quality. Conversely, hypothesis 1d predicts less desire for more color graphics among the readers of the visual newspaper.

H1c: The newspaper that has a higher ratio of visual space to total editorial space will score higher on measures of satisfaction with other graphics.

H1d: The newspaper that has a higher ratio of visual space to total editorial space will score lower on the measure of desire for more color graphics.

Hypothesis 1e predicts that readers of the more visual newspaper will extend their satisfaction with visuals to satisfaction with news, feature and sports writing and sports and news coverage.

H1e: The newspaper that has a higher ratio of visual space to total editorial space will score higher on measures of satisfaction with writing and news and sports coverage.

Clearly, readers who were presented with a more visual presentation in their newspaper could reasonably be predicted to rate their newspaper higher on measures of satisfaction with the appearance of the newspaper. Appearance variables used in hypothesis 1f were interesting appearance, exciting, uncluttered, colorful, pleasant, fresh, modern, professional, appealing, strong, attractive and overall appearance.

H1f: The newspaper that has a higher ratio of visual space to total editorial space will score higher on measures of satisfaction with the appearance of the newspaper.

Hypothesis 1g and 1h posit that the more visual newspaper will have readers who extend their satisfaction with the visuals to include higher ratings on measures of satisfaction with the journalistic quality of the newspaper and personal utility and enjoyment. Dependent variables measuring satisfaction with the journalistic quality of the newspaper included accurate, timely, honest, objective, responsible, current, trustworthy, fair, professional and overall quality. Dependent variables measuring personal utility and enjoyment were useful, thorough, enjoyable, informative, entertaining and interesting to read.

H1g: The newspaper that has a higher ratio of visual space to total editorial space will score higher on measures of satisfaction with the journalistic quality of the newspaper.

H1h: The newspaper that has a higher ratio of visual space to total editorial space will score higher on measures of personal utility and enjoyment.

Newspaper Subscription and Community of Residence

The next set of hypotheses, 2a-o, was designed to explore differences in the same dependent variables presented in the first set of hypotheses among respondents who subscribed to a visual newspaper and a traditional newspaper. Moreover, these hypotheses are based on the idea that where the respondent lives may have an impact on the dependent variables. The

communities were chosen on the bases of demographic similarity and location (Table 1, p. 75). It was hypothesized that differences in the dependent variables would be evident between subscribers of the visual newspaper and the traditional newspaper and that differences in the dependent variables would be strongest between subscribers of the visual newspaper and the traditional newspaper who lived in the town located equidistant between the town where the visual newspaper was published and the town where the traditional newspaper was published. Considering the two communities where the visual and traditional newspaper were published and the third community about equidistant from the communities in which the newspapers are published may help explain differences in the dependent variables.

Juxtaposing the publishing communities and the community between these towns resulted in four distinct groups among the respondents:

1) subscribers of the visual newspaper living in the town in which it was published (the visual newspaper town), 2) subscribers of the traditional newspaper living in the town in which it was published (the traditional newspaper town), 3) subscribers of the visual newspaper living in the equidistant town and 4) subscribers of the traditional newspaper living in the equidistant town.

This results in four corresponding conditions: 1) subscribers of a visual newspaper living in the visual newspaper town with low competition from the traditional newspaper, 2) subscribers of a traditional newspaper living in the traditional newspaper town with low competition from the visual

newspaper, 3) subscribers of a visual newspaper living in the equidistant town with high competition from the traditional newspaper, and 4) subscribers of the traditional newspaper living in the equidistant town with high competition from the visual newspaper.

The prediction in hypothesis 2a presented a comparison of the readers of the visual and traditional newspaper in a low competition situation. The rationale here was that readers of the visual newspaper living in the visual newspaper town, with little knowledge of the traditional newspaper, would rate their paper higher on measures of satisfaction with photo quality than the readers of the traditional newspaper in the traditional newspaper town.

H2a: Subscribers of the visual newspaper living in the visual newspaper town will have higher means on measures of satisfaction with photo quality than subscribers of the traditional newspaper living in the traditional newspaper town.

Hypothesis 2b presented a high competition situation since readers of both the visual newspaper and the traditional newspaper live in the same town, and presumably choose which newspaper they subscribe to. The idea here was that readers of the visual newspaper, who may have seen the traditional newspaper and compared the two, would probably rate the visual newspaper higher on dependent measures of satisfaction with photo quality. Conversely, readers of the traditional newspaper, who may have seen the visual newspaper and also made a comparison, would probably rate the

traditional newspaper lower on dependent measures of satisfaction with photo quality.

H2b: Subscribers of the visual newspaper living in the equidistant town will have higher means on measures of satisfaction with photo quality than any of the other groups.

Similar reasoning was used to predict hypothesis 2c. Since readers of the traditional newspaper living in the equidistant town, a high competition situation, may feel they are being shortchanged visually, they should have more desire for larger photos, multiple photo stories, more color photos, feature photos, news photos and sports photos than any of the other groups.

H2c: Subscribers of the traditional newspaper living in the equidistant town will have higher means on measures of desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos than any of the other groups.

The same pattern of reasoning is evident in hypothesis 2d. Readers of the visual newspaper in the low competition situation should be more satisfied with the quality of editorial drawings, maps and overall graphic quality than readers of the traditional newspaper in the low competition situation since they were being presented with a more visual newspaper.

H2d: Subscribers of the visual newspaper living in the visual newspaper town will have higher means on measures of satisfaction with other graphics than subscribers of the traditional newspaper living in the traditional newspaper town.

It was expected that the effect of higher satisfaction with editorial drawings, maps and overall graphic quality among readers of the visual newspaper would be more evident in the high competition situation. As hypothesis 2e predicts, it appears reasonable that readers of the visual newspaper, who may have been exposed to the traditional newspaper, would rate the visual newspaper higher on these dependent variables.

H2e: Subscribers of the visual newspaper living in the equidistant town will have higher means on measures of satisfaction with other graphics than any of the other groups.

Hypothesis 2f predicts that readers of the traditional newspaper in the low competition situation will have a higher desire for more color graphics because they may have a stronger feeling than readers of the visual newspaper that they are missing good visuals.

H2f: Subscribers of the traditional newspaper living in the traditional newspaper town will have higher means on the measure of desire for more color graphics than subscribers of the visual newspaper living in the visual newspaper town.

Desire for more color graphics should be most pronounced in the high competition situation since readers of the traditional newspaper may have been even more aware that they were missing something visually in the traditional newspaper. The readers of the visual newspaper probably were not as likely to feel that they were missing something visually, since they presumably get a heavier diet of visuals. This is the basis for hypothesis 2g.

H2g: Subscribers of the traditional newspaper living in the equidistant town will have higher means on the measure of desire for more color graphics than any of the other groups.

In hypothesis 2h, the same ideas discussed previously may extend to satisfaction with writing quality and coverage. The thought here was that readers of the visual newspaper in the low competition situation would be more pleased with the writing and coverage because of their satisfaction with the visual aspects of the newspaper. Hypothesis 2i predicts that this effect will be most pronounced in the high competition situation.

H2h: Subscribers of the visual newspaper living in the visual newspaper town will have higher means on measures of satisfaction with writing and coverage than subscribers of the traditional newspaper living in the traditional newspaper town.

H2i: Subscribers of the visual newspaper living in the equidistant town will have higher means on measures of satisfaction with writing and coverage than any of the other groups.

Hypotheses 2j and 2k extend the same logic. Because the readers of the visual newspaper are presented more visuals they are predicted to be more satisfied with the appearance of the newspaper than readers of the traditional newspaper. Since the apparent visual differences were probably more evident to readers in the equidistant town, it is argued that this effect will be most pronounced in the high competition situation, as hypothesis 2k predicts.

H2j: Subscribers of the visual newspaper living in the visual newspaper town will have higher means on measures of satisfaction with the appearance of the newspaper than subscribers of the traditional newspaper living in the traditional newspaper town.

H2k: Subscribers of the visual newspaper living in the equidistant town will have higher means on measures of satisfaction with the appearance of the newspaper than any of the other groups.

The same line of thinking is extended in hypotheses 2l and 2m. In hypothesis 2l, readers of the visual newspaper are predicted to rate the visual newspaper higher on satisfaction with the journalistic quality of the newspaper than readers of the traditional newspaper rate the traditional newspaper on satisfaction with the journalistic quality of the newspaper. Hypothesis 2m states that this effect will be strongest among readers of the visual newspaper in the high competition situation.

H2l: Subscribers of the visual newspaper living in the visual newspaper town will have higher means on measures of satisfaction with the journalistic quality of the newspaper than subscribers of the traditional newspaper living in the traditional newspaper town.

H2m: Subscribers of the visual newspaper living in the equidistant town will have higher means on measures of satisfaction with the journalistic quality of the newspaper than any of the other groups.

A similar outcome is expected with regard to dependent measures of personal utility and enjoyment from the newspaper. In hypothesis 2n it is predicted that readers of the visual newspaper living in the visual newspaper town will rate satisfaction on these dependent variables higher than readers of the traditional newspaper living in the traditional newspaper town. By the same token, this effect is expected to be strongest among readers of the visual newspaper in the high competition situation, as hypothesis 2o predicts.

H2n: Subscribers of the visual newspaper living in the visual newspaper town will have higher means on measures of personal utility and enjoyment than subscribers of the traditional newspaper living in the traditional newspaper town.

H2o: Subscribers of the visual newspaper living in the equidistant town will have higher means on measures of personal utility and enjoyment than any of the other groups.

Media-Use Variables

Hypotheses 3a-6e were designed to test the influence of independent media use variables on dependent variables which measured satisfaction with and desire for visuals in the newspaper. These hypotheses involved differences in the dependent variables as a result of influences by media use variables in the entire data set without regard to which newspaper the respondent subscribed nor in which community the respondent resided. Media use variables were time spent with television daily, the presence of cable television in the home, time spent with magazines weekly and readership of visual newspapers including the *Wichita Eagle*, the *Kansas City Star*, the *Topeka Capital-Journal* and *USA Today*.

Daily Television Minutes

Hypotheses 3a-e all dealt with the influence of time spent watching television, measured in daily minutes, on the dependent variables measuring satisfaction with and desire for visuals. In hypothesis 3a, it was reasoned that increased time spent watching television would result in a decrease on measures of satisfaction with photo quality due to the general high quality of visuals in expensive television productions. The idea here was that readers who spent a lot of time watching television would be disappointed with the comparable quality of photos in their local community newspaper.

H3a: Increased time watching television will result in a decrease on measures of satisfaction with photo quality.

Similarly, it was thought that a heavier diet of television images would result in increased desire for more photos as predicted in hypothesis 3b and general decrease in satisfaction with other graphics as predicted in hypothesis 3c. In other words, it was predicted that the small community newspapers could never match the barrage of images that television presents, and that this in turn might stimulate more desire for photos and less satisfaction with graphics.

H3b: Increased time watching television will result in increased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

H3c: Increased time watching television will result in a decrease on measures of satisfaction with other graphics.

Increased viewership of the high level of color visuals presented on television was predicted to result in an increased desire for more color graphics in the newspaper. Again, it appears reasonable that the local newspaper may be no match for the explosion of color presented on television, as hypothesis 3d predicts.

H3d: Increased time watching television will result in increased desire for more color graphics.

Because television appears to overpower the local newspapers visually, it appears evident that increased time with television would probably result in less satisfaction on dependent measures of satisfaction with the appearance of the newspaper. This trend is predicted in hypothesis 3e.

H3e: Increased time watching television will result in decreases on measures of satisfaction with the appearance of the newspaper.

Cable Television

A very similar line of reasoning is evident in hypotheses 4a-e as was present in the hypotheses concerning time with television. Cable television, similar to network and local television, also presents many photos, graphics and color images and is predicted to have very similar results on the dependent visual variables. Additionally, since cable television involves additional expenditures, the presence of cable television in the home suggests more attention to television, which could have strong effects on satisfaction with and desire for photos, graphics and color.

H4a: The presence of cable television in the home will result in a decrease on measures of satisfaction with photo quality.

H4b: The presence of cable television in the home will result in increased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

H4c: The presence of cable television in the home will result in a decrease on measures of satisfaction with other graphics.

H4d: The presence of cable television in the home will result in increased desire for more color graphics.

H4e: The presence of cable television in the home will result in decreases on measures of satisfaction with the appearance of the newspaper.

Weekly Magazine Minutes

Time spent reading magazines weekly is the independent variable in hypotheses 5a-e. Hypothesis 5a predicts that more time spent reading magazines will result in decreases on satisfaction with photo quality because it was thought that readers who see a lot of high quality photographs in magazines would not be as satisfied with the photo quality produced by their small circulation daily newspapers.

As hypotheses 5b-e predict, exposure to high quality photography, graphics and color in magazines may result in more desire for such images in the newspaper, less satisfaction with other graphics, increased desire for color graphics and less satisfaction with the appearance of the newspaper.

H5a: Increased time spent reading magazines will result in a decrease on measures of satisfaction with photo quality.

H5b: Increased time spent reading magazines will result in increased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

H5c: Increased time spent reading magazines will result in a decrease on measures of satisfaction with other graphics.

H5d: Increased time spent reading magazines will result in increased desire for more color graphics.

H5e: Increased time spent reading magazines will result in decreases on measures of satisfaction with the appearance of the newspaper.

Readership of Visual Newspapers

The final media use variables concern readership of large metro newspapers and *USA Today*. Hypotheses 6a-e predict the same general trends as the previous hypotheses about media use variables. The theoretical idea here is that readers of small daily community newspapers who also see large, visual, colorful and graphic newspapers such as metro dailies and *USA Today* may be dissatisfied with the way their local newspapers handle photos, graphics and color and may in turn be less satisfied with photo quality, desire more photos and larger photos, be less satisfied with graphic quality, desire more color and be less satisfied with the appearance of their local newspaper.

H6a: Readership of visual newspapers will result in decreases on measures of satisfaction with photo quality.

H6b: Readership of visual newspapers will result in increased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

H6c: Readership of visual newspapers will result in a decrease on measures of satisfaction with other graphics.

H6d: Readership of visual newspapers will result in increased desire for more color graphics.

H6e: Readership of visual newspapers will result in decreases on measures of satisfaction with the appearance of the newspaper.

Demographics

Age

Demographic influences of age, income, education and gender are considered in the remaining hypotheses. Hypotheses 7a-e predict that there will be more satisfaction with visuals and less desire for more visuals as age increases. Conversely, younger readers should have less satisfaction with visuals and more desire for visuals. Clearly, it appears reasonable to predict that younger readers, who grew up in the age of television, cable television, color magazines, video games, computers and colorful, visual metro newspapers would be less satisfied with the visual presentation they received

from their local community newspaper and have more desire for more photos, graphics and color than older readers.

H7a: Increases in age will result in increases on measures of satisfaction with photo quality.

H7b: Increases in age will result in decreased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

H7c: Increases in age will result in increases on measures of satisfaction with other graphics.

H7d: Increases in age will result in decreased desire for more color graphics.

H7e: Increases in age will result in increases on measures of satisfaction with the appearance of the newspaper.

Income

Income, an independent variable evident in hypotheses 8a-e, was predicted to have a positive influence on the dependent visual variables and a negative influence on desire for more photos, graphics and color. The reasoning here is that people of higher incomes would probably view the

visual aspect of newspapers less critically since they would likely have more interest in the textual information. One exception may be the appearance variables, since people with more income are more likely to be exposed to well-designed newspapers and react less favorably to their local newspaper regarding the appearance variables.

H8a: Increases in income will result in increases on measures of satisfaction with photo quality.

H8b: Increases in income will result in decreased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

H8c: Increases in income will result in increases on measures of satisfaction with other graphics.

H8d: Increases in income will result in decreased desire for more color graphics.

H8e: Increases in income will result in decreases on measures of satisfaction with the appearance of the newspaper.

Education

The same rationale used to predict the influence of income on the dependent visual variables was employed in the predictions on the influence of education in hypotheses 9a-e. More educated people probably are less concerned with the visual aspect of the newspaper and more concerned with the content of the text. However, it is predicted that increases in education will have the effect of resulting in less satisfaction with the appearance variables since more education may result in more awareness that the local community newspapers do not match the general visual appeal of large metros or *USA Today*.

H9a: Increases in education will result in increases on measures of satisfaction with photo quality.

H9b: Increases in education will result in decreased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

H9c: Increases in education will result in increases on measures of satisfaction with other graphics.

H9d: Increases in education will result in decreased desire for more color graphics.

H9e: Increases in education will result in decreases on measures of satisfaction with the appearance of the newspaper.

Gender

Hypotheses 10a-e test influences of gender on the dependent visual variables. In general, it was thought that males would be less satisfied with the visuals and desire more photos, graphics and color in their local community newspaper than females because they are probably attracted to more visual stimuli such as television, cable television, video games and colorful magazines.

H10a: Males will have lower mean scores than females on measures of satisfaction with photo quality.

H10b: Males will have higher mean scores than females on measures of desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

H10c: Males will have lower mean scores than females on measures of satisfaction with other graphics.

H10d: Males will have higher mean scores than females on desire for color graphics.

H10e: Males will have lower mean scores than females on measures of satisfaction with the appearance with the newspaper.

A Content Analysis of the Chanute Tribune and the Iola Register

A content analysis of two small community daily newspapers and a telephone survey of 376 subscribers of each paper, a total of 752 respondents, was conducted to address the 10 sets of hypotheses.

The two newspapers selected for the content analysis were the *Chanute Tribune* and the *Iola Register*, both small circulation dailies (under 10,000 circulation) from demographically similar communities in Kansas. The *Chanute Tribune*, a newspaper which appeared to use visuals extensively, had a Monday-Saturday circulation of 5,155. The southeast Kansas paper consistently used large photographs (five columns by 6 or 7 inches) on the front and back pages, multiple picture treatments, feature photos and information graphics. The paper has also produced some noted photographers including a former photojournalism faculty member at Western Kentucky University and a White House staff photographer for former President Ronald Reagan. One full-time staff photographer covered most of the photographic assignments for the newspaper.

The *Iola Register*, the other newspaper in the study, looked like a much more traditional paper. It was published about 20 miles away from Chanute, rarely featured photographs larger than three columns wide on the front

page, did not use many information graphics nor multiple picture stories. The Iola newspaper was published Monday-Saturday, with a circulation of 4,785 and had no staff photographers. Photographic duties were handled by writers.

One goal of the research was to select two newspapers which looked different visually, but which were published in similar towns. The content analysis was conducted to quantify the differences in the use of visuals between the two papers. United States Census data from 1990 were used to compare and contrast the three communities.⁵⁹ Table 1 contains a summary of these demographic variables for Chanute, Iola, Neosho County, Allen County and Humboldt. Chanute is located in Neosho County, and Iola and Humboldt are located in Allen County. Humboldt is about equidistant from Chanute and Iola. U. S. Census reports from 1990, the latest available, suggested that the three communities and their respective counties were very similar on most demographic variables.

Even though Iola's population of 6,351 was about 67 percent of the size of Chanute's population of 9,448, the two towns shared similar demographic characteristics. Median age, racial makeup, and the percentage of female residents were all similar. Average household size was about the same. Neosho and Allen counties all shared similar trends on these same variables.

⁵⁹ Bureau of the Census, *Census of Population and Housing, 1990*, 103rd Congress on CD-ROM (Summary Tape File 1A, Kansas) [machine readable data files], prepared by the Bureau of the Census. Washington, D.C. 1993.

**Table 1 Demographics for Kansas communities in the study including
Chanute, Neosho County, Iola, Allen County and Humboldt**

Variable	Chanute	Iola	Neosho	Allen	Humboldt
Population	9,448	6,351	17,035	14,638	2,178
Median age	36.6	34.8	36.3	35.5	34.8
White	96%	96%	97%	97%	94%
Black	1.8%	3.1%	1.1%	1.8%	2.8%
Nat. American	.9%	.6%	.8%	.7%	.7%
Asian	.3%	.4%	.2%	.3%	0%
Other race	1.2%	.3%	.8%	.6%	2.8%
Hispanic	3.3%	1.1%	2.1%	1.8%	5.8%
Female	53%	54%	52%	52%	53%
Household Size	2.33	2.38	2.45	2.5	2.38
Median Age	36.6	34.8	36.3	35.5	34.8
Median Home	\$28,300	\$27,000	\$28,600	\$27,600	\$27,500
Median Rental	\$184	\$178	\$180	\$174	\$163
Pop. Per Sq. Mile	1,608.1	1,814.6	29.8	29.1	1,555.7
Native Kansans	75.9%	72.8%	78.8%	76.2%	75.1%
High School Grad.	75.9%	72.8%	78.8%	76.2%	75.1%
College Graduate	11.6%	14.5%	11.5%	12.4%	12%
In Work Force	59%	59.7%	61.2%	61.2%	57
Unemployed	6.6%	5.8%	5.4%	5.7%	6%
Per Capita Income	\$10,151	\$9,311	\$10,402	\$9,889	\$10,508
Household Income	\$21,062	\$18,226	\$22,299	\$20,774	\$21,821
Below Poverty Line	16.4%	17.9%	13.7%	15.5%	12.5%
Homes w/o Phones	8.7%	8.5%	7%	7.7%	5.9%

Note. Race percentages do not add up to 100 percent due to rounding.

The third community, Humboldt, with a population of 2,178, located about equidistant between the two towns, was served by both newspapers. A third readership study, with readers of the Chanute newspaper and readers of the Iola newspaper, was performed in this community which shared

similar demographic characteristics with Chanute and Iola and Allen and Neosho counties.

Since Humboldt was located about equidistant between Chanute and Iola, the data from Humboldt provided some validity for the comparisons between reader satisfaction in Chanute and Iola. Subscribers of the *Chanute Tribune* and the *Iola Register* resided in Humboldt, so at least in some sense, those subscribers had made a choice about which newspaper they wanted to subscribe to. The hypotheses reflect the idea that any differences that would show up between readers of the *Chanute Tribune* who lived in Chanute and readers of the *Iola Register* who lived in Iola would be even more evident between readers of the two respective newspapers who lived in Humboldt. In other words, the differences between levels of satisfaction and desire of readers of the visual newspaper and readers of the traditional newspaper would be most pronounced in Humboldt. Furthermore, since Humboldt readers lived in the same town, there would be less likelihood that differences between the communities would be influencing the results of the survey.

Median home value and median rental prices were about the same in the three towns and the two counties. The two counties had about the same density of population per square mile (Neosho County, 29.8 and Allen County, 29.1). Similar population density was evident in the towns as well (Chanute, 1,608.1 per square mile; Iola, 1,814.6 and Humboldt, 1,555.7).

All three towns and the two counties had about the same percentage of native Kansans. About the same percentage of people 25 years old and older

who were high school graduates lived in all the communities, and the communities were similar regarding percentages of those 25 or older with bachelor's degrees or higher.

The percentage of those age 16 and older in the work force was similar as well (Chanute, 59; Iola, 59.7; Neosho County, 61.2; Allen County, 61.2; and Humboldt, 57). Similar trends were evident in the percentages of unemployed people age 16 and older (Chanute, 6.6; Iola, 5.8; Allen County, 5.7; Neosho County, 5.4; and Humboldt, 6).

The communities shared common financial characteristics such as per capita annual income (Chanute, \$10,151; Iola, \$9,311; Neosho County, \$10,402; Allen County, \$9,889; and Humboldt, \$10,508); median household income (Chanute, \$21,062; Iola, \$18,226; Neosho County, \$22,299; Allen County \$20,774; and Humboldt, \$21,821) and percentage of all ages below the poverty line of \$12,674 for a family of four (Chanute, 16.4; Iola, 17.9; Neosho County, 13.7; Allen County, 15.5; and Humboldt, 12.5).

Finally, the percentage of households without telephones was also similar (Chanute, 8.7; Iola, 8.5; Neosho County, 7; Allen County, 7.7; and Humboldt, 5.9).

The similarities among the demographic variables of these communities suggested that the demographics of the three towns and the two counties in which they are located would not be likely to strongly skew the results of the findings. The visual paper, the *Chanute Tribune*, was read primarily by people in Chanute and Neosho County. The traditional paper, the *Iola Register*, was primarily read by people in Iola and Allen County. The

census data suggest that any differences in reader satisfaction between the readers of the two papers would most likely be due to differences in the papers and not the demographics of the communities.

To help control for the possibility that readers of the traditional paper were satisfied with their less-visual paper because they had never seen a strong visual paper, the newspaper markets were selected on the basis that they are served by larger, metropolitan papers which use visuals extensively. The three towns and both counties are served by the *Kansas City Star* and the *Wichita Eagle*, both very visually-oriented papers. Two other visual newspapers, *USA Today* and the *Topeka Capital-Journal*, are also available.

Entire newsholes of each newspaper were content analyzed for a randomly constructed week to determine the visual content of the papers. Riffe, Aust and Lacy⁶⁰ found that constructed week sampling, in which an issue of a newspaper is randomly drawn for each day of the week, was just as effective and efficient as simple random sampling and consecutive day sampling. In fact, for six months of publication, these researchers found that one constructed week was as efficient as four weeks. The study found that 100 percent of the sample means fell within two standard errors of the population means for the constructed week method. Simple random sampling produced 85 to 95 percent of the sample means within two standard errors of the population means. Seventy to 80 percent of the sample means fell within

⁶⁰ Daniel Riffe, Charles F. Aust and Stephen R. Lacy, "The Effectiveness of Random, Consecutive Day and Constructed Week Sampling in Newspaper Content Analysis," *Journalism Quarterly*, 70: 133-139 (Spring 1993).

two standard errors of the population means using the consecutive day method of sampling. Overall, their research showed that samples of issues of newspapers should be stratified by day of the week, as was done using the constructed week method, rather than using consecutive days of publication or simple random sampling.

Copies of the newspapers were gathered directly from the publishers, rather than being examined by microfilm, so that accurate measures could be achieved. The sample of newspapers was randomly drawn between the issue dates of Jan. 1, 1993, and June 1, 1993. This restriction to the five months prior to the survey was used because one of the newspapers, the *Chanute Tribune*, had undergone a slight design change beginning Jan. 1, 1993. While it is possible that subscribers of the *Chanute Tribune* might have reacted to the design change, it is not likely that this had a strong effect on the opinions expressed since the telephone survey was conducted five months after the design change had been implemented. Furthermore, the design change was not radical. Randomly selected issue dates were Monday, March 22; Tuesday, March 2; Wednesday, Feb. 17; Thursday, April 15; Friday, Jan. 22 and Saturday, Jan. 9.

The unit of analysis was the editorial item, defined as any type of non-advertising matter. Each editorial item was coded with an identification number for each case and by name of the newspaper (*Chanute Tribune* or *Iola Register*), fold (above or below), editorial item type (news, feature, sports, column, business, publishing info, editorial, briefs or games), visual element (no graphic, photograph, map, information graphic, story logo, editorial

cartoon, box, dingbat, illustration or screen) and visual treatment (with story, stand alone or no graphic). Visual space and editorial space (non-visual space) were measured for each item in square picas. Editorial items, visual elements and visual space were recorded for all items in the newspapers except for advertising. No advertising items were included in the content analysis (Appendix A).

Editorial items were coded by two coders, both former journalists. Coder training was accomplished by developing a well-defined codebook after three coding trials (Appendix A). Each coder coded one issue of both newspapers and was required to make 766 decisions overall. Intercoder reliability was determined by the Holsti formula for percentage of agreement. The Holsti formula is $\text{Reliability} = 2M/N1 + N2$. M represents the number of coding decisions in which the two coders are in agreement, and N1 and N2 represent the total number of coding decisions required of the first and second coder, respectively. The resulting fraction is the reliability index.

Intercoder reliability was calculated for each variable in the content analysis, and an overall intercoder reliability was computed. Intercoder reliability for the name of the newspaper was 1.00, indicating 100 percent agreement. Since this coding category was expected to have 100 percent agreement, it was not included in the overall reliability index. Table 2 presents the intercoder reliability for the remaining variables.

Table 2 Content analysis intercoder reliability using the Holsti formula

Holsti Formula: Reliability= $2M/N1+N2$

<u>Variable</u>	<u>Reliability</u>
Fold	$R = 2(140)/142+142 = 280/284 = .96$
Editorial Item Type	$R = 2(141)/142+142 = 282/284 = .99$
Visual Element	$R = 2(160)/160+160 = 320/320 = 1.00$
Visual Treatment	$R = 2(159)/160+160 = 318/320 = .99$
Visual Space	$R = 2(159)/160+160 = 318/320 = .99$
Editorial Space	$R = 2(132)/142+142 = 264/284 = .93$
Advertising Space	$R = 2(19)/20+20 = 38/40 = .95$
Overall	$R = 2(751)/766+766 = 1502/1532 = .98$

Note. Measures for the fold variable were whether the item was above or below the fold. Editorial item types were news, feature, sports, column, business, publishing info, editorial, briefs or games. Visual elements were characterized as no graphic, photograph, map information graphic, story log, editorial cartoon, small decorative illustrations (dingbats), illustration or screen. Visual treatment measured whether the visual element was with a story or other editorial item or standing alone by itself. Visual space and editorial space were measured for each editorial item.

A Survey of 752 Subscribers of the Chanute Tribune and the Iola Register

A sample of 752 respondents was randomly selected from subscriber lists provided by the newspapers. Each subscriber household was coded with a number and then randomly selected by a scientific calculator which generated random numbers. Respondents totaled 376 subscribers from each newspaper. The respondents were further subdivided by community. The total sample included 251 subscribers of the *Chanute Tribune* who lived in or

near Chanute, 251 subscribers of the *Iola Register* who lived in or near Iola, 125 readers of the *Chanute Tribune* who lived in Humboldt, the town about equidistant between the two larger towns, and 125 readers of the *Iola Register* who lived in Humboldt.

The telephone survey was conducted using seven callers over a period of two weeks in June, 1993. Days and calling times were randomized as much as possible to help ensure a random sample. A variation of the next birthday calling method, which asks for the adult in the household who will have the next birthday to complete the survey, was used to help minimize oversampling of females. As Salmon and Nichols ⁶¹ pointed out in research on this method, the next birthday calling method does help to randomize the respondents by gender. The researchers also advised that asking for the adult in the household who had the last, or most recent, birthday rather than the next birthday would help eliminate confusion. In the present study, those who answered the telephone were asked which adult in the household had the most recent birthday, who were subsequently interviewed.

Respondents agreed to a consent statement before the questionnaire was begun, and were given an opportunity to decline or participate in the research (Appendix B). A total of 903 households were called to reach the sample size of 752, for a response rate of 83.3 percent. Results of the research were provided to both newspapers.

⁶¹ Charles T. Salmon and John Spicer Nichols, "The Next-Birthday Method of Respondent Selection," *Public Opinion Quarterly*, 47: 270-276.

A total of 100 variables were included in the survey questionnaires (Appendix C). Cases were coded with an identification number and by coder. Questions and their correspondent dependent variables were all expressed as five-item Likert scales (1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree) (Appendix D).

The first set of dependent variables related to perceived quality of news, feature and sports photos and overall photo quality. Measurements in the second set of variables included desire for larger photos, multiple photos, more color photos, more feature photos, more news photos and more sports photos. The third set of variables included satisfaction with editorial drawings, maps and overall graphic quality and desire for more color graphics. Variables in the fourth set measured satisfaction with news, feature and sports writing quality and satisfaction with news and sports coverage. Numerous appearance variables made up the fifth set of variables including whether the appearance of the newspaper was perceived as interesting, exciting, uncluttered, colorful, pleasant, fresh, modern, appealing, strong, attractive and good overall. The sixth set of dependent variables was related to satisfaction with the journalistic quality of the newspaper and included measures such as accurate, timely, honest, objective, responsible, current, trustworthy, fair, professional and good quality overall. The final set of dependent variables centered on personal utility and enjoyment and perceptions of the newspaper as useful, thorough, enjoyable, informative, entertaining and interesting to read.

Independent variables in the survey took several forms. Some were dichotomous, yes/no variables or open-ended questions which asked for time, days, years or number of trips. Income and education questions were structured as categories. Two variables concerning attitudes toward the editor and editorial stance of the newspaper were structured as five-point Likert scales. Gender was recorded, but respondents were not asked to identify their gender ⁶² (Appendix E).

The first set of independent variables involved attitudes toward the newspaper's editorial stance and toward the editor. These were included as control variables, since strong opinions toward the editorial stance of the newspaper or the editor could influence attitudes toward the newspaper on several of the dimensions measured in this study. The second set dealt with personal use and involvement with the newspaper and measured such variables as days read, time spent reading the newspaper each day, whether the respondent personally knew anyone at the newspaper and whether the respondent had ever been the subject of an article or photograph and whether the coverage was generally positive or negative. Other questions in this set asked about whether the respondent had ever written a letter to the editor, discussed items read in the newspaper with others, clipped coupons, bought an advertisement, visited the newspaper office and talked to a staff member.

⁶² In cases where gender was not easy to determine, callers were instructed to refer to the respondent as "sir" or "ma'm" and await a correction if they were wrong. Out of 752 respondents, this was necessary for less than half a dozen, and only one or two respondents corrected the callers.

These kinds of measures of personal use and personal involvement with the newspaper are important because they too could contribute to satisfaction with the newspaper.

The third set of independent variables centered on use of other media available in the community including time spent watching television each day, whether cable television was present in the home, time spent each week reading magazines and any readership of area newspapers and *USA Today*. Of particular interest here were time spent with television, cable TV subscription and readership of newspapers such as *USA Today*, the *Kansas City Star*, *Wichita Eagle* and *Topeka Capital-Journal*, all recognized by the newspaper industry as visually oriented newspapers. If readers get a heavy diet of visuals in other media, they may desire more visuals in their own hometown daily newspaper. Independent variables in the fourth set measured nativity, length of residence and home ownership. Numerous newspaper readership studies have established these variables as important ones for predicting newspaper subscription, so they were included to examine how they affect satisfaction with the newspaper on the several dimensions of dependent variables in this study.

Respondents were asked in the fifth set of questions about how many trips they made to a neutral town or a competing town in an average month. Of course, these questions differed slightly depending on which subscribers in which community were being surveyed. For subscribers of the *Chanute Tribune* living in Chanute the competing town was Iola, and the neutral town was Humboldt. The competing town for *Iola Register* subscribers living

in Iola was Chanute, and the neutral town was Humboldt. For *Chanute Tribune* subscribers living in Humboldt, Iola was the competing town and Chanute was the neutral town. For *Iola Register* subscribers living in Humboldt, Iola was the neutral town and Chanute was the competing town. These questions were included to try to measure respondent connection to a particular community which might influence his or her preference for one newspaper over the other. For example, if a resident of Humboldt visits relatives, goes to the doctor or goes shopping in Chanute frequently, that behavior may have more to do with preference for the Chanute newspaper than use of visuals or anything else. Numerous studies on newspaper readership have shown that community ties are important variables in subscription or readership of a newspaper.

The final set of independent variables included demographics such as age, income, education and gender. These traditional demographic variables are often included in newspaper readership studies, so they were included here to measure their impact on satisfaction with the newspaper on several dimensions.

CHAPTER III.

RESULTS

Results of the Content Analysis

Appropriate frequencies, chi-square analyses and t-tests were computed for variables in the content analysis. Results revealed that the two papers use visuals differently, use different amounts of visuals and allocate different amounts of space to visuals. Throughout the research presented here, findings that showed statistical significance at less than the .05 level were characterized as statistically significant. A total of 811 editorial items were present in the two papers. The *Chanute Tribune* had 345 (42.5 percent), and the *Iola Register* had 466 (57.5 percent.) Table 3 presents frequencies of editorial items coded from the two newspapers.

Table 3 Frequencies of editorial items

<u>Editorial items</u>	<u>Frequency</u>	<u>Percent</u>
<i>Chanute Tribune</i>	345	42.5
<i>Iola Register</i>	466	57.5

Note. N=811

Table 4 contains frequencies of editorial items above and below the fold. The Iola newspaper contained 121 more editorial items, but the

Table 4 **Chi-square analysis of editorial items above or below the fold**

Fold	<i>Chanute Tribune</i>		<i>Iola Register</i>	
	n	%	n	%
Above	195	56.5	272	58.4
Below	150	43.5	194	41.6
Total	345	100.0	466	100.0

Note. N= 811, Chi-square= 0.28, df= 1, p= 0.60

percentages of items above and below the fold for each paper were about the same. The chi square analysis reveals that the differences here were not statistically significant. On this variable, the papers did not differ substantially.

Table 5 lists the frequencies of each editorial item type. The five most common types of editorial items overall were publishing information, briefs, sports and news. Following these types of items were features, editorials, columns, games and business items. The newspapers followed a similar pattern in terms of which types of stories were most common. For the Chanute newspaper, the most common type of editorial item was publishing information, followed by briefs, sports, news, editorial, feature, column, games and business. The *Iola Register* also ran publishing information most often, followed by briefs, news, sports, feature, editorial, column, games and business. Interestingly, publishing information and briefs made up more than 40 percent of the editorial items for both papers. In the *Chanute*

Table 5 **Frequencies of editorial item type**

Ed. Item Type	<i>Chanute Tribune</i>		<i>Iola Register</i>	
	n	%	n	%
News	47	13.6	67	14.4
Feature	23	6.7	42	9.0
Sports	59	17.1	58	12.4
Column	17	4.9	26	5.6
Business	2	.6	12	2.6
Publishing Info.	86	24.9	147	31.5
Editorial	36	10.4	28	6.0
Briefs	63	18.3	68	14.6
Games	12	3.5	18	3.9
Total	345	100	466	100

Note. N=811

Tribune, 43.2 percent of the editorial items were publishing information and briefs. In the *Iola Register*, almost half of the editorial items, 46.1 percent, were these types of items. News only accounted for 13.6 percent of the editorial items in the *Chanute Tribune* and 14.4 percent in the *Iola Register*.

Since there were so few business items, these were collapsed with the news category to run a chi-square analysis, which showed no statistical significance with a probability of 0.16, as listed in Table 6.

Almost two-thirds, 510 or 62.9 percent, of the 811 editorial items had no visual elements at all. To further calculate information about the visual elements, the data set was recoded so that each visual element was the unit of analysis, rather than each editorial element. This allowed control for cases in which there were two or more visual elements attached to an editorial

Table 6 **Chi-square analysis of editorial item type**

<u>Ed. Item Type</u>	<i>Chanute Tribune</i>		<i>Iola Register</i>	
	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>
News/Business	49	14.2	79	17
Feature	23	6.7	42	9.0
Sports	59	17.1	58	12.4
Column	17	4.9	26	5.6
Publishing Info.	86	24.9	147	31.5
Editorial	36	10.4	28	6.0
Briefs	63	18.3	68	14.6
<u>Games</u>	12	3.5	18	3.9
Total	345	42.5	466	57.5

Note. N= 811, Chi-square= 18.82, df= 8, p= 0.16

element. This resulted in a sample of 420 visual elements. Table 7 shows that the most common visual elements were boxes, followed by photographs, small decorative devices known as dingbats, illustrations, and screens. Editorial cartoons, story logos, information graphics and maps finished out the list.

Several categories of visual elements were collapsed to perform a chi-square analysis on the visual elements by newspaper due to infrequency in some cells. Screens were combined with the box category. Information graphics, maps and story logos were coded as illustrations. Table 8 reveals statistically significant differences, at less than .001, between the newspapers concerning uses of the different visual elements.

Table 7 **Frequencies of visual elements**

Visual Element	<i>Chanute Tribune</i>		<i>Iola Register</i>	
	n	%	n	%
Photograph	44	10.5	40	9.5
Map	6	1.4	0	0.0
Info. Graphic	7	1.7	3	0.7
Story Logo	8	1.9	4	0.9
Editorial Cartoon	12	2.9	5	1.2
Box	90	21.4	57	13.6
Dingbat	6	1.4	59	14.1
Illustration	21	5.0	40	9.5
Screen	17	4.1	1	0.2
Total	211		209	

Note. N=420

Table 8 **Chi-square analysis of visual elements by newspaper**

Visual Elements	<i>Chanute Tribune</i>		<i>Iola Register</i>	
	n	%	n	%
Photograph	44	20.9	40	19.1
Editorial Cartoon	12	5.7	5	2.4
Box/Screen	107	50.7	58	27.8
Dingbat	6	2.8	59	28.2
Illustration	42	19.9	47	22.5
Total	211	50.2	209	49.8

Note. N=420, Chi-square= 61.11, df= 4, p= <.001

The largest difference was in the use of boxes and screens. More than half (50.7 percent) of the visual elements in the *Chanute Tribune* were boxes and screens, while boxes and screens made up 27.8 percent of the visual elements in the *Iola Register*. The *Chanute* paper also used more than twice the percentage of editorial cartoons as the *Iola Register*. The *Register* used about 10 times as many small decorative drawings or dingbats as the *Chanute Tribune*. About equal percentages of photographs and illustrations were used by both newspapers. Overall, the papers used about the same number of visual elements, 211 for the *Chanute Tribune* and 209 for the *Iola Register*.

Since 510 of the editorial items had no visuals, 510 of them had no visual treatments. As Table 9 shows, considering the 420 visual elements that were present, there are statistically significant differences in how the two papers handle visuals. The *Chanute Tribune* ran 46.9 percent of its visuals with stories and 53.1 percent as visuals standing alone, while the *Iola Register* took the opposite trend, running 74.2 percent of its visuals with stories and 25.8 percent standing alone. These differences are statistically significant at less than .001.

These findings indicate that the *Iola Register* took a more traditional approach to visual elements, running them in conjunction with stories. The *Chanute Tribune*, following the lead of *USA Today*, tended to run somewhat more visuals standing alone.

An important variable in the content analysis was visual space. The two newspapers seemed to differ the most on this variable. As mentioned previously, frequency counts of visual elements do not fully explain the

Table 9 **Frequencies and chi-square analysis of visual treatments**

Visual Treatment	<i>Chanute Tribune</i>		<i>Iola Register</i>	
	n	%	n	%
With story	99	46.9	155	74.2
Standing alone	112	53.1	54	25.8
Total	211	50.2	209	49.8

Note. N=420, Chi-square= 32.6, df= 1, p= <.001

degree to which a newspaper devotes space to visuals. T-tests, which were performed to examine the differences between the two newspapers regarding the average amount of visual space, revealed that the *Chanute Tribune* had almost twice as much mean visual space per editorial item as the *Iola Register*.

Table 10 shows that the difference in mean visual space per editorial item between the two newspapers is significant at less than .001. The *Chanute Tribune* averaged 610 square picas of visual space per editorial item, and the *Iola Register* averaged 329 square picas of visual space per editorial item, a difference of 281 square picas. When the *Chanute Tribune* ran a visual, it was an average of 281 square picas larger than the average size visual in the *Iola Register*. Large standard deviations in this t-test and others appear to be due to very large ranges in the amount of visual space per editorial item, which ranged from zero, when no visual elements were present, to 8,550 square picas. The mean differences in each test do fit within 95 percent confidence

Table 10 Means and standard deviations of visual space per editorial item by newspaper

Visual Space in Square Picas

<i>Chanute Tribune</i>			<i>Iola Register</i>		
X	SD	n	X	SD	n
610.3	1282.51	345	329.44	784.65	466

Note. N= 811, mean diff.= 280.59, t= 3.85, p= <.001

intervals, suggesting that the t-test results are statistically valid despite the unusual standard deviations.

Total visual space for both papers combined was 363,980 square picas. The sum of visual space for the *Chanute Tribune* was 210,460 square picas and 153,520 square picas for the *Iola Register*, a difference of 56,940 square picas.

Table 10 listed the mean visual space including editorial elements that had no visual elements. Similar trends in visual space were evident when considering the mean visual space per visual element, including only those 420 editorial items that contained visual elements. Table 11 presents these results, which show that the average visual element in the *Chanute Tribune* was 264 square picas larger than the average visual element in the *Iola Register*, statistically significant at less than .05.

Mean visual space was computed for each visual element for both newspapers. Table 12 shows that photos, maps, information graphics, small decorative drawings or dingbats, illustrations and screens were larger in the

Table 11 Means and standard deviations of visual space per visual element by newspaper

Visual Space in Square Picas

<i>Chanute Tribune</i>			<i>Iola Register</i>		
X	SD	n	X	SD	n
997.27	1193.79	211	733.41	984.71	209

Note. N= 420, Mean diff.= 263.87, t= 2.47 p= <.05

Table 12 Means and standard deviations of visual space by visual element type by newspaper

Visual Space in Square Picas

	<i>Chanute Tribune</i>			<i>Iola Register</i>			Mean diff.	p
	X	SD	n	X	SD	n		
Photo	994.14	1057.75	44	882.43	629.13	40	111.71	.56
Map	327.00	7.35	6	0.00	0.00	0	327.00	NA
Infograph	936.00	606.23	7	894.00	1299.04	3	42.00	.94
Story Logo	33.25	19.29	8	82.5	12.37	4	49.25	<.01
Ed. Cart.	1057.50	272.95	12	1427.00	286.46	5	369.50	<.05
Box	1176.48	1131.93	90	1244.89	1004.61	57	68.42	.71
Dingbat	14.84	2.93	6	2.27	1.50	59	12.56	<.001
Illus.	1517.95	2260.01	21	917.25	1365.35	40	600.70	.20
Screen	433.18	351.16	17	55	0.00	1	378.18	.31

Note. N=420

Chanute Tribune than in the *Iola Register*. In the *Iola Register*, story logos, editorial cartoons and boxes were larger than in the *Chanute Tribune*.

However, statistically significant differences appeared only on story logos, editorial cartoons and dingbats. The *Iola Register* ran larger story logos and editorial cartoons, and the *Chanute Tribune* ran larger dingbats. Some of the tests resulted in differences that were not statistically significant due to small frequencies of visual elements present in some categories. For example, screens in the *Chanute Tribune* were 378 square picas larger than in the *Iola Register*, yet the t-test did not reveal statistical significance, because there was only one screen in the *Iola Register*. Similarly, because there were no maps in the *Iola Register*, statistical significance does not appear.

Another measure of visual space involved the mean amount of visual space per visual treatment. As Table 13 illustrates, when the *Chanute Tribune* ran a visual with an editorial element it was likely to be much larger than visual elements handled in that manner in the *Iola Register*. The mean difference of 426 square picas was statistically significant at less than .001.

When the *Iola Register* ran a visual element standing alone, it was somewhat larger than in the *Chanute Tribune*, although the differences were not statistically significant. The *Iola Register* ran more visuals with stories than visuals standing alone, but tended to run them smaller than the visuals they ran with stories. The *Chanute Tribune* ran more visuals standing alone than visuals with stories, but ran visuals with stories somewhat larger than their visuals standing alone.

**Table 13 Means and standard deviations of visual space
by visual treatment by newspaper**

Visual Space in Square Picas

	<i>Chanute Tribune</i>			<i>Iola Register</i>			Mean diff.	p
	X	SD	n	X	SD	n		
W/Story	1045.94	1080.14	99	619.97	913.04	155	425.97	<.001
Standing Alone	954.26	1289.26	112	1059.00	1112.44	54	104.74	.61

Note. N=420

The *Chanute Tribune* tended to favor visuals standing alone and visuals with stories run large, while the *Iola Register* tended to prefer to run visuals with stories, but much smaller than the *Chanute* newspaper. This means that readers of the *Chanute Tribune* were likely to encounter traditional stories with large visuals and large visuals standing alone, while the *Iola Register* readers were likely to see smaller visuals run with stories and large visuals standing alone. Perhaps the *Chanute* readers were exposed to a more visual newspaper because visuals run with stories and visuals standing alone seemed to be larger on average, making them stand out on the page, more so than in the *Iola Register*.

A final measure of visual space was how much visual space each paper devoted to different types of editorial items. As Table 14 shows, the *Chanute Tribune* ran more mean visual space on all but two of the editorial elements including news, features, sports, columns, publishing information, briefs and

**Table 14 Means and standard deviations of visual space
by editorial element type by newspaper**

Visual Space in Square Picas

	<i>Chanute Tribune</i>			<i>Iola Register</i>			Mean diff.	p
	X	SD	n	X	SD	n		
News	145.76	504.36	47	136.84	431.63	67	8.93	.92
Feature	1826.52	2484.89	23	453.62	751.99	42	1340.50	<.01
Sports	637.14	1455.38	59	534.54	897.00	58	102.60	.65
Column	196.77	784.34	17	112.88	297.98	26	83.88	.62
Business	0.00	0.00	2	378.25	447.32	12	378.25	.27
Pub. Info.	138.24	269.96	86	55.63	176.96	147	82.61	<.01
Editorial	591.72	607.03	36	823.75	1123.28	28	232.03	.29
Briefs	883.51	1124.23	63	314.78	866.01	68	568.73	<.001
Games	2650.92	2457.28	12	1823.00	1469.15	18	827.92	.26

Note. N= 811

games. The Iola newspaper was higher on mean visual space on editorials and on business stories, because the two business stories the *Chanute Tribune* ran did not have any visual space.

Statistically significant differences were present on mean visual space of features, publishing information and briefs. The *Chanute Tribune* ran visual elements with features that were an average of 1341 square picas larger than in the *Iola Register*, significant at less than .01. Visual elements run with publishing information were 83 square picas larger in the *Chanute Tribune* on average than in the *Iola Register*, statistically significant at less than .01. Visual elements with briefs in the *Iola Register* were an average of

569 square picas smaller than in the *Chanute Tribune*, statistically significant at less than .001.

These findings suggest that the *Chanute Tribune* appeared more visual to readers than the *Iola Register*, because visual elements with every editorial element type except editorials and business stories were larger in the Chanute newspaper than in the Iola newspaper.

Editorial space was computed for each paper. The *Chanute Tribune* had a total editorial or non-visual space of 296,147 square picas, while the *Iola Register* had a total of 340,591 square picas, a difference of 44,444 square picas. Mean editorial space for the Chanute newspaper was 858 square picas, and mean editorial space for the *Iola Register* was 731 square picas. The mean difference of editorial space between the two newspapers was 127 square picas, significant at less than .05, $t=2.46$. These findings also suggest that the Iola paper appeared less visual than the Chanute newspaper.

Ratios of visual space to editorial space for both newspapers were computed. The *Chanute Tribune*, with visual space of 210,460 square picas and editorial space of 296,147 square picas had a visual space to editorial space ratio of .71. The *Iola Register* with visual space of 153,520 square picas and editorial space of 340,591 square picas had a visual space to editorial space ratio of .45, further suggesting that the *Chanute Tribune* was more visual than the *Iola Register*.

Overall, the content analysis revealed statistically significant quantitative differences in visuals between the two newspapers on several dimensions. The *Chanute Tribune* ran slightly larger percentages of

photographs and about twice the percentage of editorial cartoons and boxes and screens of the *Iola Register*. The *Iola Register* ran slightly larger percentages of illustrations and 1,000 percent more small decorative drawings or dingbats. Dingbats accounted for almost a third (28.2 percent) of the *Iola* newspaper's visual elements. The *Iola Register* ran almost three-fourths of its visual elements in the traditional manner, with stories. The largest number of these were small decorative drawings or dingbats, which do not have strong visual impact. The *Chanute Tribune* tended to run more visuals standing alone, which may attract more visual attention.

Perhaps more important than the frequency of visual items, was the difference in the mean visual space between the newspapers. Editorial elements in the *Chanute Tribune* had almost twice as much visual space as the *Iola Register*. The average space of visual elements in the *Chanute Tribune* was larger than in the *Iola Register*. Both of these findings were statistically significant. This means that when readers encountered a visual element, it was likely to be larger on average in the *Chanute Tribune* than in the *Iola Register*, suggesting more visual impact.

All but three of the visual elements were larger in the *Chanute Tribune* than in the *Iola Register*, but only the average size of the dingbats was statistically larger in the *Chanute Tribune*. Story logos and editorial cartoons were statistically larger in the *Iola Register*. These findings do show that the differences in mean visual space were not as strongly evident when considering each visual element separately. Yet, readers are probably more

likely to be impressed with the average size of the visual space overall, rather than with a breakdown of each type of visual.

Mean visual space on visual elements run with editorial elements was almost twice as large in the *Chanute Tribune* compared to the *Iola Register*, significant at less than .001. The mean visual space on visual elements standing alone was only slightly larger in the *Iola Register*, but the difference was not statistically significant.

A final measure that illustrates the difference in use of visuals between the two newspapers is the mean amount of visual space devoted to different types of editorial elements. I suspect that this kind of organization is the way many readers experience newspapers, so the finding that the *Chanute Tribune* ran larger visuals with every editorial element type except one (editorials) suggests that the readers of the *Chanute Tribune* were exposed to a heavier diet of visuals than readers of the *Iola Register*. The *Chanute Tribune* ran features with about four times as much visual space as the *Iola Register*, significant at less than .01. Visuals with publishing information were more than twice as large in the *Chanute Tribune*, compared to the *Iola Register*, significant at less than .01. Visuals with briefs were twice as large in the *Chanute Tribune* as in the *Iola Register*, significant at less than .001.

Finally, the ratio of visual space to editorial space in the *Chanute Tribune* at .71, compared to .45 in the *Iola Register*, suggests that readers of the *Chanute* newspaper experience a more visual newspaper than readers of the *Iola Register*. In short, the *Chanute Tribune* had more visual space, presenting readers with a fairly visual newspaper; and the *Iola Register* had

more editorial space, giving readers a newspaper with a more traditional look with less visual impact (Appendix F).

Results of the Survey

Frequencies and means for the entire data set, computed for all dependent and independent variables in the survey, are included in Appendix H. Statistical tests were performed to test the 10 sets of hypotheses. Results of the statistical tests and discussion follow each hypothesis.

Visual Newspaper vs. Traditional Newspaper

H1a: The newspaper that has a higher ratio of visual space to editorial (non-visual) space will score higher on measures of satisfaction with photo quality.

As Table 15 shows, the two newspapers were statistically significantly different, at less than .001, only on satisfaction with sports photos. However, the trend was in the opposite direction from the prediction. Subscribers of the visual newspaper reported less satisfaction, not more satisfaction, with sports photos than readers of the traditional newspaper.

It was expected that the visual paper would score higher on overall photo quality, news photo quality, feature photo quality and sports photo

Table 15 T-tests of dependent variables by newspaper on measures of satisfaction with photo quality

Dependent variable	Visual paper			Traditional paper		
	X	SD	n	X	SD	n
Overall photo quality	3.9547	.557	376	3.9574	.550	376
Note. N= 752, mean diff.= .0027, t= .07, p= .47						
News photos	3.8936	.602	376	3.9122	.611	376
Note. N= 752, mean diff.= .0186, t= .42, p= .34						
Feature photos	3.9601	.576	376	3.9521	.582	376
Note. N= 752, mean diff.= .0080, t= .19, p= .43						
Sports photos	3.6144	.736	376	3.8693	.789	376
Note. N= 752, mean diff.= .2550, t= 4.58, p= <.001						

quality. In fact, the traditional paper scored slightly higher on overall photo quality, news photo quality and sports photo quality. The visual paper scored slightly higher only on feature photo quality. However, these differences were not statistically significant. No support for hypothesis 1a was provided.

H1b: The newspaper that has a higher ratio of visual space to total editorial space will score lower on measures of desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

Results in Table 16 reveal that there were statistically significant differences between the two newspapers on desire for more color photos, more news photos and more sports photos. However, the result was in the opposite direction of the outcome predicted. The newspaper with the higher ratio of visual space to editorial space, the *Chanute Tribune*, had readers who had greater desire for more color photos, more news photos and more sports photos than readers of the *Iola Register*, the traditional newspaper. Therefore, hypothesis 1b is not supported. Perhaps the visual newspaper has

**Table 16 T-tests of dependent variables by newspaper
on measures of desire for increased size and amounts of photos**

Dependent variable	<u>Visual paper</u>			<u>Traditional paper</u>		
	X	SD	n	X	SD	n
Larger photos	2.2447	.816	376	2.2713	.731	376
Note. N= 752, mean diff.= .0266, t= .47, p= .32						
Multiple photos	2.5745	1.017	376	2.6516	.979	376
Note. N= 752, mean diff.= .0771, t= 1.06, p= .15						
More color photos	2.9601	1.203	376	2.6037	1.056	376
Note. N= 752, mean diff.= .3564, t= 4.32, p= <.001						
More feature photos	3.1064	1.063	376	3.1280	1.047	376
Note. N= 752, mean diff.= .0216, t= .28, p= .39						
More news photos	3.0239	1.077	376	2.8484	1.038	376
Note. N= 752, mean diff.= .1755, t= 2.28, p= <.05						
More sports photos	2.6543	.995	376	2.5348	.965	376
Note. N= 752, mean diff.= .1195, t= 1.67, p= <.05						

whetted the appetite of subscribers resulting in more desire for color photos, news photos and sports photos, rather than less desire for such visuals.

However, three of the other dependent measures did score in the predicted direction, but without statistically significant differences. Desire for larger photos, desire for multiple photos and desire for more feature photos were all less for subscribers of the visual newspaper, the *Chanute Tribune*.

H1c: The newspaper that has a higher ratio of visual space to total editorial space will score higher on measures of satisfaction with other graphics.

Table 17 lends support to hypothesis 1c. Chanute subscribers indicated statistically significant higher satisfaction levels, at the .01 level for dependent measures of satisfaction with maps and at the .05 level for satisfaction with overall graphic quality. However, there was no statistically significant

**Table 17 T-tests of dependent variables by newspaper
on measures of satisfaction with other graphics**

Dependent variable	Visual paper			Traditional paper		
	X	SD	n	X	SD	n
Editorial drawings	3.7793	.621	376	3.7447	.648	376
Note. N= 752, mean diff.= .0346, t= .75, p= .23						
Maps	3.7793	.553	376	3.6480	.584	376
Note. N= 752, mean diff.= .1313, t= 3.16, p= <.01						
Overall graphic quality	3.8723	.400	376	3.7973	.513	376
Note. N= 752, mean diff.= .0750, t= 2.23, p= <.05						

difference between the two newspapers on satisfaction with editorial drawing quality.

H1d: The newspaper that has a higher ratio of visual space to total editorial space will score lower on the measure of desire for more color graphics

Hypothesis 1d predicted lower levels of desire for more color graphics among the readers of the *Chanute Tribune* than among readers of the *Iola Register*. This hypothesis was not supported. As Table 18 shows, there was a statistically significant difference, at the .05 level, between the two newspapers on desire for more color graphics, but not in the predicted direction. Subscribers of the visual newspaper, the *Chanute Tribune* had greater desire for more color graphics than subscribers of the traditional newspaper, the *Iola Register*. Perhaps, again the overall visual presentation of the *Chanute Tribune* has fueled even more desire for color graphics. Hypothesis 1d was not supported.

H1e: The newspaper that has a higher ratio of visual space to total editorial space will score higher on measures of writing and news and sports coverage.

Hypothesis 1e is supported, as Table 19 shows, only by the significant difference between the two newspapers on satisfaction with news coverage. The *Chanute Tribune*, the newspaper with a higher ratio of visual space to

Table 18 T-tests of dependent variables by newspaper on desire for more color graphics

<u>Dependent variable</u>	<u>Visual paper</u>			<u>Traditional paper</u>		
	X	SD	n	X	SD	n
More color graphics	2.7739	1.088	376	2.2663	1.003	376

Note. N= 752, mean diff.= .1476, t= .28, p= <.05

Table 19 T-tests of dependent variables by newspaper on measures of satisfaction with writing and coverage

<u>Dependent variable</u>	<u>Visual paper</u>			<u>Traditional paper</u>		
	X	SD	n	X	SD	n
News writing	3.8723	.669	376	3.8670	.644	376
Note. N= 752, mean diff.= .0053, t= .11, p= .46						
Feature writing	3.9309	.576	376	3.9548	.580	376
Note. N= 752, mean diff.= .0239, t= .57, p= .29						
Sports writing	3.4507	.758	376	3.6676	.738	376
Note. N= 752, mean diff.= .2169, t= 3.96, p= <.001						
News coverage	3.8351	.779	376	3.7314	.873	376
Note. N= 752, mean diff.= .1037, t= .1.72, p= <.05						
Sports Coverage	3.4388	.843	376	3.7074	.813	376
Note. N= 752, mean diff.= .2686, t= .4.45, p= <.001						

editorial space, scored higher on this dependent variable than the *Iola Register*, significant at less than .05. There were significant differences between the two newspapers on satisfaction with sports writing and sports coverage, but not in the predicted direction. It appears that visual differences may have little impact on satisfaction with sports writing and coverage.

H1f: The newspaper that has a higher ratio of visual space to total editorial space will score higher on measures of satisfaction with the appearance of the newspaper.

Results in Table 20 showed some support for hypothesis 1f. The visual newspaper scored statistically significantly higher on dependent measures of satisfaction with the appearance of the newspaper on modern, appealing and overall appearance. Readers of the visual newspaper rated it .14 higher than the traditional newspaper on the modern measure, significant at less than .01. Visual newspaper readers also rated the paper .07 higher on appealing and .06 higher on overall appearance, both significant at less than .05. While these differences on the five-point Likert scales are not large, they are significant.

Differences between the two newspapers on the remaining appearance variables were not significant. The visual newspaper scored higher on interesting appearance, uncluttered, pleasant, fresh, professional and attractive. The traditional newspaper was rated higher on exciting, colorful and strong.

Table 20 T-tests of dependent variables by newspaper on measures of satisfaction with the appearance of the newspaper

Dependent variable	<u>Visual paper</u>			<u>Traditional paper</u>		
	X	SD	n	X	SD	n
Interesting appearance	3.8511	.536	376	3.8005	.598	376
Note. N= 752, mean diff.= .0505, t= 1.22, p= .11						
Exciting	2.7899	1.036	376	2.8723	.903	376
Note. N= 752, mean diff.= .0824, t= 1.16, p= .12						
Uncluttered	3.8830	.508	376	3.8298	.643	376
Note. N= 752, mean diff.= .0532, t= 1.26, p= .11						
Colorful	2.6064	1.038	376	2.7021	.964	376
Note. N= 752, mean diff.= .0957, t= 1.31, p= .10						
Pleasant	3.8537	.465	376	3.8351	.531	376
Note. N= 752, mean diff.= .0186, t= .51, p= .31						
Fresh	3.8165	.517	376	3.7793	.617	376
Note. N= 752, mean diff.= .0372, t= .90, p= .19						
Modern	3.8670	.515	376	3.7314	.689	376
Note. N= 752, mean diff.= .1356, t= 3.06, p= <.01						
Professional	3.8989	.512	376	3.8777	.571	376
Note. N= 752, mean diff.= .0213, t= .54, p= .30						
Appealing	3.7899	.543	376	3.7128	.667	376
Note. N= 752, mean diff.= .0771, t= 1.74, p= <.05						
Strong	3.5266	.726	376	3.5452	.754	376
Note. N= 752, mean diff.= .0186, t= .34, p= .37						
Attractive	3.7606	.621	376	3.7314	.700	376
Note. N= 752, mean diff.= .0293, t= .61, p= .27						

Table 20 Continued

Overall appearance	3.9733	.334	375	3.9096	.549	376

Note. N= 751, mean diff.= .0638, t= 1.92, p= <.05

H1g: The newspaper that has a higher ratio of visual space to total editorial space will score higher on measures of satisfaction with the journalistic quality of the newspaper.

Hypothesis 1g was supported on only one of the dependent variables measuring satisfaction with the journalistic quality of the newspaper, as shown in Table 21. Readers of the visual newspaper rated it .09 higher on honest than the readers of the traditional newspaper, significant at less than .05. There were no significant differences between the newspapers on accurate, timely, objective, responsible, current, trustworthy, fair, professional and overall quality. This suggests that contrary to the prediction, visual differences between the newspapers had little impact on satisfaction with the journalistic quality of the newspaper.

Table 21 T-tests of dependent variables by newspaper on measures of satisfaction with the journalistic quality of the newspaper

Dependent variable	Visual paper			Traditional paper		
	X	SD	n	X	SD	n
Accurate	3.5401	.880	374	3.5963	.860	374
Note. N= 748, mean diff.= .0561, t= .88, p= .19						
Timely	3.8404	.571	376	3.8298	.639	376
Note. N= 752, mean diff.= .0106, t= .24, p= .41						
Honest	3.8404	.557	376	3.7500	.698	376
Note. N= 752, mean diff.= .0904, t= 1.96, p= <.05						
Objective	3.2819	1.007	376	3.2101	1.054	376
Note. N= 752, mean diff.= .0718, t= .96, p= .17						
Responsible	3.8617	.608	376	3.7979	.642	376
Note. N= 752, mean diff.= .0638, t= 1.40, p= .08						
Current	3.9415	.470	376	3.9413	.476	375
Note. N= 751, mean diff.= .0002, t= .00, p= .50						
Trustworthy	3.7727	.658	374	3.7261	.706	376
Note. N= 750, mean diff.= .0467, t= .94, p= .18						
Fair	3.6090	.793	376	3.6250	.833	376
Note. N= 752, mean diff.= .0160, t= .27, p= .39						
Professional	3.9176	.497	376	3.9043	.533	376
Note. N= 752, mean diff.= .0133, t= .35, p= .36						
Overall quality	3.9973	.397	375	3.9813	.498	375
Note. N= 750, mean diff.= .0160, t= .49, p= .31						

H1h: The newspaper that has a higher ratio of visual space to total editorial space will score higher on measures of personal utility and enjoyment.

Results of hypothesis 1h suggest that visual differences may have some impact on measures of personal utility and enjoyment of newspapers. Table 22 shows that readers of the visual newspaper rated it .08 higher than the traditional newspaper on informative and .09 higher on entertaining, both significant at less than .05. This further suggests that a more visual

Table 22 T-tests of dependent variables by newspaper on measures of personal utility and enjoyment of the newspaper

Dependent variable	Visual paper			Traditional paper		
	X	SD	n	X	SD	n
Useful	4.0080	.465	376	3.9947	.419	376
Note. N= 752, mean diff.= .0133, t= .41, p= .34						
Thorough	3.6747	.798	375	3.6400	.844	375
Note. N= 750, mean diff.= .0347, t= .58, p= .28						
Enjoyable	3.9415	.492	376	3.9096	.534	376
Note. N= 752, mean diff.= .0319, t= .85, p= .20						
Informative	4.0239	.403	376	3.9441	.536	376
Note. N= 752, mean diff.= .0798, t= 2.31, p= <.05						
Entertaining	3.7926	.723	376	3.7021	.771	376
Note. N= 752, mean diff.= .0904, t= 1.66, p= <.05						
Interesting to read	3.9441	.575	376	3.9202	.536	376
Note. N= 752, mean diff.= .0239, t= .59, p= .28						

newspaper may provide readers with the feeling that they have been better informed and entertained. However, there were no significant differences on useful, thorough, enjoyable or interesting to read.

Newspaper Subscription and Community of Residence

The next set of hypotheses, 2a-o, centered on differences in the dependent variables as a result of the influence of the community in which the subscriber lived and the newspaper to which the reader subscribed. The visual newspaper was determined to be the *Chanute Tribune*, and the *Iola Register* was determined to be the newspaper that appeared more traditional. Chanute was the visual newspaper town, and Iola was the traditional newspaper town. The equidistant town was Humboldt.

Recall that the juxtaposition of the town and the newspaper resulted in four corresponding conditions: 1) subscribers of a visual newspaper living in the visual newspaper town with low competition from the traditional newspaper, 2) subscribers of a traditional newspaper living in the traditional newspaper town with low competition from the visual newspaper, 3) subscribers of a visual newspaper living in the equidistant town with high competition from the traditional newspaper, and 4) subscribers of the traditional newspaper living in the equidistant town with high competition from the visual newspaper.

H2a: Subscribers of the visual newspaper living in the visual newspaper town will have higher means on measures of satisfaction with photo quality than subscribers of the traditional newspaper living in the traditional newspaper town.

Hypothesis 2a is not supported, as Table 23 shows. There were no statistically significant differences in the predicted direction on satisfaction with overall photo quality, news photos, feature photos nor sports photos. This suggests that the combination of community and newspaper subscribed to did not have the predicted effect on satisfaction with photo quality. In fact, subscribers of the traditional newspaper living in the traditional newspaper town rated the traditional newspaper .30 higher on satisfaction with sports photos than subscribers of the visual newspaper living in the visual newspaper town, significant at less than .001. This could indicate that readers of the traditional newspaper living in the traditional newspaper town were more pleased with sports photos or it could simply be a result of the teams in that town having a better season.

Table 23 Scheffe-tests of dependent variables by newspaper on measures of satisfaction with photo quality

Dependent variable: Overall photo quality

Newspaper/Town	X	SD	n
Visual paper/visual town	3.9233	.5860	251
Traditional paper/traditional town	3.9283	.5682	251
Visual paper/equidistant town	4.0000	.4919	125
Traditional paper/equidistant town	4.0160	.5077	125

Note. N=752, No significant differences between groups at the .05 level.

Dependent variable: News photos

Newspaper/Town	X	SD	n
Visual paper/visual town	3.8645	.6368	251
Traditional paper/traditional town	3.8486	.6580	251
Visual paper/equidistant town	3.9520	.5214	125
Traditional paper/equidistant town	4.0400	.4819	125

Note. N=752, Traditional paper/equidistant town was significantly different from traditional paper/traditional town at <.05.

Dependent variable: Feature photos

Newspaper/Town	X	SD	n
Visual paper/visual town	3.9442	.5907	251
Traditional paper/traditional town	3.9163	.6107	251
Visual paper/equidistant town	3.9920	.5462	125
Traditional paper/equidistant town	4.0240	.5153	125

Note. N=752, No significant differences between groups at <.05.

Dependent variable: Sports photos

Newspaper/Town	X	SD	n
Visual paper/visual town	3.6096	.7739	251
Traditional paper/traditional town	3.9040	.7958	250
Visual paper/equidistant town	3.6240	.6558	125
Traditional paper/equidistant town	3.8000	.7725	125

Note. N=751, Traditional paper/traditional town was significantly different from visual paper/visual town and visual paper/equidistant town at <.001.

H2b: Subscribers of the visual newspaper living in the equidistant town will have higher means on measures of satisfaction with photo quality than any of the other groups.

Hypothesis 2b was not supported, as Table 23 also shows. There were no significant differences in the predicted direction for this hypothesis.

H2c: Subscribers of the traditional newspaper living in the equidistant town will have higher means on measures of desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos than any of the other groups.

Hypothesis 2c, as shown in Table 24, was not supported with statistically significant differences among the groups in the predicted direction. Desire for more news photos was lower, by .41 in the traditional paper/equidistant town than in the visual paper/equidistant town, significant at less than .05. However, this result was not in the direction predicted in the hypothesis in which it was expected that levels of desire would be higher in the traditional paper/equidistant town than in the visual paper/equidistant town. Additionally, desire for larger photos, more color photos and more feature photos was lowest in the traditional paper/traditional town, although these findings were not statistically significant.

These results suggest that subscription to the traditional newspaper in the high competition situation has little effect on desire for larger photos,

Table 24 **Scheffe-tests of dependent variables by newspaper on measures of desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos**

Dependent variable: Larger photos

<u>Newspaper/Town</u>	<u>X</u>	<u>SD</u>	<u>n</u>
Visual paper/visual town	2.2032	.7966	251
Traditional paper/traditional town	2.3227	.7345	251
Visual paper/equidistant town	2.3280	.8498	125
Traditional paper/equidistant town	2.1680	.7155	125

Note. N=752, No significant differences between groups at $<.05$.

Dependent variable: Multiple photos

<u>Newspaper/Town</u>	<u>X</u>	<u>SD</u>	<u>n</u>
Visual paper/visual town	2.5936	1.0326	251
Traditional paper/traditional town	2.7052	.9883	251
Visual paper/equidistant town	2.5360	.9882	125
Traditional paper/equidistant town	2.5440	.9546	125

Note. N=752, No significant differences between groups at $<.05$.

Dependent variable: More color photos

<u>Newspaper/Town</u>	<u>X</u>	<u>SD</u>	<u>n</u>
Visual paper/visual town	2.9841	1.2132	251
Traditional paper/traditional town	2.7530	1.0211	251
Visual paper/equidistant town	2.9120	1.1847	125
Traditional paper/equidistant town	2.3040	1.0643	125

Note. N=752, Traditional paper/traditional town was significantly different from the other groups at $>.001$.

Dependent variable: More feature photos

<u>Newspaper/Town</u>	<u>X</u>	<u>SD</u>	<u>n</u>
Visual paper/visual town	3.1155	1.0347	251
Traditional paper/traditional town	3.1753	1.0436	251
Visual paper/equidistant town	3.0880	1.1217	125
Traditional paper/equidistant town	3.0323	1.0510	125

Note. N=752, No significant differences between groups at $<.05$.

Table 24 Continued

Dependent variable: More news photos

Newspaper/Town	X	SD	n
Visual paper/visual town	2.9761	1.0656	251
Traditional paper/traditional town	2.9163	1.0455	251
Visual paper/equidistant town	3.1200	1.0969	125
Traditional paper/equidistant town	2.7120	1.0145	125

Note. N=752, Visual paper/equidistant town was significantly different from traditional paper/equidistant town at $>.05$.

multiple photo stories, more color photos, more feature photos, more news photos, nor more sports photos.

H2d: Subscribers of the visual newspaper living in the visual newspaper town will have higher means on measures of satisfaction with other graphics than subscribers of the traditional newspaper living in the traditional newspaper town.

As Table 25 shows, subscribers of the visual paper living in the visual newspaper town scored higher on satisfaction with editorial drawings, maps and overall graphic quality than subscribers of the traditional newspaper living in the traditional newspaper town, but the differences were not statistically significant, providing no support for hypothesis 2d.

Table 25 Scheffe-tests of dependent variables by newspaper on measures of satisfaction with and desire for other graphics

Dependent variable: Editorial drawings

Newspaper/Town	X	SD	n
Visual paper/visual town	3.7450	.6121	251
Traditional paper/traditional town	3.7291	.6916	251
Visual paper/equidistant town	3.8480	.6357	125
Traditional paper/equidistant town	3.7760	.5516	125

Note. N=752, No significant differences between groups at $<.05$.

Dependent variable: Maps

Newspaper/Town	X	SD	n
Visual paper/visual town	3.7649	.5697	251
Traditional paper/traditional town	3.6240	.6166	250
Visual paper/equidistant town	3.8080	.5189	125
Traditional paper/equidistant town	3.6960	.5115	125

Note. N=751, Visual paper/equidistant town was significantly different from traditional paper/traditional town at $<.01$.

Dependent variable: Overall graphic quality

Newspaper/Town	X	SD	n
Visual paper/visual town	3.8765	.3958	251
Traditional paper/traditional town	3.7968	.5390	251
Visual paper/equidistant town	3.8640	.4085	125
Traditional paper/equidistant town	3.7984	.4594	124

Note. N=751, No significant differences between groups at $<.05$.

Dependent variable: More color graphics

Newspaper/Town	X	SD	n
Visual paper/visual town	2.7570	1.1210	251
Traditional paper/traditional town	2.7470	.9777	249
Visual paper/equidistant town	2.8080	1.0215	125
Traditional paper/equidistant town	2.3821	1.0124	123

Note. N=748, Traditional paper/equidistant town was significantly different from the other three groups at $<.01$.

H2e: Subscribers of the visual newspaper living in the equidistant town will have higher means on measures of satisfaction with other graphics than any of the other groups.

As table 25 also shows, subscribers of the visual newspaper living in the equidistant town did have higher means than any of the other groups on satisfaction with editorial drawings and maps than any of the other groups. Hypothesis 2e was not supported since none of the differences were statistically significant as predicted. Visual paper/equidistant town did score statistically significantly higher on satisfaction with maps than traditional paper/ equidistant town at less than .01, but was not significantly different from the two remaining groups.

H2f: Subscribers of the traditional newspaper living in the traditional newspaper town will have higher means on the measure of desire for more color graphics than subscribers of the visual newspaper living in the visual newspaper town.

Table 25 provides no support for hypothesis 2f, as there was no significant difference between traditional paper/traditional town and visual paper/visual town, suggesting that the newspaper subscription and town had no impact on desire for more color graphics.

H2g: Subscribers of the traditional newspaper living in the equidistant town will have higher means on the measure of desire for more color graphics than any of the other groups.

Table 25 also shows no support for hypothesis 2g. Traditional paper/equidistant town scored lower, not higher than the other groups on desire for more color graphics. This group was significantly different from the other groups, at less than .01, but not in the predicted direction.

H2h: Subscribers of the visual newspaper living in visual newspaper town will have higher means on measures of satisfaction with writing and coverage than subscribers of the traditional newspaper living in the traditional newspaper town.

Table 26 shows no support for hypothesis 2h. None of the tests showed significant differences in the predicted direction. Satisfaction with sports coverage, the only test that found significant differences between visual paper/visual town and traditional paper/traditional town, showed that the visual paper/visual town had lower, not higher, means on satisfaction with sports writing and sports coverage, opposite from the prediction.

H2i: Subscribers of the visual newspaper living in the equidistant town will have higher means on measures of satisfaction with writing and coverage than any of the other groups.

Table 26 **Scheffe-tests of dependent variables by newspaper on measures of satisfaction with writing and coverage**

Dependent variable: News writing

Newspaper/Town	X	SD	n
Visual paper/visual town	3.8247	.7383	251
Traditional paper/traditional town	3.7888	.7094	251
Visual paper/equidistant town	3.9680	.4908	125
Traditional paper/equidistant town	4.0240	.4484	125

Note. N=752, Traditional paper/equidistant town was significantly different from traditional paper/traditional town at <.01.

Dependent variable: Feature writing

Newspaper/Town	X	SD	n
Visual paper/visual town	3.9323	.6127	251
Traditional paper/traditional town	3.9004	.6148	251
Visual paper/equidistant town	3.9280	.4947	125
Traditional paper/equidistant town	4.0640	.4877	125

Note. N=752, No significant differences between groups at <.05.

Dependent variable: Sports writing

Newspaper/Town	X	SD	n
Visual paper/visual town	3.4200	.8088	250
Traditional paper/traditional town	3.7080	.7436	250
Visual paper/equidistant town	3.5120	.6428	125
Traditional paper/equidistant town	3.5854	.7235	123

Note. N=748, Visual paper/visual town was significantly different from traditional paper/traditional town at <.001.

Dependent variable: News coverage

Newspaper/Town	X	SD	n
Visual paper/visual town	3.8008	.8150	251
Traditional paper/traditional town	3.6175	.9237	251
Visual paper/equidistant town	3.9040	.7005	125
Traditional paper/equidistant town	3.9600	.7117	125

Note. N=752, Traditional paper/traditional town was significantly different from visual paper/equidistant town and traditional paper/equidistant town at <.001.

Table 26 Continued

Dependent variable: Sports coverage

<u>Newspaper/Town</u>	<u>X</u>	<u>SD</u>	<u>n</u>
Visual paper/visual town	3.4183	.8924	251
Traditional paper/traditional town	3.7570	.8299	251
Visual paper/equidistant town	3.4800	.7362	125
Traditional paper/equidistant town	3.6080	.7714	125

Note. N=752, Traditional paper/traditional town was significantly different from visual paper/visual town and visual paper/equidistant town at <.001.

Traditional paper/equidistant town scored higher on satisfaction with news writing, feature writing, news coverage and sports coverage than visual paper/equidistant town, opposite from the prediction in hypothesis 2i. These differences were not statistically significant. Table 26 shows no support for this hypothesis.

H2j: Subscribers of the visual newspaper living in the visual newspaper town will have higher means on measures of satisfaction with the appearance of the newspaper than subscribers of the traditional newspaper living in the traditional newspaper town.

The only support for hypothesis 2j, as listed in Table 27, was that visual paper/visual town scored .16 higher on modern than traditional paper/traditional town, significant at less than .05. There were no significant differences between the two newspapers on interesting appearance, exciting,

Table 27 Scheffe-tests of dependent variables by newspaper on measures of satisfaction with the appearance of the newspaper

Dependent variable: Interesting appearance

Newspaper/Town	X	SD	n
Visual paper/visual town	3.8486	.5376	251
Traditional paper/traditional town	3.7809	.6354	251
Visual paper/equidistant town	3.8560	.5344	125
Traditional paper/equidistant town	3.8400	.5143	125

Note. N=752, No significant differences between groups at <.05.

Dependent variable: Exciting

Newspaper/Town	X	SD	n
Visual paper/visual town	2.6773	1.0599	251
Traditional paper/traditional town	2.8805	.9261	251
Visual paper/equidistant town	3.0160	.9502	125
Traditional paper/equidistant town	2.8560	.8586	125

Note. N=752, Visual paper/visual town was significantly different from visual paper/equidistant town at <.01 level.

Dependent variable: Uncluttered

Newspaper/Town	X	SD	n
Visual paper/visual town	3.8805	.5076	251
Traditional paper/traditional town	3.7928	.6848	251
Visual paper/equidistant town	3.8880	.5114	125
Traditional paper/equidistant town	3.9040	.5451	125

Note. N=752, No significant differences between groups at <.05.

Dependent variable: Colorful

Newspaper/Town	X	SD	n
Visual paper/visual town	2.4980	1.0095	251
Traditional paper/traditional town	2.7570	.9554	251
Visual paper/equidistant town	2.8240	1.0630	125
Traditional paper/equidistant town	2.5920	.9763	125

Note. N=752, Visual paper/visual town was significantly different from visual paper/equidistant town and traditional paper/traditional town at <.01.

Table 27 Continued

Dependent variable: Pleasant

Newspaper/Town	X	SD	n
Visual paper/visual town	3.8127	.5146	251
Traditional paper/traditional town	3.8207	.5690	251
Visual paper/equidistant town	3.9360	.3298	125
Traditional paper/equidistant town	3.8640	.4462	125

Note. N=752, No significant differences between groups at <.05.

Dependent variable: Fresh

Newspaper/Town	X	SD	n
Visual paper/visual town	3.7809	.5760	251
Traditional paper/traditional town	3.7410	.6698	251
Visual paper/equidistant town	3.8880	.3640	125
Traditional paper/equidistant town	3.8560	.4870	125

Note. N=752, No significant differences between groups at <.05.

Dependent variable: Modern

Newspaper/Town	X	SD	n
Visual paper/visual town	3.8725	.5288	251
Traditional paper/traditional town	3.7131	.7248	251
Visual paper/equidistant town	3.8560	.4870	125
Traditional paper/equidistant town	3.7680	.6109	125

Note. N=752, Visual paper/visual town was significantly different from traditional paper/traditional town at <.05.

Dependent variable: Professional

Newspaper/Town	X	SD	n
Visual paper/visual town	3.8884	.5172	251
Traditional paper/traditional town	3.8566	.6288	251
Visual paper/equidistant town	3.9200	.5016	125
Traditional paper/equidistant town	3.9200	.4325	125

Note. N=752, No significant differences between groups at <.05.

Table 27 Continued

Dependent variable: Appealing

Newspaper/Town	X	SD	n
Visual paper/visual town	3.7729	.5369	251
Traditional paper/traditional town	3.6892	.7093	251
Visual paper/equidistant town	3.8240	.5545	125
Traditional paper/equidistant town	3.7600	.5736	125

Note. N=752, No significant differences between groups at $<.05$.

Dependent variable: Strong

Newspaper/Town	X	SD	n
Visual paper/visual town	3.4980	.7342	251
Traditional paper/traditional town	3.5378	.8060	251
Visual paper/equidistant town	3.5840	.7092	125
Traditional paper/equidistant town	3.5600	.6401	125

Note. N=752, No significant differences between groups at $<.05$.

Dependent variable: Attractive

Newspaper/Town	X	SD	n
Visual paper/visual town	3.7410	.6517	251
Traditional paper/traditional town	3.6972	.7615	251
Visual paper/equidistant town	3.8000	.5536	125
Traditional paper/equidistant town	3.8000	.5536	125

Note. N=752, No significant differences between groups at $<.05$.

Dependent variable: Overall appearance

Newspaper/Town	X	SD	n
Visual paper/visual town	3.9840	.2830	250
Traditional paper/traditional town	3.9004	.5675	251
Visual paper/equidistant town	3.9520	.4184	125
Traditional paper/equidistant town	3.9280	.5108	125

Note. N=751, No significant differences between groups at $<.05$.

pleasant, fresh, professional, appealing, strong, attractive and overall appearance. This suggests that the visual differences between the two newspapers seemed to have an effect on perceptions of the visual paper as more modern, but no effect on the other appearance variables.

H2k: Subscribers of the visual newspaper living in the equidistant town will have higher means on measures of satisfaction with the appearance of the newspaper than any of the other groups.

Table 27 also shows no support for hypothesis 2k. Visual paper/ equidistant town did score higher than any of the other groups on interesting appearance, exciting, uncluttered, colorful, pleasant, fresh, appealing, strong, and overall appearance. However, none of these differences were statistically significant, suggesting that the location of the town and subscription had no impact on measures of satisfaction with appearance.

H2l: Subscribers of the visual newspaper living in the visual newspaper town will have higher means on measures of satisfaction with the journalistic quality of the newspaper than subscribers of the traditional newspaper living in the traditional newspaper town.

Hypothesis 2l received no support, as listed in Table 28. There were no significant differences between the two newspapers concerning satisfaction with the journalistic quality of the newspaper, suggesting that visual differences have no impact on satisfaction with the journalistic quality of the newspaper.

H2m: Subscribers of the visual newspaper living in the equidistant town will have higher means on measures of satisfaction with the journalistic quality of the newspaper than any of the other groups.

Table 28 also shows no support for hypothesis 2m. None of the tests on satisfaction with journalistic quality showed that the visual paper/equidistant town group scored significantly higher than all other groups. On measures of perceptions of the newspaper as accurate and objective, visual paper/equidistant town scored significantly higher than visual paper/visual town and traditional paper/traditional town, but not statistically higher than traditional paper/equidistant town. Visual paper/equidistant town also scored higher than any of the other groups on honest, objective, responsible and trustworthy. However, these differences were not statistically significant. Overall these findings suggest that living in the equidistant town may have some limited impact on satisfaction with the journalistic quality of the newspaper, but that subscription to the visual paper may have little impact on these measures of satisfaction with journalistic quality.

Table 28 **Scheffe-tests of dependent variables by newspaper on measures of satisfaction with the journalistic quality of the newspaper**

Dependent variable: Accurate

<u>Newspaper/Town</u>	<u>X</u>	<u>SD</u>	<u>n</u>
Visual paper/visual town	3.4223	.9492	251
Traditional paper/traditional town	3.5020	.8986	249
Visual paper/equidistant town	3.7805	.6596	123
Traditional paper/equidistant town	3.7840	.7469	125

Note. N=748, Visual paper/visual town was significantly different from visual paper/equidistant town and traditional paper/equidistant town at $<.001$, and traditional paper/traditional town was significantly different from visual paper/equidistant town and traditional paper/equidistant town at $<.001$.

Dependent variable: Timely

<u>Newspaper/Town</u>	<u>X</u>	<u>SD</u>	<u>n</u>
Visual paper/visual town	3.7968	.6153	251
Traditional paper/traditional town	3.7769	.6856	251
Visual paper/equidistant town	3.9280	.4610	125
Traditional paper/equidistant town	3.9360	.5197	125

Note. N=752, No significant differences between groups at $<.05$.

Dependent variable: Honest

<u>Newspaper/Town</u>	<u>X</u>	<u>SD</u>	<u>n</u>
Visual paper/visual town	3.8207	.5897	251
Traditional paper/traditional town	3.7291	.7255	251
Visual paper/equidistant town	3.8800	.4853	125
Traditional paper/equidistant town	3.7920	.6387	125

Note. N=752, No significant differences between groups at $<.05$.

Dependent variable: Objective

<u>Newspaper/Town</u>	<u>X</u>	<u>SD</u>	<u>n</u>
Visual paper/visual town	3.1514	1.0588	251
Traditional paper/traditional town	3.1873	1.0737	251
Visual paper/equidistant town	3.5440	.8377	125
Traditional paper/equidistant town	3.2560	1.0152	125

Note. N=752, Visual paper/equidistant town was significantly different from visual paper/visual town and traditional paper/traditional town at $<.01$.

Table 28 Continued

Dependent variable: Responsible

Newspaper/Town	X	SD	n
Visual paper/visual town	3.8287	.6682	251
Traditional paper/traditional town	3.7689	.6888	251
Visual paper/equidistant town	3.9280	.4610	125
Traditional paper/equidistant town	3.8560	.5344	125

Note. N=752, No significant differences between groups at <.05.

Dependent variable: Current

Newspaper/Town	X	SD	n
Visual paper/visual town	3.9124	.5443	251
Traditional paper/traditional town	3.9084	.5173	251
Visual paper/equidistant town	4.0000	.2540	125
Traditional paper/equidistant town	4.0081	.3717	125

Note. N=752, No significant differences between groups at <.05.

Dependent variable: Trustworthy

Newspaper/Town	X	SD	n
Visual paper/visual town	3.7211	.7224	251
Traditional paper/traditional town	3.6813	.7550	251
Visual paper/equidistant town	3.8780	.4890	123
Traditional paper/equidistant town	3.8160	.5973	125

Note. N=750, No significant differences between groups at <.05.

Dependent variable: Fair

Newspaper/Town	X	SD	n
Visual paper/visual town	3.5578	.8388	251
Traditional paper/traditional town	3.5737	.8704	251
Visual paper/equidistant town	3.7120	.6817	125
Traditional paper/equidistant town	3.7280	.7446	125

Note. N=752, No significant differences between groups at <.05.

Table 28 Continued

Dependent variable: Professional overall

<u>Newspaper/Town</u>	<u>X</u>	<u>SD</u>	<u>n</u>
Visual paper/visual town	3.9283	.5166	251
Traditional paper/traditional town	3.8884	.5688	251
Visual paper/equidistant town	3.8960	.4548	125
Traditional paper/equidistant town	3.9360	.4534	125

Note. N=752, No significant differences between groups at <.05.

Dependent variable: Overall quality

<u>Newspaper/Town</u>	<u>X</u>	<u>SD</u>	<u>n</u>
Visual paper/visual town	3.9960	.4344	251
Traditional paper/traditional town	3.9363	.5476	251
Visual paper/equidistant town	4.0000	.3111	125
Traditional paper/equidistant town	4.0726	.3646	125

Note. N=752, No significant differences between groups at <.05.

H2n: Subscribers of the visual newspaper living in the visual newspaper town will have higher means on measures of personal utility and enjoyment than subscribers of the traditional newspaper living in the traditional newspaper town.

Results of tests of hypothesis 2n, listed in Table 29, reveal some support for the prediction. Subscribers of the visual newspaper living in the visual newspaper town rated the visual paper .14 higher on informative than subscribers of the traditional newspaper living in the traditional newspaper town, significant at less than .001. There were no significant differences between the two newspaper on useful, thorough, enjoyable, entertaining, or

Table 29 Scheffe-tests of dependent variables by newspaper on measures of personal utility and enjoyment of the newspaper

Dependent variable: Useful

Newspaper/Town	X	SD	n
Visual paper/visual town	4.0040	.5329	251
Traditional paper/traditional town	3.9721	.4596	251
Visual paper/equidistant town	4.0160	.2835	125
Traditional paper/equidistant town	4.0400	.3213	125

Note. N=752, No significant differences between groups at <.05.

Dependent variable: Thorough

Newspaper/Town	X	SD	n
Visual paper/visual town	3.6240	.8750	250
Traditional paper/traditional town	3.5320	.9189	250
Visual paper/equidistant town	3.7760	.6073	125
Traditional paper/equidistant town	3.8560	.6183	125

Note. N=750, Traditional paper/traditional town was significantly different from traditional paper/equidistant town at <.01.

Dependent variable: Enjoyable

Newspaper/Town	X	SD	n
Visual paper/visual town	3.9323	.4810	251
Traditional paper/traditional town	3.8606	.5801	251
Visual paper/equidistant town	3.9600	.5143	125
Traditional paper/equidistant town	4.0080	.4114	125

Note. N=752, No significant differences between groups at <.05.

Dependent variable: Informative

Newspaper/Town	X	SD	n
Visual paper/visual town	4.0239	.4283	251
Traditional paper/traditional town	3.8805	.6145	251
Visual paper/equidistant town	4.0240	.3470	125
Traditional paper/equidistant town	4.0720	.2889	125

Note. N=752, Trad. paper/traditional town was significantly different from traditional paper/equidistant town and visual paper/visual town at <.001.

Table 29 Continued

Dependent variable: Entertaining

Newspaper/Town	X	SD	n
Visual paper/visual town	3.7888	.7584	251
Traditional paper/traditional town	3.6215	.8125	251
Visual paper/equidistant town	3.8000	.6476	125
Traditional paper/equidistant town	3.8640	.6518	125

Note. N=752, Traditional paper/traditional town was significantly different from traditional paper/equidistant town at $<.01$.

Dependent variable: Interesting to read

Newspaper/Town	X	SD	n
Visual paper/visual town	3.9442	.6041	251
Traditional paper/traditional town	3.8725	.5654	251
Visual paper/equidistant town	3.9440	.5128	125
Traditional paper/equidistant town	4.0160	.4576	125

Note. N=752, No significant differences between groups at $<.05$.

interesting to read. This suggests that readers of visual newspapers may feel more informed than readers of traditional newspapers, but that overall visuals may make little difference on measures of personal utility and enjoyment of newspapers.

H2o: Subscribers of the visual newspaper living in the equidistant town will have higher means on measures of personal utility and enjoyment than any of the other groups.

As Table 29 shows, hypothesis 2o received no statistical support, suggesting that newspaper subscription in the more competitive location had

little impact on measures of personal utility and enjoyment derived from the newspaper.

Media Use Variables

Daily Television Minutes

The next set of hypotheses, 3a-e, involves differences in the dependent variables as a result of influences by selected independent variables in the entire data set without regard to which newspaper the respondent subscribed nor in which community the respondent resided.

H3a: Increased time watching television will result in a decrease on measures of satisfaction with photo quality.

The regression analysis in Table 30 shows no statistical support for

**Table 30 Regression analysis of minutes of television viewing daily
on measures of satisfaction with photo quality**

Independent variable: Daily TV minutes						
Dependent Variable	B	Beta	t	R2	F	p
Overall photo quality	-.00	-.05	1.27	.00	1.61	.20
News photos	-.00	-.03	-.79	.00	.62	.43
Feature photos	-.00	-.06	1.68	.00	2.81	.09
Sports photos	-.00	-.03	.71	.00	.50	.48

hypothesis 3a. Even though increased time watching television did seem to result in lower scores on all the measures of satisfaction with photo quality, as indicated by the negative Beta scores, none of the tests were significant. This suggests that increased time watching television has little impact on assessment of the quality of photos in community newspapers.

H3b: Increased time watching television will result in increased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

Similarly, as Table 31 shows, increased time watching television did not result in desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos. Hypothesis 3b is not supported.

Table 31 **Regression analysis of minutes of television viewing daily on measures of desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos**

Independent variable: Daily TV minutes

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Larger photos	-.00	-.00	-.05	.00	.00	.96
Multiple photos	-.00	-.01	-.38	.00	.14	.70
More color photos	-.00	-.00	-.06	.00	.00	.95
More feature photos	.00	.02	.59	.00	.35	.55
More news photos	.00	.04	1.17	.00	1.36	.24
More sports photos	.00	.06	1.62	.00	2.63	.11

H3c: Increased time watching television will result in a decrease on measures of satisfaction with other graphics.

Hypothesis 3c is supported by the regression analysis in Table 32. As television time increased one standard deviation, satisfaction with overall graphic quality decreased by .07, significant at less than .05. Increased time viewing television did not have an impact on satisfaction with editorial drawings nor maps. This finding suggests that as television viewing increases satisfaction with the overall graphic quality may decrease.

Table 32 Regression analysis of minutes of television viewing daily on measures of satisfaction with other graphics

Independent variable: Daily TV minutes

Dependent Variable	B	Beta	t	R2	F	p
Editorial drawings	.00	.00	.10	.00	.01	.92
Maps	-.00	-.03	.94	.00	.88	.35
Overall graphic quality	-.00	-.07	-1.99	.01	1.99	<.05

H3d: Increased time watching television will result in increased desire for more color graphics.

Hypothesis 3d was not supported. As Table 33 shows, increases in television time did not result in desire for more color graphics. This suggests that subscribers of community newspapers may not expect their local newspaper to match the color graphics they find on television.

**Table 33 Regression analysis of minutes of television viewing daily on
desire for more color graphics**

Independent variable: Daily TV minutes

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
More color graphics	-.00	.02	.61	.00	.37	.54

H3e: Increased time watching television will result in decreases on
measures of satisfaction with the appearance of the newspaper.

Hypothesis 3e was supported only on one variable, exciting. As Table 34 shows, respondents rated their papers .08 lower on exciting, significant at less than .05. None of the other regression tests were significant, suggesting that increased time watching television may have only slight impact on measures of satisfaction with the appearance of the community newspaper.

Cable Television

H4a: The presence of cable television in the home will result in a decrease on measures of satisfaction with photo quality.

Table 35 shows no support for hypothesis 4a. The presence of cable television in the home did not impact measures of satisfaction with photo quality.

Table 34 Regression analysis of minutes of television viewing daily on measures of satisfaction with the appearance of the newspaper

Independent variable: Daily TV minutes

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Interesting appearance	.00	.02	.59	.00	.35	.56
Exciting	-.00	-.08	2.12	.01	4.50	<.05
Uncluttered	-.00	-.01	.34	.00	.12	.73
Colorful	-.00	-.01	.26	.00	.07	.79
Pleasant	-.00	-.01	.30	.00	.09	.77
Fresh	-.00	-.03	.87	.00	.76	.38
Modern	.00	.03	.68	.00	.46	.50
Professional	-.00	-.00	.02	.00	.00	.99
Appealing	-.00	-.02	.65	.00	.42	.52
Strong	.00	.01	.36	.00	.13	.71
Attractive	.00	.02	.54	.00	.30	.59
Overall appearance	-.00	-.02	.58	.00	.33	.56

Table 35 Regression analysis of cable TV in the home on measures of satisfaction with photo quality

Independent variable: Cable TV

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Overall photo quality	-.03	-.02	.47	.00	.22	.64
News photos	.09	.05	1.28	.00	1.64	.21
Feature photos	.05	.03	.72	.00	.52	.47
Sports photos	.12	.05	1.28	.00	1.63	.21

H4b: The presence of cable television in the home will result in increased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

As indicated in Table 36, hypothesis 4b was supported on one of these variables, resulting in an increase of .08 in desire for multiple photo stories, significant at less than .05. Cable television did not have any effect on desire for larger photos, more color photos, more feature photos, more news photos nor more sports photos. This finding suggests that cable television in the home may result in small increases in desires for multiple photo stories. This makes sense, given the barrage of images seen in much cable television programming. If readers see a steady stream of images on cable television, they may come to desire more multiple photos in stories in their local community newspaper.

Table 36 Regression analysis of cable TV in the home on measures of desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos

Independent variable: Cable TV

Dependent Variable	B	Beta	t	R2	F	p
Larger photos	-.02	-.01	.24	.00	.06	.81
Multiple photos	.25	.08	2.07	.01	4.27	<.05
More color photos	.19	.05	1.42	.00	2.02	.16
More feature photos	-.03	-.01	.25	.00	.06	.80
More news photos	.12	.03	.94	.00	.88	.35
More sports photos	.01	.00	.12	.00	.01	.91

H4c: The presence of cable television in the home will result in a decrease on measures of satisfaction with other graphics.

Hypothesis 4c was not supported. The regression analyses in Table 37 provide no support for the hypothesis that cable television in the home will result in decreases in satisfaction with editorial drawings, maps or overall graphic quality.

H4d: The presence of cable television in the home will result in increased desire for more color graphics.

As Table 38 shows, hypothesis 4d was not supported. Cable television had no impact on desire for color graphics in community newspapers.

H4e: The presence of cable television in the home will result in decreases on measures of satisfaction with the appearance of the newspaper.

Cable television had no impact on satisfaction with the appearance of the newspaper. As shown in Table 39, hypothesis 4e was not supported.

**Table 37 Regression analysis of cable TV in the home
on measures of satisfaction with other graphics**

Independent variable: Cable TV

Dependent Variable	B	Beta	t	R2	F	p
Editorial drawings	.13	.06	1.76	.00	3.11	.08
Maps	-.02	-.01	.30	.00	.09	.76
Overall graphic quality	-.04	-.03	.75	.00	.57	.45

**Table 38 Regression analysis of cable TV in the home
on desire for more color graphics**

Independent variable: Cable TV

Dependent Variable	B	Beta	t	R2	F	p
More color graphics	.07	.02	.57	.00	.32	.57

**Table 39 Regression analysis of cable TV in the home on
measures of satisfaction with the appearance of the newspaper**

Independent variable: Cable TV

Dependent Variable	B	Beta	t	R2	F	p
Interesting appearance	.01	.00	.08	.00	.01	.94
Exciting	-.03	-.00	.25	.00	.06	.81
Uncluttered	.01	.00	.12	.00	.01	.91
Colorful	-.05	-.02	.45	.00	.20	.66
Pleasant	-.09	-.06	1.52	.00	2.30	.13
Fresh	.08	.05	1.24	.00	1.53	.22
Modern	.10	.05	1.37	.00	1.86	.17
Professional	.03	.02	.46	.00	.21	.64
Appealing	.02	.01	.24	.00	.06	.81

Table 39 Continued

Independent variable: Cable TV

Strong	.06	.02	.66	.00	.43	.51
Attractive	-.00	-.00	.04	.00	.00	.97
Overall appearance	.09	.06	1.64	.00	2.67	.10

Weekly Magazine Minutes

H5a: Increased time spent reading magazines will result in a decrease on measures of satisfaction with photo quality.

If subscribers are exposed to good photos in magazines, it seems reasonable that they would be less happy with the photos in their community newspaper. Table 40 shows that as time spent reading magazines increased by one standard deviation, satisfaction with overall photo quality increased .07, significant at less than .05. This, of course, is the opposite effect of the prediction, so hypothesis 5a is not supported. Increased time spent reading magazines had no impact on satisfaction with news photos, feature photos nor sports photos. It should be noted that it was beyond the scope of this study to measure what types of magazines were read, which could better explain these findings. Perhaps the magazine photos were not perceived as any better than what was seen in the local community newspaper.

Table 40 Regression analysis of minutes spent reading magazines weekly on measures of satisfaction with photo quality

Independent variable: Weekly magazine minutes

Dependent Variable	B	Beta	t	R2	F	p
Overall photo quality	.00	.07	1.98	.01	3.90	<.05
News photos	.00	.02	.46	.00	.21	.65
Feature photos	.00	.03	.93	.00	.87	.35
Sports photos	.00	.04	1.02	.00	1.05	.31

H5b: Increased time spent reading magazines will result in increased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

Hypothesis 5b is not supported, as shown in Table 41. Increased time spent reading magazines had no effect on increased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos. All the dependent measures showed negative Betas, indicating decreased desire for these visuals, but none of the regressions were significant.

H5c: Increased time spent reading magazines will result in a decrease on measures of satisfaction with other graphics.

Hypothesis 5c was not supported. As shown in Table 42, increased time spent reading magazines resulted in increased satisfaction with editorial

Table 41 Regression analysis of minutes spent reading magazines weekly on measures of desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos

Independent variable: Weekly magazine minutes

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Larger photos	-.00	-.07	1.09	.01	3.62	.06
Multiple photos	-.00	-.06	1.62	.00	2.62	.11
More color photos	-.00	-.02	.57	.00	.33	.57
More feature photos	-.00	-.06	1.57	.00	2.47	.12
More news photos	-.00	-.02	.45	.00	.21	.65
More sports photos	-.00	-.03	.72	.00	.51	.47

Table 42 Regression analysis of minutes spent reading magazines weekly on measures of satisfaction with other graphics

Independent variable: Weekly magazine minutes

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Editorial drawings	.00	.09	2.41	.01	5.79	<.05
Maps	.00	.04	.95	.00	.91	.34
Overall graphic quality	.00	.05	1.45	.00	2.11	.15

graphics, not decreased satisfaction. As time reading magazines went up one standard deviation, satisfaction with editorial drawings went up .07, significant at less than .05. This is the opposite direction from the prediction. There was no impact on satisfaction with maps nor overall graphic quality.

H5d: Increased time spent reading magazines will result in increased desire for more color graphics.

Hypothesis 5d posited that since magazines usually contain a lot of color graphics, higher readership of magazines would result in a desire for more color graphics in local community newspapers. Table 43 shows no support for this hypothesis. The Beta score was in the right direction, but the regression was not significant.

Table 43 Regression analysis of minutes spent reading magazines weekly on desire for more color graphics

Independent variable: Weekly magazine minutes

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
More color graphics	-.00	-.04	1.04	.00	1.07	.30

H5e: Increased time spent reading magazines will result in decreases on measures of satisfaction with the appearance of the newspaper.

In hypothesis 5e, it was predicted that increased time spent reading magazines would result in decreases in satisfaction with the appearance of the newspaper because readers of magazines are generally exposed to well designed, attractive publications. It was reasoned that this would result in less satisfaction with the appearance of the community newspaper. Table 44 provides no support for this hypothesis. The only significant regression was on the attractive variable, but the result was not in the predicted direction. As magazine reading increased, perceptions of the community newspaper as attractive increased, rather than decreasing as predicted. None of the regressions of the other appearance variables with time spent reading magazines were significant.

Table 44 **Regression analysis of minutes spent reading magazines weekly on measures of satisfaction with the appearance of the newspaper**

Independent variable: Weekly magazine minutes						
Dependent Variable	B	Beta	t	R2	F	p
Interesting appearance	.00	.03	.93	.00	.86	.35
Exciting	.00	.04	1.07	.00	1.16	.28
Uncluttered	.00	.03	.75	.00	.55	.46
Colorful	-.00	-.04	1.21	.00	1.06	.30
Pleasant	-.00	-.00	.04	.00	.00	.97
Fresh	.00	.02	.47	.00	.22	.64
Modern	.00	.01	.29	.00	.09	.77
Professional	.00	.33	.90	.00	.82	.37
Appealing	.00	.04	1.06	.00	1.11	.29
Strong	-.00	-.04	1.17	.00	1.36	.24
Attractive	.00	.08	2.14	.00	4.60	<.05
Overall appearance	.00	.04	.98	.00	.96	.32

Readership of Visual Newspapers

H6a: Readership of visual newspapers (*Wichita Eagle*, *Kansas City Star*, *Topeka Capital-Journal* and *USA Today*) will result in decreases on measures of satisfaction with photo quality.

Hypothesis 6a predicted that readers of visual metropolitan newspapers in the area or *USA Today* would be less satisfied with photo quality in their community newspaper. Table 45 shows that readers of *USA Today* were less satisfied, by .09, with feature photos in their community newspaper, significant at less than .05. This suggests that readers of *USA Today*, who see many feature photos from day to day, are less satisfied with the feature photos they see in their community newspaper than those who do not read *USA Today*. This lends some support to the hypothesis.

Ironically, readers of the *Wichita Eagle*, the *Kansas City Star* or the *Topeka Capital-Journal* all rated satisfaction with overall photo quality higher than respondents who did not read any of these papers, all significant at less than .01. This was the opposite of the prediction. Perhaps readers of these visual newspapers have a heightened appreciation for good photography, but don't expect their small local community newspaper to live up to such high photo standards. Readership of these three metro newspapers did not have any significant impact on satisfaction with news photos, feature photos nor sports photos. Readership of *USA Today* did not have an impact on satisfaction with overall photo quality, news photos nor sports photos.

Table 45 **Regression analysis of readership of the *Wichita Eagle*, *Kansas City Star*, *Topeka Capital-Journal* and *USA Today* on measures of satisfaction with photo quality**

Independent variable: *Wichita Eagle*

Dependent Variable	B	Beta	t	R2	F	p
Overall photo quality	.11	.10	2.74	.01	7.51	<.01
News photos	.05	.04	1.04	.00	1.09	.30
Feature photos	.01	.01	.14	.00	.02	.89
Sports photos	.04	.02	.64	.00	.41	.52

Independent variable: *Kansas City Star*

Dependent Variable	B	Beta	t	R2	F	p
Overall photo quality	.10	.09	2.47	.01	6.08	<.01
News photos	.01	.01	.30	.00	.09	.77
Feature photos	.05	.05	1.25	.00	1.55	.21
Sports photos	.04	.02	.66	.00	.43	.51

Independent variable: *Topeka Capital-Journal*

Dependent Variable	B	Beta	t	R2	F	p
Overall photo quality	.24	.10	2.8	.01	7.89	<.01
News photos	.05	.02	.56	.00	.32	.57
Feature photos	-.05	-.02	.57	.00	.33	.57
Sports photos	.15	.05	1.24	.00	1.54	.21

Independent variable: *USA Today*

Dependent Variable	B	Beta	t	R2	F	p
Overall photo quality	.04	.03	.77	.00	.60	.44
News photos	-.05	-.03	.77	.00	.59	.44
Feature photos	-.14	-.09	2.45	.01	5.99	<.05
Sports photos	.05	.03	.70	.00	.49	.48

H6b: Readership of visual newspapers (*Wichita Eagle*, *Kansas City Star*, *Topeka Capital-Journal* and *USA Today*) will result in increased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

Hypothesis 6b was based on the idea that readers of these visual newspapers would see visual shortcomings in their community newspaper compared to the larger newspapers and have increased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos in their local community newspaper.

As Table 46 shows, this idea seemed to manifest itself the most on desire for sports photos. Readers of the *Kansas City Star* reported more desire for sports photos, as did readers of the Topeka paper, both significant at less than .05. None of the other regressions on dependent variables measuring desire were statistically significant.

H6c: Readership of visual newspapers (*Wichita Eagle*, *Kansas City Star*, *Topeka Capital-Journal* and *USA Today*) will result in a decrease on measures of satisfaction with other graphics.

Table 46 **Regression analysis of readership of the *Wichita Eagle*, *Kansas City Star*, *Topeka Capital-Journal* and *USA Today* on measures of desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos**

Independent variable: *Wichita Eagle*

Dependent Variable	B	Beta	t	R2	F	p
Larger photos	-.02	-.01	.26	.00	.07	.79
Multiple photos	-.05	-.03	.68	.00	.46	.50
More color photos	-.14	-.06	1.72	.00	2.95	.09
More feature photos	-.02	-.01	.28	.00	.08	.78
More news photos	-.13	-.06	1.69	.00	2.86	.09
More sports photos	-.09	-.05	1.30	.00	1.69	.19

Independent variable: *Kansas City Star*

Dependent Variable	B	Beta	t	R2	F	p
Larger photos	.03	.02	.50	.00	.25	.62
Multiple photos	.02	.01	.21	.00	.04	.84
More color photos	-.05	-.02	.55	.00	.30	.58
More feature photos	-.04	-.02	.55	.00	.30	.58
More news photos	.04	.02	.50	.00	.25	.62
More sports photos	.14	.07	2.02	.01	4.06	<.05

Independent variable: *Topeka Capital-Journal*

Dependent Variable	B	Beta	t	R2	F	p
Larger photos	-.10	-.03	.84	.00	.70	.40
Multiple photos	-.16	-.04	1.00	.00	1.00	.32
More color photos	-.09	-.02	.51	.00	.26	.61
More feature photos	-.05	-.01	.29	.00	.08	.77
More news photos	-.13	-.03	.79	.00	.63	.43
More sports photos	-.33	-.08	2.17	.01	4.72	<.05

Table 46 Continued

Independent variable: *USA Today*

Dependent Variable	B	Beta	t	R2	F	p
Larger photos	.12	.06	1.60	.00	2.43	.12
Multiple photos	.06	.02	.57	.00	.32	.57
More color photos	.16	.05	1.47	.00	2.17	.14
More feature photos	.02	.01	.23	.00	.05	.81
More news photos	.13	.05	1.26	.00	1.60	.21
More sports photos	-.03	-.01	.28	.00	.08	.77

As Table 47 indicates, hypothesis 6c was not supported. Readership of the large visual newspapers had no impact on measures of satisfaction with editorial drawings, maps, nor overall graphic quality.

H6d: Readership of visual newspapers (*Wichita Eagle*, *Kansas City Star*, *Topeka Capital-Journal* and *USA Today*) will result in increased desire for more color graphics.

Hypothesis 6d predicted that exposure to color graphics in the large visual newspapers would result in desire for more color graphics in the local community newspaper. Regressions in Table 48 provided no support for this hypothesis. In fact, readership of the Topeka paper resulted in decreased desire for color graphics in the community newspaper, contrary to the prediction. This may be understandable since this particular newspaper

Table 47 **Regression analysis of readership of the *Wichita Eagle*, *Kansas City Star*, *Topeka Capital-Journal* and *USA Today* on measures of satisfaction with other graphics**

Independent variable: *Wichita Eagle*

Dependent Variable	B	Beta	t	R ²	F	p
Editorial drawings	.07	.06	1.58	.00	2.48	.12
Maps	-.01	-.01	.16	.00	.03	.87
Overall graphic quality	.06	.06	1.78	.00	3.16	.08

Independent variable: *Kansas City Star*

Dependent Variable	B	Beta	t	R ²	F	p
Editorial drawings	.06	.05	1.36	.00	1.86	.17
Maps	-.05	-.05	1.29	.00	1.67	.20
Overall graphic quality	.02	.02	.51	.00	.26	.61

Independent variable: *Topeka Capital-Journal*

Dependent Variable	B	Beta	t	R ²	F	p
Editorial drawings	-.02	-.01	.21	.00	.04	.83
Maps	.06	.02	.62	.00	.39	.53
Overall graphic quality	.05	.03	.70	.00	.49	.48

Independent variable: *USA Today*

Dependent Variable	B	Beta	t	R ²	F	p
Editorial drawings	.01	.00	.11	.00	.01	.91
Maps	-.04	-.03	.69	.00	.48	.49
Overall graphic quality	.05	.04	1.20	.00	1.44	.23

Table 48 **Regression analysis of readership of the *Wichita Eagle*, *Kansas City Star*, *Topeka Capital-Journal* and *USA Today* on desire for more color graphics**

Independent variable: *Wichita Eagle*

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
More color graphics	-.05	-.02	.66	.00	.43	.51

Independent variable: *Kansas City Star*

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
More color graphics	-.03	-.02	.44	.00	.20	.66

Independent variable: *Topeka Capital-Journal*

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
More color graphics	-.32	-.07	1.97	.01	3.88	<.05

Independent variable: *USA Today*

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
More color graphics	.13	.05	1.28	.00	1.64	.21

makes heavy use of color on its pages. Readers may have felt overloaded with color and expressed less desire for color in their community newspaper.

H6e: Readership of visual newspapers (*Wichita Eagle*, *Kansas City Star*, *Topeka Capital-Journal* and *USA Today*) will result in decreases on measures of satisfaction with the appearance of the newspaper.

Readership of the large visual newspapers had the most impact on satisfaction with the appearance of the community newspaper, providing support for hypothesis 6e. As is evident in Table 49, readers of the *Wichita*

Table 49 **Regression analysis of readership of the *Wichita Eagle*, *Kansas City Star*, *Topeka Capital-Journal* and *USA Today* on measures of satisfaction with the appearance of the newspaper**

Independent variable: *Wichita Eagle*

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Interesting appearance	-.04	-.03	.90	.00	.80	.37
Exciting	-.08	-.04	1.12	.00	1.26	.26
Uncluttered	.05	.04	1.11	.00	1.22	.27
Colorful	-.18	-.09	2.52	.01	6.33	<.01
Pleasant	-.07	-.07	1.88	.00	3.53	.06
Fresh	-.02	-.02	.48	.00	.23	.63
Modern	-.04	-.03	.86	.00	.74	.39
Professional	.04	.03	.95	.00	.90	.34
Appealing	.04	.04	1.00	.00	1.01	.32
Strong	-.07	-.04	1.23	.00	1.51	.22
Attractive	-.01	-.01	.29	.00	.09	.77
Overall appearance	.02	.02	.56	.00	.32	.57

Independent variable: *Kansas City Star*

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Interesting appearance	-.00	-.00	.05	.00	.00	.96
Exciting	-.03	-.01	.37	.00	.14	.71
Uncluttered	.01	.00	.13	.00	.02	.90
Colorful	-.09	-.04	1.19	.00	1.41	.24
Pleasant	.04	.04	1.15	.00	1.33	.25
Fresh	-.08	-.07	2.04	.01	4.15	<.05
Modern	-.02	-.01	.37	.00	.14	.71
Professional	.02	.02	.55	.00	.30	.58
Appealing	.04	.03	.84	.00	.71	.40
Strong	-.12	-.08	2.26	.01	5.11	<.05
Attractive	-.00	-.00	.04	.00	.00	.96
Overall appearance	-.02	-.02	.60	.00	.35	.55

Table 49 Continued

Independent variable: *Topeka Capital-Journal*

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Interesting appearance	.04	.02	.42	.00	.17	.68
Exciting	.08	.02	.51	.00	.26	.61
Uncluttered	.00	.00	.05	.00	.00	.96
Colorful	-.05	-.01	.34	.00	.12	.73
Pleasant	.14	.07	1.80	.00	3.23	.07
Fresh	-.06	-.02	.63	.00	.40	.53
Modern	.02	.01	.16	.00	.03	.87
Professional	-.05	-.02	.63	.00	.40	.52
Appealing	.12	.04	1.21	.00	1.47	.23
Strong	-.12	-.04	1.07	.00	1.13	.29
Attractive	-.08	-.03	.73	.00	.53	.47
Overall appearance	.11	.06	1.56	.00	2.44	.12

Independent variable: *USA Today*

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Interesting appearance	-.11	-.07	1.90	.00	3.60	.06
Exciting	-.19	-.07	2.02	.01	4.08	<.05
Uncluttered	-.14	-.09	2.51	.01	6.32	<.01
Colorful	-.19	-.07	1.91	.00	3.64	.06
Pleasant	-.01	-.01	.27	.00	.07	.79
Fresh	-.10	-.07	1.80	.00	3.25	.07
Modern	-.13	-.08	2.19	.01	4.78	<.05
Professional	-.01	-.01	.16	.00	.03	.87
Appealing	-.05	-.03	.90	.00	.81	.37
Strong	-.27	-.14	3.79	.02	14.34	<.001
Attractive	-.08	-.04	1.17	.00	1.38	.24
Overall appearance	-.07	-.06	1.64	.00	2.68	.10

paper rated their community paper .09 lower on colorful, significant at less than .01. Readers of the Kansas City paper rated their local community paper .07 lower on fresh and .08 lower on strong, both significant at less than .05. Readers of *USA Today* rated their local community paper .07 lower on exciting, significant at less than .05; .09 lower on uncluttered, significant at less than .01; .08 lower on modern, significant at less than .05; and .14 lower on strong, significant at less than .001. Readership of the Topeka paper had no significant impact on any of the appearance variables.

Readership of *USA Today* had larger significant impact on more appearance variables than any of the other large metro papers. Clearly, readers who were exposed to the visual design and use of color in *USA Today* desire some visual changes from their community newspaper.

Demographics

Age

H7a: Increases in age will result in increases on measures of satisfaction with photo quality.

Hypothesis 7a is not supported. As Table 50 shows, as age increased, satisfaction with sports photos decreased, significant at less than .01. This was the opposite of the predicted result. Age increases did not have an impact on satisfaction with overall photo quality, news photos nor feature photos.

**Table 50 Regression analysis of age
on measures of satisfaction with photo quality**

Independent variable: Age

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Overall photo quality	.00	.01	.25	.00	.06	.80
News photos	.00	.02	.47	.00	.22	.64
Feature photos	-.00	-.03	.69	.00	.48	.49
Sports photos	-.00	-.11	3.03	.01	9.18	<.01

H7b: Increases in age will result in decreased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

Age does appear to have an effect on desire for color photos and desire for more news photos, as Table 51 indicates. Hypothesis 7b was supported because as age increased there was less desire for more color photos, significant at less than .01. Desire for more news photos also decreased as age increased, significant at less than .01. These findings suggest that older subscribers were more pleased with the amount of color photos and news photos in their community newspaper and did not desire more of these types of visuals. Younger subscribers did desire more of these types of visuals.

Age did not have a statistically significant impact on desire for larger photos, more multiple photo stories, more feature photos nor more sports photos. However, desire on all these variables decreased with increases in

Table 51 **Regression analysis of age on measures of desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos**

Independent variable: Age

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Larger photos	-.00	-.02	.46	.00	.21	.64
Multiple photos	-.00	-.07	1.81	.00	3.28	.07
More color photos	-.01	-.11	2.99	.01	8.95	<.01
More feature photos	-.00	-.06	1.60	.00	2.57	.11
More news photos	-.01	-.11	2.88	.01	8.29	<.01
More sports photos	-.00	-.03	.71	.00	.50	.48

age, suggesting that older readers desire less of these changes than younger readers.

H7c: Increases in age will result in increases on measures of satisfaction with other graphics.

Hypothesis 7c was not supported. As evident in Table 52, measures of satisfaction with editorial drawings, maps and overall graphic quality did not rise as age increased. None of these regressions were significant statistically.

**Table 52 Regression analysis of age
on measures of satisfaction with other graphics**

Independent variable: Age

Dependent Variable	B	Beta	t	R2	F	p
Editorial drawings	-.00	-.07	1.77	.00	3.13	.08
Maps	.00	.05	1.40	.00	1.96	.16
Overall graphic quality	-.00	-.04	1.08	.00	1.17	.28

H7d: Increases in age will result in decreased desire for more color graphics.

Table 53 shows that hypothesis 7d is strongly supported, significant at less than .001. As age increased one standard deviation, desire for more color graphics decreased .13. This means that younger readers, who are more likely to experience and enjoy highly visual media, desire more color graphics in their community newspaper than older readers.

H7e: Increases in age will result in increases on measures of satisfaction with the appearance of the newspaper.

Hypothesis 7e predicted that as age increased measures of satisfaction with the appearance of the newspaper would also increase. Nine of the 12 regressions in Table 54 provide strong support for this hypothesis. As age increased one standard deviation, perceptions of the newspaper as having an interesting appearance increased .15, significant at less than .001. As age increased exciting increased .09, significant at less than .01. Colorful increased

Table 53 Regression analysis of age on desire for more color graphics

Independent variable: Age

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
More color graphics	-.001	-.13	3.50	.02	12.28	<.001

Table 54 Regression analysis of age on measures of satisfaction with the appearance of the newspaper

Independent variable: Age

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Interesting appearance	.00	.15	4.10	.02	16.84	<.001
Exciting	.00	.09	2.54	.01	6.45	<.01
Uncluttered	.00	.06	1.57	.00	2.45	.12
Colorful	.01	.24	6.74	.06	45.48	<.001
Pleasant	.00	.05	1.26	.00	1.59	.21
Fresh	.00	.10	2.75	.01	7.58	<.01
Modern	.01	.16	4.25	.02	18.09	<.001
Professional	.00	.05	1.30	.00	1.69	.19
Appealing	.00	.12	3.18	.01	10.12	<.01
Strong	.01	.14	3.76	.02	14.15	<.001
Attractive	.01	.22	5.98	.05	35.77	<.001
Overall appearance	.00	.13	3.52	.02	12.37	<.001

.24 as age increased, significant at less than .001. Fresh increased .10, significant at less than .01. Modern increased .16, significant at less than .001. Appealing increased .12, significant at less than .01. Strong increased .14, significant at less than .001. Attractive increased .22, and overall appearance increased .13, both significant at less than .001. There were no significant increases on uncluttered, pleasant and professional.

Strong evidence was provided for the hypothesis that as age increased measures of satisfaction with the appearance of the newspaper also increased. Moreover, age had the strongest impact of any of the independent variables tested thus far. Clearly, age had an impact on perceptions of the appearance of the newspaper. Older readers rated the newspaper higher on appearance variables than younger readers.

Income

H8a: Increases in income will result in increases on measures of satisfaction with photo quality.

Hypothesis 8a was supported. Table 55 indicates that as income increased one standard deviation, satisfaction with overall photo quality increased .10, significant at less than .01. Satisfaction with sports photos increased with income .17, significant at less than .001. Satisfaction with news photos and feature photos did not increase with income.

**Table 55 Regression analysis of income
on measures of satisfaction with photo quality**

Independent variable: Income

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Overall photo quality	.04	.10	2.73	.01	7.44	<.01
News photos	.01	.02	.49	.00	.24	.62
Feature photos	.01	.04	.93	.00	.87	.35
Sports photos	.09	.17	4.55	.03	20.70	<.001

H8b: Increases in income will result in decreased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

Hypothesis 8b also received some statistical support, evident in Table 56. As income increased one standard deviation, desire for larger photos decreased .08, significant at less than .05. As income increased, desire for more sports photos decreased .12, significant at less than .01. Income did not appear to have an impact on desire for more multiple photo stories, color photos, feature photos nor news photos.

H8c: Increases in income will result in increases on measures of satisfaction with other graphics.

Hypothesis 8c was also supported. As Table 57 shows, as income increased one standard deviation, satisfaction with overall graphic quality

Table 56 **Regression analysis of income on measures of desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos**

Independent variable: Income

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Larger photos	-.04	-.08	2.10	.01	4.43	<.05
Multiple photos	-.01	-.01	.28	.00	.08	.78
More color photos	-.01	-.01	.21	.00	.04	.83
More feature photos	-.02	-.03	.78	.00	.61	.43
More news photos	.02	.02	.64	.00	.40	.53
More sports photos	-.08	-.12	3.24	.01	10.50	<.01

Table 57 **Regression analysis of income on measures of satisfaction with other graphics**

Independent variable: Income

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Editorial drawings	.02	.05	1.28	.00	1.63	.20
Maps	.00	.01	.20	.00	.04	.84
Overall graphic quality	.03	.08	2.23	.01	4.97	<.05

rose .08, significant at less than .05. Income appeared to have no effect on satisfaction with editorial drawings nor maps.

H8d: Increases in income will result in decreased desire for more color graphics.

Increases in income appeared to have no impact on desire for more color graphics, as indicated in Table 58. Hypothesis 8d was not supported.

H8e: Increases in income will result in decreases on measures of satisfaction with the appearance of the newspaper.

Hypothesis 8e was supported on some of the dependent variables. Increases in income appeared to have statistically significant impact on measures of satisfaction with the appearance of the newspaper, as listed in Table 59. As income increased one standard deviation, interesting appearance decreased .10, significant at less than .01. A larger impact was seen on perceptions of the newspaper as colorful. On that variable, as income rose, perceptions of the papers as colorful decreased .21, significant at less than .001. Strong decreased .13, significant at less than .001. Attractive decreased .06, significant at less than .05. Other dependent variables including exciting, uncluttered, pleasant, fresh, modern, professional, appealing and overall appearance did not appear to be influenced by income.

Table 58 Regression analysis of income on desire for more color graphics

Independent variable: Income

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
More color graphics	-.02	-.02	.63	.00	.40	.53

**Table 59 Regression analysis of income on measures of satisfaction
with the appearance of the newspaper**

Independent variable: Income

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Interesting appearance	-.04	-.10	2.75	.01	7.56	<.01
Exciting	-.04	-.06	1.63	.00	2.66	.10
Uncluttered	.01	.04	.96	.00	.92	.34
Colorful	-.14	-.21	5.70	.04	32.54	<.001
Pleasant	-.00	-.01	.26	.00	.07	.79
Fresh	-.01	-.03	.81	.00	.65	.42
Modern	-.02	-.05	1.22	.00	1.50	.22
Professional	-.01	-.03	.90	.00	.80	.37
Appealing	-.00	-.01	.30	.00	.09	.76
Strong	-.06	-.13	3.45	.02	11.87	<.001
Attractive	-.04	-.09	2.42	.01	5.86	<.05
Overall appearance	-.02	-.06	1.67	.00	2.77	.10

Education

H9a: Increases in education will result in increases on measures of satisfaction with photo quality.

Hypothesis 9a received support, as outlined in Table 60. As education increased one standard deviation, satisfaction with overall photo quality rose .12, and satisfaction with sports photos rose .10, both significant at less than .001. These findings reflect the prediction that people with more education would probably be more interested in the informational content of the newspaper and therefore would be less critical of the photo quality. Satisfaction with news photos and feature photos did not appear to be impacted by education levels.

**Table 60 Regression analysis of education
on measures of satisfaction with photo quality**

Independent variable: Education

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Overall photo quality	.04	.12	3.33	.01	11.11	<.001
News photos	.01	.04	1.09	.00	1.18	.28
Feature photos	.01	.02	.65	.00	.42	.51
Sports photos	.05	.10	2.87	.01	8.23	<.001

H9b: Increases in education will result in decreased desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

Education did have an influence on desire for more sports photos as Table 61 shows. As hypothesis 9b predicted, as education increased one standard deviation, desire for more sports photos decreased by .17, significant at less than .001. Desire for larger photos, more multiple photo stories, more color photos, feature photos and news photos all decreased with rises in education, but the regressions were not statistically significant.

Table 61 Regression analysis of education on measures of desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos

Independent variable: Education

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
Larger photos	-.03	-.06	1.57	.00	2.48	.12
Multiple photos	-.00	-.00	.05	.00	.00	.96
More color photos	-.02	-.03	.90	.00	.82	.37
More feature photos	-.02	-.04	1.05	.00	1.10	.29
More news photos	-.02	-.04	1.00	.00	.99	.32
More sports photos	-.10	-.17	4.69	.03	22.03	<.001

H9c: Increases in education will result in increases on measures of satisfaction with other graphics.

As Table 62 demonstrates, education appeared to have no statistically significant effect on satisfaction with editorial drawings, maps nor overall graphic quality. Hypothesis 9c was not supported.

Table 62 Regression analysis of education on measures of satisfaction with other graphics

Independent variable: Education

Dependent Variable	B	Beta	t	R ²	F	p
Editorial drawings	.02	.06	1.51	.00	2.28	.13
Maps	-.02	-.06	1.63	.00	2.66	.10
Overall graphic quality	.00	.01	.33	.00	.11	.74

H9d: Increases in education will result in decreased desire for more color graphics.

Hypothesis 9d was not supported. As shown in Table 63, education appeared to have no significant effect on desire for more color graphics.

H9e: Increases in education will result in decreases on measures of satisfaction with the appearance of the newspaper.

Hypothesis 9e posited that as education increased, subscribers would become more critical of the general appearance of the community newspaper, perhaps because of exposure to larger visual metro newspapers. Even though more educated people may be more interested in information to be gained

**Table 63 Regression analysis of education
on desire for more color graphics**

Independent variable: Education

<u>Dependent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>R2</u>	<u>F</u>	<u>p</u>
More color graphics	-.01	-.01	.28	.00	.08	.78

from the newspaper, the reasoning behind this hypothesis was that more educated people would be more aware of visual sophistication used by larger newspapers and would therefore rate their local community newspaper lower on the general appearance variables. Table 64 provides support for this reasoning.

Table 64 shows that as education increased, four of the appearance variables decreased as predicted. Perceptions of the newspaper as exciting decreased .08 with each standard deviation increase in education, significant at less than .05. Perceptions of the newspaper as colorful decreased .18, significant at less than .001. Perceptions of the newspaper as modern decreased .11, significant at less than .01. As education increased one standard deviation, perceptions of the newspaper as strong decreased .12, significant at less than .001.

Perceptions of the newspaper as appealing increased .09, significant at less than .001, opposite of the predicted result. The remaining variables including interesting, uncluttered, pleasant, fresh, professional, attractive nor overall appearance appeared not to be influenced by education.

Table 64 **Regression analysis of education on measures of satisfaction with the appearance of the newspaper**

Independent variable: Education						
Dependent Variable	B	Beta	t	R2	F	p
Interesting appearance	-.02	-.04	1.22	.00	1.51	.22
Exciting	-.04	-.08	2.22	.01	4.90	<.05
Uncluttered	.01	.02	.42	.00	.18	.67
Colorful	-.11	-.18	5.00	.03	25.01	<.001
Pleasant	.01	.03	.88	.00	.77	.38
Fresh	-.02	-.05	1.25	.00	1.56	.21
Modern	-.04	-.11	2.99	.01	8.91	<.01
Professional	.02	.05	1.27	.00	1.61	.20
Appealing	.03	.09	2.33	.01	5.44	<.05
Strong	-.05	-.12	3.33	.01	11.07	<.001
Attractive	.01	.02	.66	.00	.43	.51
Overall appearance	.00	.02	.46	.00	.21	.65

Perhaps these four variables, including exciting, colorful, modern and strong, represent the stronger of the appearance variables and may be the ones most critical of the newspapers. The other appearance variables may represent weaker or softer variables, which respondents may have been more likely to be agreeable to. For example, it probably is much easier to agree that a paper looks pleasant, but tougher to agree that it is exciting, colorful, modern or strong. This seemed to be especially true of more educated respondents, and may help explain why more educated people rated their local community newspaper lower on these dependent variables measuring satisfaction with the appearance of the newspaper.

Gender

H10a: Males will have lower mean scores than females on measures of satisfaction with photo quality.

Gender differences were difficult to predict, but there did seem to be some rationale for doing so. In hypothesis 10a, it was reasoned that males would be more critical of the photo quality than females since they probably get heavier exposure to more visuals through visually oriented media such as cable television, video games and magazines.

As Table 65 shows, the only t-test of the photo quality variables that resulted in a significant difference was on satisfaction with feature photos. However, males were more satisfied, not less satisfied as predicted, with feature photos. Gender did not appear to have an impact on satisfaction with overall photo quality, satisfaction with news photos nor satisfaction with sports photos.

H10b: Males will have higher mean scores than females on measures of desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos.

By similar reasoning, it was predicted in hypothesis 10b, that males would desire large photos, multiple photo stories, more color photos, more

Table 65 T-tests of measures of satisfaction with photo quality by gender

Dependent variable	Males			Females		
	X	SD	n	X	SD	n
Overall photo quality N= 752, mean diff.= .0348, t= .81, p= .20	3.9796	.466	245	3.9448	.591	507
News photos N= 752, mean diff.= .0532, t= 1.13, p= .13	3.9388	.544	245	3.8856	.634	507
Feature photos N= 752, mean diff.= .0954, t= 2.12, p= <.05	4.0204	.483	245	3.9250	.618	507
Sports photos N= 751, mean diff.= .0791, t= 2.12, p= .09	3.7951	.811	245	3.7160	.753	507

feature photos, more news photos and more sports photos. Table 66 provides some support for this hypothesis. Males desired multiple photos .13 more than females, significant at less than .05. Males also wanted more sports photos. The mean difference here was .27, significant at less than .001.

Gender did not have an impact on desire for larger photos, more color photos, more feature photos nor more news photos. Males and females appeared to have about the same levels of satisfaction on these variables.

H10c: Males will have lower mean scores than females on measures of satisfaction with other graphics.

Table 66 T-tests of measures of desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos by gender

Dependent variable	Males			Females		
	X	SD	n	X	SD	n
Larger photos N= 752, mean diff.= .0048, t= .08, p= .47	2.2612	.833	245	2.2564	.745	507
Multiple photos N= 752, mean diff.= .1260, t= 1.62, p= <.05	2.6980	1.086	245	2.5720	.952	507
More color photos N= 752, mean diff.= .1124, t= 1.26, p= .10	2.7061	1.230	245	2.8185	1.115	507
More feature photos N= 752, mean diff.= .0987, t= 1.20, p= .11	3.1837	1.069	245	3.0850	1.047	507
More news photos N= 752, mean diff.= .2460, t= 3.00, p= .11	3.1020	1.099	245	2.8560	1.034	507
More sports photos N= 750, mean diff.= .2686, t= 3.54, p= <.001	2.7755	1.114	245	2.5069	.898	505

Hypothesis 10c was not supported. Table 67 shows that males had a .14 higher mean score than females on satisfaction with editorial drawings, significant at less than .01. Males had a .06 higher mean score than females on satisfaction with overall graphic quality, significant at less than .05. These findings were opposite from the prediction. It was expected that males would have less satisfaction with these variables. Gender did not have a significant impact on satisfaction with maps.

Table 67 T-tests of measures of satisfaction with other graphics by gender

<u>Dependent variable</u>	Males			Females		
	X	SD	n	X	SD	n
Editorial drawings N= 752, mean diff.= .1412, t= 2.87, p= <.01	3.8571	.601	245	3.7160	.646	507
Maps N= 751, mean diff.= .0416, t= .93, p= .18	3.6857	.674	245	3.7273	.516	506
Overall graphic quality N= 751, mean diff.= .0633, t= 1.77, p= <.05	3.8776	.472	245	3.8142	.455	506

H10d: Males will have higher mean scores than females on desire for color graphics.

As reported in Table 68, gender did not have an influence on desire for more color graphics. Males and females agreed on this variable. Hypothesis 10d was not supported.

H10e: Males will have lower mean scores than females on measures of satisfaction with the appearance with the newspaper.

The strongest impact of gender was present on the appearance variables. Hypothesis 10e was supported. Table 69 shows that males rated the newspaper significantly lower on four of the appearance variables. Males'

Table 68 T-test of desire for more color graphics by gender

Dependent variable	Males			Females		
	X	SD	n	X	SD	n
More color graphics	2.6626	1.132	243	2.7188	1.006	505
N= 748, mean diff.= .0563, t= .69, p= .25						

Table 69 T-tests of measures of satisfaction with the appearance of the newspaper by gender

Dependent variable	Males			Females		
	X	SD	n	X	SD	n
Interesting appearance	3.7959	.633	245	3.8402	.534	507
N= 752, mean diff.= .0443, t= 1.00, p= .16						
Exciting	2.7102	.989	245	2.8895	.959	507
N= 752, mean diff.= .1793, t= 2.38, p= <.01						
Uncluttered	3.8816	.542	245	3.8442	.598	507
N= 752, mean diff.= .0375, t= .83, p= .21						
Colorful	2.5388	.989	245	2.7101	1.004	507
N= 752, mean diff.= .1713, t= .83, p= <.05						
Pleasant	3.8041	.560	245	3.8639	.465	507
N= 752, mean diff.= .0598, t= 1.54, p= .06						
Fresh	3.7755	.636	245	3.8087	.534	507
N= 752, mean diff.= .0332, t= .75, p= .23						
Modern	3.8122	.619	245	3.7929	.608	507
N= 752, mean diff.= .0193, t= .41, p= .34						

Table 69 Continued

Dependent variable	Males			Females		
	X	SD	n	X	SD	n
Professional N= 752, mean diff.= .0325, t= .77, p= .22	3.9102	.565	245	3.8777	.531	507
Appealing N= 752, mean diff.= .0610, t= 1.29, p= .10	3.7102	.679	245	3.7712	.572	507
Strong N= 752, mean diff.= .1895, t= 3.31, p= <.001	3.4082	.818	245	3.5976	.691	507
Attractive N= 752, mean diff.= .1136, t= 2.21, p= <.05	3.6694	.731	245	3.7830	.623	507
Overall appearance N= 752, mean diff.= .0043, t= .12, p= .45	3.9385	.435	244	3.9428	.465	507

perceptions of the local community newspaper as exciting were .18 lower for males than females, significant at less than .01. Males also rated the newspaper lower on colorful by .17, significant at less than .05. Males' perceptions of the newspaper as strong were .19 lower than females' perceptions, significant at less than .001. Males also thought the newspaper was .11 less attractive than females, significant at less than .05.

Gender did not have a significant impact on interesting appearance, uncluttered, pleasant, fresh, modern, professional, appealing nor overall appearance.

CHAPTER IV.

EXPLORATORY RESEARCH

Factor Analysis of the Dependent and Independent Variables

All dependent and independent variables from the survey were subjected to factor analysis to reduce the data and to conduct exploratory research beyond the scope of the content analysis and the survey.

Factor loadings for the dependent variables, using varimax rotation, which results in orthogonal rotation, are listed in Table 70. Only those variables that loaded with a correlation of .50 or higher were extracted from the factor analysis. Only factors with eigenvalues above 1.0 were included in factor selection. Eleven factors emerged from the factor analysis performed on the dependent variables.

Table 71 shows the factor loadings for the independent variables, again using varimax rotation. Independent variables that loaded together above a correlation of .50 were extracted from the factor analysis. Only factors with an eigenvalue above 1.0 were used in the analysis. Dummy variables were devised to include nominal variables. As Table 71 shows, 12 factors emerged from the factor analysis on the independent variables.

Table 70 Factor analysis of the dependent variables in the survey

Dependent Variable	Factor Name	Eigen-value	Percent of Variance
Overall appearance Attractive Interesting Appealing Professional Strong	Satisfaction with appearance	9.36	19.9
Fair Trustworthy Honest Objective Accurate Responsible	Satisfaction with journalistic quality	2.82	6.0
Enjoy Useful Interesting Informative Entertaining	Personal Utility	2.53	5.4
Multiple photos More sports photos More news photos More feature photos Larger photos	Desire more photos and larger photos	2.08	4.4
Sports coverage Sports writing Sports photos	Satisfaction with sports treatment	1.85	3.9
Feature writing News writing News coverage	Satisfaction with writing and reporting	1.60	3.4

Table 70 Continued

Dependent Variable	Factor Name	Eigen- value	Percent of Variance
Overall photo quality News photos Feature photos	Satisfaction with photo quality	1.40	3.0
Colorful Exciting	Perceptions of papers as colorful and exciting	1.28	2.7
Timely Current	Satisfaction with timeliness	1.26	2.7
More color photos More color graphics	Desire for color	1.12	2.4
Maps Overall graphic quality	Satisfaction with maps and graphics	1.09	2.3

Table 71 **Factor analysis of the independent variables in the survey**

Dependent Variable	Factor Name	Eigen-value	Percent of Variance
Visual paper Visual town/visual paper Visual town	Visual paper/ visual town	5.00	11.6
Trad. town/trad. paper Traditional town Traditional paper	Trad. town/ Trad. paper	5.00	11.6
Equidistant town <i>Marketplace News</i> Neutral Trips Read competing paper	Equidistant residents read <i>Marketplace News</i> neutral trips read both papers	4.54	10.5
Talked to staffer Been subject Visited office Know staffer	Personal contact with paper	3.55	8.3
Income Education	Socio-economic status	2.29	5.3
<i>USA Today</i> <i>Kansas City Star</i> <i>Topeka Capital-Journal</i> <i>Wichita Eagle</i>	Large visual paper readership	1.74	4.0
Equidistant town/visual paper Equidistant town/trad. paper	Equidistant town	1.40	3.3
Age Own home	Maturity/ home owner	1.53	3.6
Editor Editorial stance	Editor influence	1.33	3.1

Table 71 Continued

Dependent Variable	Factor Name	Eigen-value	Percent of Variance
Native Length of residence	Nativity/ Years of residence	1.28	3.0
Clips	Clip coupons	1.20	2.8
Gender	Gender	1.02	2.4

Multiple Regression Analyses of the Factors

To examine, in an exploratory fashion, the influence of the independent factors which emerged from the factor analysis on the emergent dependent factors, a stepwise multiple regression analysis was performed for each of the 11 dependent factors. Additional demographic variables including age, income and education were included as independent variables. The following tables present the results of the multiple regression analyses on the entire data set. Only those independent variables which were statistically significant at less than .05 in the equation were included in the results tables.

The purpose of the multiple regression analyses was to determine which independent variables influenced the dependent variables and to what extent. Stepwise regression enters variables into the equation if they have a

statistically significant probability below .05 and removes them when probability rises above .10. Variables in the equations were considered statistically significant only if they had probabilities of less than .05.

Editor influence, maturity/home ownership, clip coupons and education all had statistically significant impact on satisfaction with the appearance of the newspaper as evident in Table 72. Respondents who liked the editor and agreed with the editorial stance of the editor most of the time rated the papers .28 higher on satisfaction with the appearance of the newspaper. Older subscribers who owned homes rated appearance .15 higher for each standard deviation increase. Readers who clipped coupons rated the papers .12 higher than those who did not clip coupons, and as education rose one standard deviation, satisfaction with appearance rose .11.

The adjusted R-square value of .13 means that 13 percent of the variance in the dependent variable, satisfaction with the appearance of the newspaper, is explained by the independent variables in the equation. The influence of the editor had the most impact on satisfaction with appearance,

Table 72 Multiple regression analysis on satisfaction with appearance

Dependent variable: Satisfaction with appearance

<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>p</u>
Editor influence	.37	.28	8.172	<.001
Maturity/home ownership	.02	.15	4.251	<.001
Clip coupons	.44	.12	3.375	<.001
Education	.13	.11	3.232	<.01

Note. Multiple R=.36, R-square=.13, Adjusted R-square=.13

suggesting that readers who like the editor and agree with the newspaper's editorial stance most of the time may extend those feelings to rate the paper higher on its appearance.

Table 73 shows that editor influence also had the largest impact on satisfaction with journalistic quality. Readers who liked the editor and agreed with the editorial stance most of the time rated the paper .47 higher on satisfaction with journalistic quality. This was the largest effect of the entire study. Those who lived in the equidistant town, Humboldt, and those of higher socio-economic status also rated the paper higher on this variable. The gender finding means that males rated the papers .07 higher on satisfaction with journalistic quality than females.

There was a significant negative effect of readership of large visual newspapers on satisfaction with journalistic quality. Those respondents rated the papers .07 lower than subscribers who did not read any of the large visual newspapers. This is understandable, since the large metro papers and USA

**Table 73 Multiple regression analysis on
satisfaction with journalistic quality**

Dependent variable: Satisfaction with journalistic quality				
Independent Variable	B	Beta	t	p
Editor influence	1.05	.47	14.898	<.001
Equidistant town	.71	.11	3.505	<.001
Socio-economic status	.01	.10	3.113	<.01
Large visual paper readership	-.21	-.07	2.332	<.05
Gender	.44	.07	2.149	<.05

Note.. Multiple R=.52, R-square=.28, Adjusted R-square=.27

Today, with large staffs and budgets should provide readers of small local newspapers with a desire for better journalism in their community newspaper. The adjusted R-square of .27, means that 27 percent of the variance of the dependent variable, satisfaction with journalistic quality, was explained by the independent variables.

Nine percent of the variance in personal utility was explained by editor influence, socio-economic status, gender, living in the equidistant town, education and readership of large visual papers, as Table 74 indicates. Editor influence had the largest impact, increasing personal utility ratings .21. Males, those of higher socio-economic status, residents of the equidistant town, subscribers with more education and readers of large visual newspapers rated the community newspaper higher on personal utility.

Males had .14 larger desire for more photographs and larger photographs than females as Table 75 shows. Desire for these types of visuals

Table 74 Multiple regression analysis on personal utility

Dependent variable: Personal utility

<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>p</u>
Editor influence	.24	.21	5.959	<.001
Socio-economic status	.01	.14	3.966	<.001
Gender	.28	.08	2.415	<.05
Equidistant town	.29	.09	2.471	<.05
Education	.08	.09	2.462	<.05
Large visual paper readership	-.12	-.08	2.316	<.05

Note. Multiple R=.31, R-square=.10, Adjusted R-square=.09

was also impacted positively by the behavioral variable of clipping coupons.

Education and maturity/home ownership had a negative impact on this dependent variable. As education increased one standard deviation, desire for more photos and larger photos decreased .11, suggesting that those with less education have more desire for such visuals. Maturity/home ownership showed a very similar trend, decreasing desire by .10.

**Table 75 Multiple regression analysis
on desire for more photos and larger photos**

Dependent variable: Desire for more photos and larger photos

Independent Variable	B	Beta	t	p
Clip coupons	.77	.13	3.599	<.001
Gender	.87	.14	3.890	<.001
Education	-.21	-.11	3.187	<.01
Maturity/home ownership	-.02	-.10	2.837	<.01

Note. Multiple R=.23, R-square=.05, Adjusted R-square=.05

These independent variables explained 5 percent of the variance of the dependent variable, desire for more photographs and larger photographs.

Surprisingly, gender did not have an impact on satisfaction with sports treatment, as Table 76 indicates. Traditional paper/traditional town, income and equidistant residents who read the *Marketplace News* (a weekly newspaper published in Humboldt, the equidistant town), took neutral trips and read both papers all rated the community newspaper higher on satisfaction with sports treatment by the newspaper. These independent

variables explained 5 percent of the variance on satisfaction with sports treatment.

**Table 76 Multiple regression analysis
on satisfaction with sports treatment**

Dependent variable: Satisfaction with sports treatment

<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>p</u>
Traditional paper/traditional town	.25	.22	5.915	<.001
Income	.11	.10	2.779	<.01
Equidistant residents, etc.	.02	.10	2.602	<.01

Note. Multiple R=.24, R-square=.06, Adjusted R-square=.05

As table 77 indicates, editor influence had the strongest effect on satisfaction with writing and reporting, increasing the mean score .27. Satisfaction with writing and reporting was also impacted by equidistant town (Humboldt) residents who read the *Marketplace News* (a weekly newspaper published in Humboldt), took more neutral trips and read both papers. Respondents who did all this rated the papers .11 higher than those who did not live in the equidistant town, took fewer neutral trips and only read one of the community papers in the study. Natives, those with more years of residence, males and those who clipped coupons also rated the papers higher on satisfaction with writing and reporting. Ten percent of the variance was explained by the independent variables.

**Table 77 Multiple regression analysis
on satisfaction with writing and reporting**

Dependent variable: Satisfaction with writing and reporting

Independent Variable	B	Beta	t	p
Editor influence	.24	.27	7.721	<.001
Equidistant residents, etc.	.28	.11	3.121	<.01
Nativity/years of residence	.00	.08	2.228	<.05
Gender	.23	.09	2.463	<.05
Clip coupons	.19	.08	2.214	<.05

Note. Multiple R=.33, R-square=.11, Adjusted R-square=.10

Editor influence, education and living in the equidistant town all had an impact on satisfaction with photo quality as Table 78 shows. However, these independent variables explained only 3 percent of the variance on the dependent variable, satisfaction with photo quality.

Table 79 shows that editor influence, maturity/home ownership, socioeconomic status and clip coupons all impacted positively on perceptions of the newspaper as colorful and exciting. This dependent variable probably represented the strongest possible indicators of opinions about the appearance of the newspaper, since few respondents rated either paper highly on this variable. Those who lived in the visual newspaper/visual newspaper town and those with more education rated the newspaper lower on colorful and exciting appearance. The independent variables explained 15 percent of the variance on perceptions of the newspaper as colorful and exciting.

Table 78 Multiple regression analysis on satisfaction with photo quality

Dependent variable: Satisfaction with photo quality

<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>p</u>
Editor influence	.10	.13	3.570	<.001
Education	.07	.10	2.859	<.01
Equidistant town	.23	.10	2.766	<.01

Note. Multiple R=.19, R-square=.04, Adjusted R-square=.03

**Table 79 Multiple regression analysis
on perceptions of the newspaper as colorful and exciting**

Dependent variable: Perceptions of the newspaper as colorful and exciting

<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>p</u>
Editor influence	.22	.23	6.688	<.001
Maturity/home ownership	.01	.13	3.403	<.001
Socio-economic status	.01	.13	3.842	<.001
Visual paper/visual town	-.13	-.13	3.887	<.001
Education	-.08	-.10	2.923	<.01
Clip coupons	.19	.07	2.117	<.05

Note. Multiple R=.40, R-square=.16, Adjusted R-square=.15

Editor influence, education and equidistant town residents who read the *Marketplace News*, took more neutral trips and read both papers had an impact on satisfaction with timeliness of the community newspaper, as indicated in Table 80. All of these independent variables were positive and explained 4 percent of the variance on satisfaction with timeliness, the dependent variable.

Table 80 Multiple regression analysis on satisfaction with timeliness

Dependent variable: Satisfaction with timeliness

Independent Variable	B	Beta	t	p
Editor influence	.08	.14	3.991	<.001
Equidistant town, etc.	.18	.11	3.139	<.01
Education	.03	.07	2.035	<.05

Note. Multiple R=.20, R-square=.04, Adjusted R-square=.04

Desire for color was influenced positively by readers of the visual newspaper who lived in the visual newspaper town, as Table 81 indicates. Maturity/home ownership and income were negatively associated with desire for more color, suggesting that older home owners and those with higher incomes had less desire for color than younger non-home owners and those with lower incomes. Three percent of the variance for the dependent variable, desire for color, was explained by these independent variables.

Table 82 shows that subscribers who lived in the traditional newspaper town and read the traditional newspaper were less satisfied with maps and

Table 81 Multiple regression analysis on desire for more color

Dependent variable: Desire for more color

<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>p</u>
Maturity/home ownership	-.01	-.16	4.128	<.001
Visual paper/visual town	.14	.13	3.568	<.001
Income	-.08	-.08	2.021	<.05

Note. Multiple R=.20, R-square=.04, Adjusted R-square=.03

**Table 82 Multiple regression analysis
on satisfaction with maps and graphics**

Dependent variable: Satisfaction with maps and graphics

<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>t</u>	<u>p</u>
Editor influence	.06	.12	3.268	<.01
Clip coupons	.16	.11	3.200	<.01
Traditional paper/traditional town	-.05	-.09	2.709	<.01

Note. Multiple R=.21, R-square=.04, Adjusted R-square=.04

graphics in the community newspaper. Editor influence and clip coupons had positive effects on satisfaction with maps and graphics. These independent variables explained 4 percent of the variance of satisfaction with maps and graphics, the dependent variable.

CHAPTER V.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary and Conclusions

Today's newspaper reader is bombarded with a world full of visual media. Network and local television, cable television, magazines, motion pictures, videotapes, newspapers in medium and large markets and *USA Today*, billboards, video games, computer games and programs, computer on-line services such as America Online, Prodigy and the Internet and multi-media CD-ROM programs all present the user with bold and colorful visual communication. All of this creates challenges for newspaper publishers and editors, visual communication educators and visual communication researchers.

Many newspapers have responded to the visual competition by expanding use of color, graphics, dominant photographs, stylistic typography and information graphics all organized into highly visual packaged news. Many journalism and mass communications departments, schools and colleges have incorporated visual communication courses into curriculums to teach journalism and mass communications students foundations and skills of visual communication and multi-media communication. Visual communication researchers have responded to the visual changes in communications by devising content analysis studies, experiments and surveys to try to assess the effects and industry trends concerning visual

communication in newspapers. Apparently, some of the increased use of visual communication in newspapers and changes in visual communication curriculum have come about as a result of academic and proprietary research. Media practitioners and educators are also often advised to "get visual" in their information presentations by presenters in workshops organized by professional organizations and by visual communication researchers.

Newspaper editors and publishers are faced with the challenge of presenting news, information and entertainment in print form to readers who are constantly being bombarded with visual media from all directions. The question for media practitioners is how to attract new readers and keep current readers through attractive packaging while still performing the newspaper function of providing information so that readers may make informed decisions about politics, lifestyle issues, even entertainment. It's a delicate balancing act that can easily be upset by gravitating too quickly to research findings which may not be generalizable to the newspaper's audience.

Clearly, understanding the effects of visual communication is a problem involving multiple influences which demands that multi-variate research design approaches be used to sort out the various influences on the effects of visual communication. This research study may represent an advancement from previous content analysis studies, experiments and surveys because it approaches the problem of visual communication by combining a content analysis study with a survey of the readers. The quasi-experimental design in a natural setting provided new information about

visual communication and newspaper reader satisfaction. This study also examined newspaper reader satisfaction in much more detail than previous studies in an attempt to understand the influences on satisfaction with visual communication. Of course, all research designs have limitations. Since this study involved two small daily newspapers in Kansas and subscribers in three small towns, results from this research cannot be generalized to all newspapers, but the findings do have implications for newspaper publishers and editors, visual communication educators, visual communication researchers.

Many of the measurements and hypotheses of this research were based on experimental studies in visual communication. Perhaps the most important finding from this research project is that many of the findings from previous experimental studies do not match findings from the field study. Throughout this research, the goal was to determine the effects of several independent variables on the dependent variables. A summary of the findings reveals many differences between the effects of visual communication in a laboratory setting and a natural setting. Only the findings that were statistically significant are included in this discussion.

Visual Newspaper vs. Traditional Newspaper

The first set of independent variables dealt with the influence of the readership of the visual newspaper vs. the traditional newspaper on the dependent variables. Findings showed that readership of the visual paper

resulted in no higher levels of satisfaction with photo quality than readership of the traditional newspaper. Readership of the visual newspaper also resulted in higher, not lower, levels of desire for more color photos, more news photos and more sports photos. Perhaps readers who were exposed to more visuals and more space devoted to visuals desired even more of these types of visuals to satisfy their visual appetite.

Readership of the visual newspaper resulted in more satisfaction with maps, overall graphic quality and news coverage. Readers of the visual newspaper did rate the visual paper statistically significantly higher on some of the appearance variables including modern, appealing and overall appearance, but nine other appearance variables were not influenced by readership of the visual newspaper. This is in sharp contrast to the experimental studies which have found that the more visual newspaper scores higher on almost all of these appearance variables.

Concerning satisfaction with the journalistic quality of the newspaper, readers rated the visual newspaper as more honest. There were no differences on nine other measures of satisfaction with the journalistic quality of the newspaper. On measures of personal utility and enjoyment, readers of the visual newspaper rated it as more informative and entertaining. There were no differences on four other measures of personal utility and enjoyment. Overall, readership of the visual newspaper had only limited influence on the dependent measures.

The small amount of variance on this independent variable may be due to the fact that the respondents were all subscribers who are probably

satisfied enough with the respective newspapers to keep subscribing. Also, the visual differences between the newspapers were evident in the content analysis, but the differences between the frequency of visuals and the amount of space devoted to visuals was not as pronounced as they would be in experimental studies. Perhaps, this gets to the crux of the matter concerning differences in results of most of the experimental studies and this field study. In the experimental studies, researchers purposely create radical differences between the visuals in the control newspaper and the experimental newspaper, often resulting in large statistically significant differences in reader opinions. While these papers were different visually, there were not radically different treatments of visuals strongly evident. This seems to mirror the situation in most communities in close proximity to each other. In other words, it would be difficult to find two real newspapers that use radically different treatment of visuals in the same city or in close proximity. In the natural setting, other variables appear to have more influence than the visual design on satisfaction with the newspaper.

Newspaper Subscription and Community of Residence

The combination of newspaper subscription and community of residence, the second set of independent variables, had scant influence on the dependent variables. Readers of the visual newspaper living in the visual newspaper town rated the paper higher on modern appearance than readers of the traditional newspaper living in the traditional newspaper town.

Readers of the visual newspaper living in the visual newspaper town also rated the paper as more informative than readers of the traditional newspaper living in the traditional newspaper town. None of the other dependent measures were influenced by the combination of the newspaper subscription and the community of residence. This suggests that readership of the visual newspaper in the low competition situation or the high competition situation had no effect on the dependent variables. This finding could also be an artifact of the respondents being subscribers rather than newspaper rack buyers, suggesting low competition in each combination of newspaper subscription and community of residence. It may also suggest that readers probably choose which newspaper to read on the basis of other variables rather than the visual design of the newspapers. This also means that visual design may have had little to do with selection of a newspaper.

Media Use Variables

Daily Television Minutes

The third independent variable concerned the influence of use of other media on the dependent variables. Time spent watching television had no effect on satisfaction with photo quality nor desire for larger photos, multiple photos, more color photos, more feature photos, more news photos nor more sports photos. Satisfaction with overall graphic quality was negatively impacted by increased time watching television as predicted. More time spent

watching television did not result in more desire for color graphics. The only appearance variable impacted by time spent with television was lower perceptions of the paper as having an exciting appearance.

These findings suggest that newspaper readers may view television and newspapers as separate entities. It is interesting that respondents who spent more time with television rated their local newspaper as less exciting and lower in satisfaction with overall graphic quality, but these two findings alone do not suggest that time spent with television has much impact on satisfaction with newspapers. Perhaps those who watch a lot of television do not spend enough time with their newspapers to formulate much of a critical view about the appearance of the newspaper.

Cable Television

The only impact of cable television in the home, the fourth independent variable, was that it resulted in more desire for multiple photos. This may be due to the fast paced editing that is apparent in cable programming, especially music videos. Cable television had no impact on satisfaction with photo quality, satisfaction with editorial drawings, maps, overall graphic quality nor desire for more color graphics. None of the appearance variables were affected by cable television. Again, the presence of cable television in the home did not appear to have much influence on satisfaction with visual communication in newspapers.

Weekly Magazine Minutes

The only impacts of increased time spent reading magazines, the fourth independent variable, were an increase in satisfaction with overall photo quality and an increase in perceptions of the newspaper as having an attractive appearance, both opposite of the predictions in the hypotheses. Increased time spent reading magazines had no impact on the other dependent variables, suggesting that magazine reading has little influence on satisfaction with visual communication in newspapers. Perhaps respondents viewed magazines and newspapers as separate entities as well.

Readership of Visual Newspapers

The sixth set of independent variables, readership of large visual newspapers, had the strongest impact on visual communication of any of the media use variables. Readers of *USA Today* were less satisfied with feature photos in their community newspaper and they rated their paper lower on several appearance variables including exciting, uncluttered, modern and strong. This suggests that readers of *USA Today* felt that their local newspaper did not live up to the visual standards of *USA Today*. Readership of the *Wichita Eagle* resulted in higher ratings on overall photo quality and lower ratings of the paper as colorful. Readers of the *Kansas City Star* gave higher ratings on overall photo quality, more desire for sports photos and lower ratings on appearance variables including fresh and strong. Readership

of the *Topeka Capital-Journal* resulted in higher ratings on overall photo quality, less desire for sports photos and less desire for color graphics. These findings suggest that readership of large visual newspapers may have an impact on expectations, satisfaction and desires of readers of smaller daily newspapers. Perhaps some of these readers, who get a steady diet of color, large photos, information graphics and stylistic design from the larger newspapers, may come to expect their local papers to keep up. These findings suggest that readers who are accustomed to the visual communication of *USA Today* or other large visual newspapers may expect or at least wish that their local community newspaper would emulate the style of *USA Today* or the large metro paper nearby. However, others may not expect their local papers to match the visual output of larger news organizations.

Demographics

Demographic variables including age, education, income and gender were used as independent variables to test their influence on visual communication. Overall, the demographic variables had more impact than any of the other independent variables included in the study.

Age

Age, the seventh independent variable, had statistically significant influence on several of the dependent variables. As age increased, satisfaction

with sports photos decreased, desire for more color photos decreased, desire for more news photos decreased and desire for more color graphics decreased. Ratings on nine of the 12 appearance variables increased with age increases including interesting appearance, exciting, colorful, fresh, modern, appealing, strong, attractive and overall appearance. Clearly age is a significant factor on satisfaction with visual communication. Not only did age impact more of the dependent variables, the strength of the impact of age was stronger than any of the other independent variables. For example, as age increased one standard deviation, perceptions of the community newspaper as attractive increased .22 on a five-point scale, a fairly large increase. These findings suggest that younger readers may need to see many visual changes before their satisfaction levels increase. Yet older readers seemed to be satisfied with things they way they were. Older readers did not want more color photos or graphics and they were satisfied with the appearance of their local newspaper.

Income

The eighth independent variable, income, showed several patterns of influence as well. As income increased satisfaction with overall photo quality increased, satisfaction with sports photos increased, desire for larger photos decreased, desire for sports photos decreased and ratings of overall graphic quality increased. Income impacted negatively on four of the appearance variables including interesting appearance, colorful, strong and attractive. As predicted, increases in income resulted in more satisfaction, or less critical

stance, with visual communication and less desire for visual change. Yet, those who had more income did recognize that the appearance of their local paper did not match the visual presentation of large metros nor *USA Today*.

Education

The ninth independent variable, education, showed patterns similar to income. As education increased, satisfaction with overall photo quality increased, satisfaction with sports photos increased and desire for more sports photos decreased. As education increased, decreases were evident on perceptions of the newspaper's appearance as exciting, colorful, modern and strong. Perhaps those with more education were more likely to read newspapers other than their local community newspaper and recognized the appearance differences between large metro papers and their local community newspaper. These findings also suggest that those who are more educated probably are more concerned with the content of the text than visuals.

Gender

The tenth independent variable, gender, had an impact on several of the dependent variables. Males showed more desire for multiple photos and more desire for more sports photos as predicted. Males also reported more satisfaction with feature photos, more satisfaction with editorial drawings and overall graphic quality, all opposite from the predictions in the hypothesis

testing. Males had less satisfaction on four of the appearance variables including exciting, colorful, strong and attractive. Perhaps males are more attracted to exciting, stimulating visuals and expressed less satisfaction with four of the appearance variables as a result. However, there were eight appearance variables in which there were no gender differences, so gender did not appear to strongly impact satisfaction with visual communication.

Overall, the demographic variables showed more influence on satisfaction with visual communication than any of the other variables. This suggests that age, education, income and to a lesser extent gender, may have more to do with satisfaction and desire for visual communication in newspapers than any of the other variables tested in the study. While there were statistical differences evident in the hypothesis testing, it is fairly evident that the independent variables used in the study did not fully explain the variance. The highest R-square on any of the regression analyses included in the hypothesis testing was .06, indicating that the independent variables explained only 6 percent of the variance on the dependent variable. These findings further suggest that visual communication may have less impact on readers' evaluations of newspapers in a natural setting compared to the impact evidenced in laboratory settings. Clearly the hypothesis testing showed that differences in the appearance of the newspapers had only slight impact on reader perceptions of their local newspapers. It was apparent that other factors must be at work to influence reader satisfaction.

Exploratory Research

The exploratory research, which included multi-variate analyses, was an attempt to uncover some of the latent influences not evident in the hypothesis testing. Satisfaction with the appearance of the paper was influenced most heavily by editor influence, maturity/home ownership, whether the reader clipped coupons or not and education. These variables explained 13 percent of the variance. Satisfaction with journalistic quality was influenced positively by editor influence, living in the equidistant town, socio-economic status and gender. One of the media use variables, readership of large visual newspapers, impacted satisfaction with journalistic quality negatively. Readers who read these types of papers had less satisfaction with the journalistic quality of their local newspaper. These independent variables explained 27 percent of the variance.

Personal utility was influenced positively by editor influence, socio-economic status, male gender, living in the equidistant town and education. Readers of the large visual newspapers rated their local paper lower on this variable. Nine percent of the variance was explained here. Those who clipped coupons and males were more likely to desire more photos and larger photos. Those with more education and older homeowners had less desire for these types of visuals. Five percent of the variance was explained here.

Satisfaction with sports treatment was rated higher by those who read the traditional newspaper and lived in the traditional newspaper town, those with higher incomes and those who lived in the equidistant town, read the

Marketplace News, took more neutral trips and read both papers. These variables explained 5 percent of the variance. Satisfaction with writing and reporting was impacted by editor influence; residents who lived in the equidistant town, read the *Marketplace News*, took more neutral trips and read both papers; older natives, male gender and clipping coupons. Ten percent of the variance was explained by these independent variables.

Satisfaction with photo quality was impacted by editor influence, more education and living in the equidistant town. These variables explained 3 percent of the variance. Perceptions of the newspaper as colorful and exciting was positively impacted by editor influence, maturity and home ownership, soci-economic status and clipping coupons. Those who lived in the visual newspaper town and read the visual newspaper and those with more education had lower perceptions of the paper as colorful and exciting. These independent variables explained 15 percent of the variance.

Those with more education, those who were influenced positively by the editor and those who lived in the equidistant town, read the *Marketplace News*, took more neutral trips and read both papers all were more satisfied with the timeliness of the papers. These variables explained 4 percent of the variance. Desire for more color was positively affected by those who read the visual newspaper and lived in the visual newspaper town. Older home owners and those with more income had less desire for more color. These variables explained 3 percent of the variance. Finally, satisfaction with maps and graphics was impacted positively by editor influence and coupon clipping. Those who lived in the traditional newspaper town and read the

traditional newspaper had less satisfaction with maps and graphics. These variables explained 4 percent of the variance.

Overall, it is clear that editor influence was a major factor on most of the dependent variables. Editor influence resulted in some of the largest Beta score differences among the dependent variables, indicating that those who liked the editor and agreed with the editor's editorial stance most of the time were more satisfied with the paper on most of the dependent variables than those who were not positively influenced by the editor. Editor influence had a positive impact on satisfaction with appearance, satisfaction with journalistic quality, satisfaction with personal utility, satisfaction with writing and reporting, satisfaction with photo quality, perceptions of the newspaper as colorful and exciting, satisfaction with timeliness and satisfaction with maps and graphics. Those who indicated that they liked the editor and agreed with the editor's editorial stance most of the time rated their paper higher on all of these dependent variables.

In a small town setting, it is clear that the newspaper editor has some influence on readers' perceptions of the newspaper. This is understandable since most residents of small towns know who the editor is and may even know him or her personally. In other words, the editor of a small town newspaper is not as detached from the readers as the editor of a large metropolitan newspaper is. Furthermore, it is probably much clearer to readers that the small town editor is the voice of the newspaper and is often the source of editorials and opinions expressed by the newspaper.

Maturity and home ownership, another prevalent independent variable, showed positive influence on satisfaction with appearance and perceptions of the paper as colorful and exciting. Mature home owners had less desire for more photos and larger photos and less desire for more color. These types of readers probably had more connections with the community and the newspaper because of the length of time they have lived in the community and because they own their homes. These community ties understandably may result in more satisfaction with the newspaper. The community newspaper might be considered one of the institutions in the town and long time residents may feel more affiliation with the newspaper and thus rate it more positively.

Education had a positive impact on satisfaction with appearance. This finding is in contrast with the finding in the hypothesis testing because the factor analysis extracted a different set of dependent variables on the attractiveness measure. Education had a negative impact on four appearance variables including exciting, colorful, modern and strong in the hypothesis testing. The factor analysis extracted overall appearance, attractive, interesting, appealing, professional and strong to form the factor, satisfaction with appearance. This finding suggests that those with more education may be less concerned with visual communication and more concerned with information in the text.

Gender also showed up as a common factor in the exploratory research. Males were more satisfied with journalistic quality, more satisfied with personal utility, had more desire for more photos and larger photos and were

more satisfied with writing and reporting than females. These findings suggest that males generally may have more at stake in the community and find that the local newspaper provides them with the information they need to function in the community. However, they would like to see more photos and larger photos.

Increases in socio-economic status (a combination of education and income) resulted in increased satisfaction with journalistic quality, increased satisfaction with personal utility and increased perceptions of the local papers as colorful and exciting. Income increases resulted in more satisfaction with sports treatment and less desire for color. Older natives had more satisfaction with writing and reporting than their counterparts.

The only media use variable which emerged was readership of large visual newspapers, which resulted in less satisfaction with journalistic quality and less satisfaction with personal utility. Readership of the visual newspaper and residence in the visual newspaper town resulted in perceptions of the newspaper as less colorful and less exciting and increased desire for more color. Perhaps these readers are expressing more desire for color since they perceive a lack of color in their local paper. In fact, the content analysis of the sample revealed only one visual element in color. The publishers both reported that they rarely run spot color and almost never run four-color photos. Surprisingly, some respondents rated the papers colorful anyway. Readers of the traditional newspaper who lived in the traditional newspaper town reported less satisfaction with maps and graphics and more satisfaction with sports treatment.

One of the behavioral variables, clip coupons, emerged in several of the regressions. Those who clipped coupons were more satisfied with the appearance of the newspaper, desired more photos and larger photos, had more satisfaction with writing and reporting, had perceptions of the paper as more colorful and exciting and had more satisfaction with maps and graphics. Perhaps the fact that these readers clipped coupons from the paper meant that they had used the paper more and were therefore more satisfied with it in all these ways. This finding generally relates to uses and gratifications research. Apparently, the readers who clipped coupons were highly involved with using the newspaper personally and were therefore more satisfied with it in many ways.

The final two independent variables involved connections to the equidistant town. Those who lived in the equidistant town were more satisfied with journalistic quality, more satisfied with personal utility and more satisfied with photo quality. A unique subgroup of equidistant town residents emerged in the factor analysis. This group included those who lived in the equidistant town and who also read the *Marketplace News*, took more neutral trips and read both papers. Readers who did all of these things were more satisfied with writing and reporting and more satisfied with the timeliness of the paper.

Perhaps residents of the equidistant town were fairly satisfied because they had chosen to subscribe to a newspaper and had stuck with it. In this analysis, residents of the equidistant town included subscribers of the visual newspaper and subscribers of the traditional newspaper. Presumably,

subscribers would not keep subscribing to at least one of the papers if they were not somewhat satisfied with it. Moreover, the subset of equidistant residents read both papers. If they weren't satisfied with some aspect of one paper, they probably were satisfied with the other newspaper, resulting in more satisfaction.

While the regressions on the factor analysis did not explain all of the variance on the dependent variables, they did explain much more of the variance than any of the regressions in the hypothesis testing. It is clear from this research that multi-variate research design is needed to fully understand the effects of visual communication in a natural setting since there seem to be many factors that influence visual communication.

Interestingly, many of the behavioral variables expected to have an impact on visual communication appeared to have little or no influence. Several behavioral variables did not emerge in the factor analysis. How many days the newspaper was read, time spent with the newspaper, whether the respondent knew staff members, whether respondents had ever been a subject of positive or negative articles or photos, whether the respondent had ever written a letter to the editor, discussed items with others, bought an ad, visited the office or talked to a staffer did not seem to have any impact on the dependent variables. Part of this result may be due to little variance on some of these variables among the respondents. For example, 94 percent read the paper six days a week, and 80 percent had visited the office. However, many of these variables had plenty of variance among the respondents, yet they did

not seem to have an impact on satisfaction with visual communication nor desire for more visual communication.

Recommendations

These research findings have several implications for newspaper publishers and editors, visual communication educators and visual communication researchers. These results should also be of interest to those who will work with emerging media technologies.

Publishers and editors should not automatically jump on the visual bandwagon based on experimental research findings. This research shows that readership of the visual newspaper had little impact on satisfaction with the newspaper and satisfaction with visual communication and desire for more visual communication. Does this mean that editors and publishers should abandon attempts to change the design of their newspapers? Results from this study show that younger readers would be more satisfied with a newspaper that used more graphics, photos and color and that older readers had less desire for these visual elements. The challenge for editors and publishers is to attract young readers without alienating established older readers. The answer is to implement visual changes slowly so that young readers may become more interested in looking at the newspaper and older readers have time to adjust to the visual changes. Furthermore, visuals should not be added just for the sake of adding more visuals. Some care

should be taken to ensure that information graphics and photos actually provide more information rather than being used just to dress up the page. Likewise, color should not be added just to jazz up the page, but to help organize the page and guide the reader to related information. Editors should regard photo size the same way they regard headline size. Photos with more important information or photos that have small details that provide important information should be run larger to better inform the reader visually.

This research clearly shows that a number of variables besides readership of the visual newspaper may have an impact on satisfaction with the newspaper, satisfaction with visuals and desire for visuals. Publishers and editors should work with researchers to determine the demographic variables of their readers such as income, education and age. For example if most readers are highly educated, have high incomes and are older, the editor and publisher might do well to concentrate more on providing better coverage of issues important to the community and slowly implement visual changes. If most readers have less education, less income and are younger, editors and publishers might consider a faster track to using more visuals, larger visuals and more color. In any event, as stated previously, design changes should provide more information, not less. Visuals should not be increased solely to dress up the page, but to provide more visual information to complement the verbal information.

Readership of large visual newspapers and *USA Today* also should be examined. If a large majority of a newspaper's readers also read a large visual

newspaper or *USA Today*, the editor and publisher should consider increasing the amount of visual communication to better meet the expectations of these readers.

Research should be conducted periodically to assess reader satisfaction with the newspaper concerning visual and verbal communication. Editors and publishers should also recognize that reader tastes may change. Newspaper managers should stay aware of continuing academic research and conduct their own research to determine needs and desires of their readers and how to attract new readers.

Results of this research show that even though the two newspapers differed visually, reader opinions between the two newspapers were similar on several dimensions. This suggests some evidence of habituation, the idea that readers read out of habit and may adjust their opinions as the newspaper changes. In other words, if the paper is fulfilling the information needs of the reader, different kinds of visual treatments may not make much difference to readers.

Just as newspaper publishers and editors should not make rash decisions based on experimental research findings, visual communication educators should resist the temptation to train students to take a cookbook approach to visual communication based on research findings. Educators should learn from this research that varying research methods may turn up different results and they should recognize that reader satisfaction with newspapers and visual communication is a fairly complicated problem to solve. Educators should stay abreast of research findings on visual

communication published in academic journals such as *Journalism Quarterly*, *Newspaper Research Journal*, *Visual Communication Quarterly* and others so that they are aware of current research findings.

Visual communication researchers should expand on the findings of this research to further explore the effects of visual communication. Future research on visual communication and newspaper reader satisfaction should concentrate on the effects of independent variables such as age, education, income, gender, community ties, agreement with the editorial stance of the paper, affiliation with the editor and readership of large visual newspapers or *USA Today* on satisfaction with visual communication and desire for more visual communication. General use of other media such as television, cable television and time spent with magazines probably would not be fruitful independent variables for further research. However, measures of attention to particular types of programming or reading material may be more valuable.

Field studies should probably include respondents who are occasional readers rather than just subscribers so that more variance is evident in the results. This could be accomplished by random digit dialing. Experimental studies should take into account the influence of demographics, especially age, income and education, on satisfaction with visual communication. Experimental researchers would also do well to pick representative samples of newspaper readers as respondents rather than college students. Experimental treatments should be presented in forms that closely resemble the media under study. For example, realistic newspaper pages should be

used rather than slides in experiments involving visual communication in newspapers.

Content analysis studies should do more than just document the visual content of newspapers. Researchers performing content analysis studies should also measure characteristics of the newspapers such as staff size and makeup, circulation and chain ownership to determine if these independent variables have an impact on satisfaction with visual communication and desire for more visual communication.

Three specific studies that could expand on previous research in visual communication and this study are suggested. A major problem with field studies on visual communication is finding two papers that differ greatly in the amount of visual communication used. One way to overcome this problem would be to conduct a before and after study of one paper that undergoes a rapid change in visual communication. Respondents would be selected randomly through random digit dialing and surveyed on their satisfaction with visual communication and desire for more visual communication before the design changes were implemented and after. Demographic data including age, education, income and gender and other control variables would also be recorded to determine if the impact of these independent variables change with the design change.

A second study would involve an experiment to determine if the quality, rather than the quantity, of visual elements may have an impact on satisfaction with visual communication and information recall from visuals. High quality and low quality information graphics would be constructed to

test differences in satisfaction with visuals, attention and information recall from visuals. The quality of the visuals would be determined by a panel of experts. Presumably, high quality information graphics would result in more satisfaction, more attention and more recall of information. Experimental treatments of realistic looking newspaper pages would be devised to construct the experiment. Age, education, income and gender and other control variables would also be used as independent variables. Respondents would be a large representative sample of newspaper readers. A control group would be included.

A third study would involve an experiment of visual communication in news information presented in an interactive multi-media computer "publication." Satisfaction with visual communication, attention and recall of information would be the dependent variables. Independent variables would be three different treatments of the same information. One group would see a presentation with text on the screen. Another group would see a presentation of text and still visuals much like those in newspapers. The third group would see a presentation that included text, still images, motion images and sound. All the presentations would be interactive and index based. That is, respondents would be able to randomly access any part of the information by using a mouse cursor or touch sensitive screen. Those who saw the text only would have indexes organized with letters. The group which saw text and still images would have indexes with still visual elements and text. The third group would be exposed to indexes with motion images and sound.

It would be expected that the group exposed to text, still images, motion images and sound would have the highest scores on satisfaction with visual communication and attention and recall of information, because of the redundancy effect. The text and still images treatment would result in lower scores on the dependent variables, and those exposed to the text only treatment would have the lowest scores on the dependent variables.

The beauty of this kind of experiment is that attention to different parts of the presentation could be tracked by the computer running the program with a minimum of interference from the researcher. The presentation would be modeled after popular current electronic "publications." A control group would be included, and respondents would be a large representative sample of newspaper readers. Demographic data and control variables would be included. Multi-variate analysis techniques should be used in all three studies to determine the relative strength of the independent variables on the dependent variables.

Results from the present research project have some implications for those who work or will work with emerging interactive technologies. This research shows that characteristics of the readers of newspapers may have more impact on satisfaction with visual communication and desire for more visual communication than the visual design of the newspaper. Those who produce and design news and information in interactive multi-media computer formats should not automatically produce highly visual, highly active presentations without understanding characteristics of the consumers of the information. The temptation may be to produce news that looks more

like MTV than a newspaper, but the expectation is that such presentations may not result in high levels of satisfaction or understanding of issues or events. If producers of interactive news follow this track, there will be lots of young consumers, but it is not clear whether they will be well informed or just highly entertained. Researchers also need to examine how many levels of interactivity are optimal. If consumers have endless layers of visual and verbal information on every screen, they may suffer information overload and not attend to much of it.

Since interactive multi-media news and information with text, still images, motion images and sound may resemble television more than newspapers, researchers need to build on the body of research concerning social learning and cultivation theories to determine how interactive multi-media news and information services may impact consumers' construction of social and political reality and social and political behavior.

Visual communication is an important topic for media practitioners, educators and researchers. Research on visual communication should continue and increase as media forms providing news and information become increasingly visual in nature. The more that is known concerning how readers, viewers or consumers of information respond to visual communication in its wide variety of forms, the more visual communication researchers can inform media practitioners and journalism and mass communications educators about how to meet the challenges that lie ahead for visual communication.

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APPENDICES

APPENDIX A

Definitions

Editorial items

Editorial items were identified as any item in the newspaper, visual or text, that contained any information, except for advertising. Editorial elements included in the content analysis were news stories, feature stories, soft news stories, sports stories and scores, columns, business items, stock and farm prices, staff boxes, teasers, promotional story items, indexes, flags or nameplates, letters policies, publishing information, section headings, news tips, folios or datelines, editorials, opinion pieces, letters to the editor or transcripts from phone-in letters to the editor, editorial cartoons, briefs, announcements, listings, calendar items, anniversaries, birthdays, weather information, police briefs, births, deaths, almanac items, weddings, corrections, hospital listings, games, puzzles, contests, horoscopes and any visual element (listed below).

Visual element or visuals

Visual elements or visuals were defined as photographs, location maps, weather maps, information graphics or charts, story logos, editorial cartoons, comic strips, crossword puzzles, boxes, screens, reverse type, small decorative devices known as dingbats, illustrations and line drawings. Visual elements sometimes contained text, but text by itself was not included as a visual element. Lines which did not form a complete box were not considered visual elements in the content analysis.

Advertising

Advertising included any type of advertisement including display ads, classified ads, house ads and public service ads. Text and visuals present in any type of advertising were not included in the content analysis. Advertising space was not included in the computation of the ratio of visual space to editorial space.

Content Analysis Codebook

Item of analysis—editorial item (any non-advertising elements)

Paper and ID

Number sequentially

Chanute Tribune 1 _ _ _ _ (5 number spaces, ex. 100001)

Iola Register 2 _ _ _ _ (5 number spaces, ex. 200001)

Page

List page number exactly

Front page= 01

Fold

1= above

2= below

3= middle

If editorial element crosses fold—

more than 50 percent of height above= 1, above

more than 50 percent of height below= 2, below

exactly 50 percent above and 50 percent below= 3, middle

Editorial element type

If more than one editorial element type is in box or visual element use first editorial element type.

1= news

2= feature/soft news

3= sports/any sports including scores

4= column/Ann Landers/Heloise/community news columns

5= business/stocks/farm prices

6= staff box/tease/promo/index/flag/letters policy/publishing info/
section heads/news tip/folio

7= editorial/opinion/letters to editor/sound off/editorial cartoon

8= briefs/announcements/listings/calendar items/anniversaries/birthdays/
weather/police briefs/births/deaths/almanac/weddings/corrections/
hospital

9= games/puzzles/contests/horoscopes/comics/crossword puzzles

Visual element

- 1= no graphic element at all (includes lines and rules that don't form a box)
- 2= photograph
- 3= map/location map or weather map/(count weather icons as one visual element)
- 4= infographic/chart/graph
- 5= story logo (except business logo/sports logo)/signature/standing head (drawn not photo)
- 6= editorial cartoon (Doonesbury/ syndicated or local)
- 7= graphic box/screen/reverse type
- 8= simple graphic/dingbat/bullet/weather symbol not connected to weather map (cloud, sun, etc.)
- 9= illustration/line drawing/comics/crossword puzzles

If more than one visual element is present treat separately
(visual element 1, 2, etc.).

Count box as one visual element

(visual contents of box as visual element 1, 2, etc.).

Do not count boxes that form a flush frame around a photo or graphic twice.

For boxes within boxes, count as visual element 1, 2, etc.

Count each comic strip as one visual element.

Don't count each comic strip panel as a separate visual element.

Visual element treatment

1= with story

2= standing alone

3= no graphic at all (includes lines and rules that don't form a box)

If more than one visual element is present treat separately

(visual element treatment 1, 2, etc.).

Visual space

Measure width by height in picas.

On irregular shaped visual elements measure in rectangle form (widest point by highest point of positive space).

If more than one visual element is present, treat separately

(visual space 1, 2, etc.).

These measurements should correspond with visual element 1, 2, etc.).

In cases where visuals are contained in boxes or other visual elements

measure the space of the second element separately from the box.

Measure weather graphics as one visual element. (Don't count each sun, cloud, etc. as a separate visual element.)

Non-visual editorial space

Include text, headlines, cutlines, all text.

Record non-visual space only for first graphic element (don't duplicate) in cases where there is more than one visual element.

Measure width and height of story, headline, cutline, all text.

Start width measurement from left where text begins.

Include gutters in stories with two or more columns.

Start height measurement from top of ascenders to bottom of descenders.

Do not include space occupied by visual elements.

Measure type in rectangle form from widest extreme to tallest/deepest extreme.

On headlines, measure the full column width.

Include type separated from body text in measurements (pull-quotes, etc.).

Don't include text in comics or editorial cartoons.

Measure text inside boxes.

Begin measurement at highest ascender on headlines.

Measure story block and subtract out graphics to get editorial space.

Content Analysis Coding Sheet

Visual Communication and Newspaper Reader Satisfaction Coding Sheet

[illegible]

APPENDIX B

Survey Consent Statement

(Read information below before starting survey.)

Hi, I'm (caller's name) and I'm working on a survey on newspaper reading with (newspaper name), Pittsburg State University and the University of Tennessee.

We'd like to interview the adult in your household who had the most recent birthday. (If they seem bewildered, explain that this is to select the respondents within a household randomly.)

(Repeat first sentence if respondent is not the person who answered the phone. Continue if respondent is the person who answered the phone.)

The research project is designed to measure readers' opinions about their local newspapers. We'd like to ask you a few questions about (paper's name). Of course, your responses will be kept confidential and your participation is voluntary. You may refuse or discontinue participation at any time without any penalty, and of course you may ask questions about the research. The survey should take about 10-15 minutes to complete. Would you like to participate in the survey? (Continue if they agree to participate. If not, thank them and hang up.)

APPENDIX C

Questionnaire for Chanute Tribune Subscribers Living in Chanute

Questionnaire—Chanute Survey—Chanute Tribune Readers

ID#					
Caller					
(Read consent statement first.)					
(Then start survey here.)					
First of all, do you read the Chanute Tribune?	yes no				
(If Yes, continue. If, No say thanks and hang up.)					
OK, now I'm going to read several statements about the paper. After I read the statement, please tell me if you strongly disagree, disagree, have no opinion, agree or strongly agree?					
	SD	D	N	A	SA
The first statement is: The overall quality of photos in the paper is good.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
(Repeat if he/she doesn't understand.)					
The quality of the news photos in the paper is good.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The quality of feature photos in the paper is good.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
(They should get it by now—but repeat SD, D, N, A, SA explanation as needed.)					
The quality of sports photos in the paper is good.	1	2	3	4	5
The paper should use larger photos.	1	2	3	4	5
The paper should use more photos with each story.	1	2	3	4	5
The paper should use more color photos.	1	2	3	4	5
The paper should use more feature photos.	1	2	3	4	5
The paper should use more news photos.	1	2	3	4	5
The paper should use more sports photos.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The quality of editorial drawings is good.	1	2	3	4	5
The quality of the maps is good.	1	2	3	4	5
The quality of the graphics is good.	1	2	3	4	5
The paper should use more color graphics.	1	2	3	4	5
The news stories are well written.	1	2	3	4	5
The feature stories are well written.	1	2	3	4	5
The sports stories are well written.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper does a good job of covering the news.	1	2	3	4	5
The paper does a good job of covering sports.	1	2	3	4	5

Questionnaire—Chanute Survey—Chanute Tribune Readers

	SD	D	N	A	SA
Now I'm going to read some statements about how the paper looks.					
The paper looks interesting.	1	2	3	4	5
The paper looks exciting.	1	2	3	4	5
The paper looks uncluttered.	1	2	3	4	5
The paper looks colorful.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper looks pleasant.	1	2	3	4	5
The paper looks fresh.	1	2	3	4	5
The paper looks modern.	1	2	3	4	5
The paper looks professional.	1	2	3	4	5
The paper looks appealing.	1	2	3	4	5
The paper looks strong.	1	2	3	4	5
The paper looks attractive.	1	2	3	4	5
The overall look of the paper is good.	1	2	3	4	5
Now, I'm going to read a few statements about your general opinion of the paper.					
The paper is accurate.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper is timely.	1	2	3	4	5
The paper is interesting to read.	1	2	3	4	5
The paper is honest.	1	2	3	4	5
The paper is objective/non-biased.	1	2	3	4	5
The paper is informative.	1	2	3	4	5
The paper is entertaining.	1	2	3	4	5
The paper is responsible.	1	2	3	4	5
The paper is current.	1	2	3	4	5
The paper is useful.	1	2	3	4	5
The paper is thorough.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper is enjoyable.	1	2	3	4	5
The paper is trustworthy.	1	2	3	4	5
The paper is fair.	1	2	3	4	5
The paper is professional.	1	2	3	4	5
The overall quality of the paper is good.	1	2	3	4	5
I agree with the paper's editorial stance most of the time.	1	2	3	4	5
I like the editor of the paper.	1	2	3	4	5
Thanks for your help. I have just a few more questions.					
How many days a week do you read the paper?	_____ days				
About how much time do you spend with the paper each day?	_____ hours _____ min.				
Do you personally know anyone who works for the paper?	yes _____ no _____				
(If yes) Who? (list)	_____				
Have you ever been the subject of an article or photo in the paper?	yes _____ no _____				

Questionnaire—Chanute Survey—Chanute Tribune Readers

(If yes) Was the article or photo generally positive or negative?	positive	negative
Have you ever written a letter to the editor and sent it to the paper?	yes	no
Do you ever discuss what you read in the paper with a family member or friend?	yes	no
Do you ever clip coupons from the paper?	yes	no
Have you ever bought an advertisement in the paper?	yes	no
Have you ever visited the newspaper office?	yes	no
Have you ever talked to an editor, reporter or photographer for the paper?	yes	no
About how much time do you spend watching TV each day?	hours	min.
Do you have cable TV or RuralVision in your home?	yes	no
About how much time do you spend each week reading magazines?	hours	min.
Do you read the Wichita Eagle?	yes	no
Do you read the Kansas City Star?	yes	no
Do you read the Topeka Capital-Journal?	yes	no
Do you read USA Today?	yes	no
Do you read the Humboldt Marketplace News?	yes	no
Do you read the Erie Record?	yes	no
Do you read the Iola Register?	yes	no
Do you read the Four County Shopper?	yes	no
Do you read any other newspapers? (If Yes, list)	yes	no
The following questions are for statistical purposes only.		
Are you a native of Chanute/Neosho County?	yes	no
How long have you lived in the Chanute/Neosho County area?	years	
Do you own a home?	yes	no
How many trips do you make to Humboldt in an average month.	trips	
How many trips do you make to Iola in an average month.	trips	
What is your birthdate?	(mo/day/yr)	
Next, I'm going to read several income categories. Please stop me when I get to the category that fits your family's total income last year		
before taxes?		
less than 10,000		
10,001-20,000		
20,001-30,000		
30,001-40,000		
40,001-50,000		
more than 50,000		
Finally, how many years of school have you completed?		
less than high school		
high school graduate		
some college		
2 year college certificate or 2 year degree		
Bachelor's degree		
some graduate work		
completed graduate degree		
Thank you for your time and cooperation. We appreciate your help.		
Gender of respondent (don't ask)	male	female

Questionnaire for Chanute Tribune Subscribers Living in Humboldt

Questionnaire—Humboldt Survey—Chanute Tribune Readers

ID#					
Caller					
(Read consent statement first.)					
(Then start survey here.)					
First of all, do you read the Chanute Tribune?	yes no				
(If Yes, continue. If No, say thanks and hang up.)					
OK, now I'm going to read several statements about the paper. After I read the statement, please tell me if you strongly disagree, disagree, have no opinion, agree or strongly agree?					
	SD	D	N	A	SA
The first statement is: The overall quality of photos in the paper is good.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
(Repeat if he/she doesn't understand.)					
The quality of the news photos in the paper is good.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The quality of feature photos in the paper is good.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
(They should get it by now—but repeat SD, D, N, A, SA explanation as needed.)					
The quality of sports photos in the paper is good.	1	2	3	4	5
The paper should use larger photos.	1	2	3	4	5
The paper should use more photos with each story.	1	2	3	4	5
The paper should use more color photos.	1	2	3	4	5
The paper should use more feature photos.	1	2	3	4	5
The paper should use more news photos.	1	2	3	4	5
The paper should use more sports photos.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The quality of editorial drawings is good.	1	2	3	4	5
The quality of the maps is good.	1	2	3	4	5
The quality of the graphics is good.	1	2	3	4	5
The paper should use more color graphics.	1	2	3	4	5
The news stories are well written.	1	2	3	4	5
The feature stories are well written.	1	2	3	4	5
The sports stories are well written.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper does a good job of covering the news.	1	2	3	4	5
The paper does a good job of covering sports.	1	2	3	4	5

Questionnaire—Humboldt Survey—Chenute Tribune Readers

	SD	D	N	A	SA
Now I'm going to read some statements about how the paper looks.					
The paper looks interesting.	1	2	3	4	5
The paper looks exciting.	1	2	3	4	5
The paper looks uncluttered.	1	2	3	4	5
The paper looks colorful.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper looks pleasant.	1	2	3	4	5
The paper looks fresh.	1	2	3	4	5
The paper looks modern.	1	2	3	4	5
The paper looks professional.	1	2	3	4	5
The paper looks appealing.	1	2	3	4	5
The paper looks strong.	1	2	3	4	5
The paper looks attractive.	1	2	3	4	5
The overall look of the paper is good.	1	2	3	4	5
Now, I'm going to read a few statements about your general opinion of the paper.					
The paper is accurate.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper is timely.	1	2	3	4	5
The paper is interesting to read.	1	2	3	4	5
The paper is honest.	1	2	3	4	5
The paper is objective/non-biased.	1	2	3	4	5
The paper is informative.	1	2	3	4	5
The paper is entertaining.	1	2	3	4	5
The paper is responsible.	1	2	3	4	5
The paper is current.	1	2	3	4	5
The paper is useful.	1	2	3	4	5
The paper is thorough.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper is enjoyable.	1	2	3	4	5
The paper is trustworthy.	1	2	3	4	5
The paper is fair.	1	2	3	4	5
The paper is professional.	1	2	3	4	5
The overall quality of the paper is good.	1	2	3	4	5
I agree with the paper's editorial stance most of the time.	1	2	3	4	5
I like the editor of the paper.	1	2	3	4	5
Thanks for your help. I have just a few more questions.					
How many days a week do you read the paper?	_____ days				
About how much time do you spend with the paper each day?	_____ hours _____ min.				
Do you personally know anyone who works for the paper?	_____ yes _____ no				
(If yes) Who? (list)					
Have you ever been the subject of an article or photo in the paper?	_____ yes _____ no				

Questionnaire—Humboldt Survey—Chanute Tribune Readers

(If yes) Was the article or photo generally positive or negative?	positive	negative
Have you ever written a letter to the editor and sent it to the paper?	yes	no
Do you ever discuss what you read in the paper with a family member or friend?	yes	no
Do you ever clip coupons from the paper?	yes	no
Have you ever bought an advertisement in the paper?	yes	no
Have you ever visited the newspaper office?	yes	no
Have you ever talked to an editor, reporter or photographer for the paper?	yes	no
About how much time do you spend watching TV each day?	hours	min.
Do you have cable TV or RuralVision in your home?	yes	no
About how much time do you spend each week reading magazines?	hours	min.
Do you read the Wichita Eagle?	yes	no
Do you read the Kansas City Star?	yes	no
Do you read the Topeka Capital-Journal?	yes	no
Do you read USA Today?	yes	no
Do you read the Humboldt Marketplace News?	yes	no
Do you read the Erie Record?	yes	no
Do you read the Iola Register?	yes	no
Do you read the Four County Shopper?	yes	no
Do you read any other newspapers? (If Yes, list)	yes	no
The following questions are for statistical purposes only.		
Are you a native of Humboldt/Allen County?	yes	no
How long have you lived in the Humboldt/Allen County area?	years	
Do you own a home?	yes	no
How many trips do you make to Chanute in an average month.	trips	
How many trips do you make to Iola in an average month.	trips	
What is your birthdate?	(mo/day/yr)	
Next, I'm going to read several income categories. Please stop me when I get to the category that fits your family's total income last year before taxes?		
less than 10,000		
10,001-20,000		
20,001-30,000		
30,001-40,000		
40,001-50,000		
more than 50,000		
Finally, how many years of school have you completed?		
less than high school		
high school graduate		
some college		
2 year college certificate or 2 year degree		
Bachelor's degree		
some graduate work		
completed graduate degree		
Thank you for your time and cooperation. We appreciate your help.		
Gender of respondent (don't ask)	male	female

Questionnaire for Iola Register Subscribers Living in Iola

Questionnaire—Iola Survey—Iola Register Readers

ID#					
Caller					
(Read consent statement first.)					
(Then start survey here.)					
First of all, do you read the Iola Register?	yes no				
(If Yes, continue. If No, say thanks and hang up.)					
OK, now I'm going to read several statements about the paper. After I read the statement, please tell me if you strongly disagree, disagree, have no opinion, agree or strongly agree?					
	SD	D	N	A	SA
The first statement is: The overall quality of photos in the paper is good.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
(Repeat if he/she doesn't understand.)					
The quality of the news photos in the paper is good.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The quality of feature photos in the paper is good.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
(They should get it by now—but repeat SD, D, N, A, SA explanation as needed.)					
The quality of sports photos in the paper is good.	1	2	3	4	5
The paper should use larger photos.	1	2	3	4	5
The paper should use more photos with each story.	1	2	3	4	5
The paper should use more color photos.	1	2	3	4	5
The paper should use more feature photos.	1	2	3	4	5
The paper should use more news photos.	1	2	3	4	5
The paper should use more sports photos.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The quality of editorial drawings is good.	1	2	3	4	5
The quality of the maps is good.	1	2	3	4	5
The quality of the graphics is good.	1	2	3	4	5
The paper should use more color graphics.	1	2	3	4	5
The news stories are well written.	1	2	3	4	5
The feature stories are well written.	1	2	3	4	5
The sports stories are well written.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper does a good job of covering the news.	1	2	3	4	5
The paper does a good job of covering sports.	1	2	3	4	5

Questionnaire—Iola Survey—Iola Register Readers

	SD	D	N	A	SA
Now I'm going to read some statements about how the paper looks.					
The paper looks interesting.	1	2	3	4	5
The paper looks exciting.	1	2	3	4	5
The paper looks uncluttered.	1	2	3	4	5
The paper looks colorful.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper looks pleasant.	1	2	3	4	5
The paper looks fresh.	1	2	3	4	5
The paper looks modern.	1	2	3	4	5
The paper looks professional.	1	2	3	4	5
The paper looks appealing.	1	2	3	4	5
The paper looks strong.	1	2	3	4	5
The paper looks attractive.	1	2	3	4	5
The overall look of the paper is good.	1	2	3	4	5
Now, I'm going to read a few statements about your general opinion of the paper.					
The paper is accurate.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper is timely.	1	2	3	4	5
The paper is interesting to read.	1	2	3	4	5
The paper is honest.	1	2	3	4	5
The paper is objective/non-biased.	1	2	3	4	5
The paper is informative.	1	2	3	4	5
The paper is entertaining.	1	2	3	4	5
The paper is responsible.	1	2	3	4	5
The paper is current.	1	2	3	4	5
The paper is useful.	1	2	3	4	5
The paper is thorough.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper is enjoyable.	1	2	3	4	5
The paper is trustworthy.	1	2	3	4	5
The paper is fair.	1	2	3	4	5
The paper is professional.	1	2	3	4	5
The overall quality of the paper is good.	1	2	3	4	5
I agree with the paper's editorial stance most of the time.	1	2	3	4	5
I like the editor of the paper.	1	2	3	4	5
Thanks for your help. I have just a few more questions.					
How many days a week do you read the paper?	_____ days				
About how much time do you spend with the paper each day?	_____ hours _____ min.				
Do you personally know anyone who works for the paper?	yes _____ no _____				
(If yes) Who? (list)	_____				
Have you ever been the subject of an article or photo in the paper?	yes _____ no _____				

Questionnaire—Iola Survey—Iola Register Readers

(If yes) Was the article or photo generally positive or negative?	__positive__negative
Have you ever written a letter to the editor and sent it to the paper?	__yes__no
Do you ever discuss what you read in the paper with a family member or friend?	__yes__no
Do you ever clip coupons from the paper?	__yes__no
Have you ever bought an advertisement in the paper?	__yes__no
Have you ever visited the newspaper office?	__yes__no
Have you ever talked to an editor, reporter or photographer for the paper?	__yes__no
About how much time do you spend watching TV each day?	__hours__min.
Do you have cable TV or RuralVision in your home?	__yes__no
About how much time do you spend each week reading magazines?	__hours__min.
Do you read the Wichita Eagle?	__yes__no
Do you read the Kansas City Star?	__yes__no
Do you read the Topeka Capital-Journal?	__yes__no
Do you read USA Today?	__yes__no
Do you read the Humboldt Marketplace News?	__yes__no
Do you read the Erie Record?	__yes__no
Do you read the Chanute Tribune?	__yes__no
Do you read the Four County Shopper?	__yes__no
Do you read any other newspapers? (If Yes, list)	__yes__no
The following questions are for statistical purposes only.	
Are you a native of Iola/Allen County?	__yes__no
How long have you lived in the Iola/Allen County area?	__years
Do you own a home?	__yes__no
How many trips do you make to Chanute in an average month.	__trips
How many trips do you make to Humboldt in an average month.	__trips
What is your birthdate?	_____(mo/day/yr)
Next, I'm going to read several income categories. Please stop me when I get to the category that fits your family's total income last year	
before taxes?	
less than 10,000	
10,001-20,000	
20,001-30,000	
30,001-40,000	
40,001-50,000	
more than 50,000	
Finally, how many years of school have you completed?	
less than high school	
high school graduate	
some college	
2 year college certificate or 2 year degree	
Bachelor's degree	
some graduate work	
completed graduate degree	
Thank you for your time and cooperation. We appreciate your help.	
Gender of respondent (don't ask)	__male__female

Questionnaire for Iola Register Subscribers Living in Humboldt

Questionnaire—Humboldt Survey—Iola Register Readers

ID#					
Caller					
(Read consent statement first.)					
(Then start survey here.)					
First of all, do you read the Iola Register?	yes no				
(If Yes, continue. If No, say thanks and hang up.)					
OK, now I'm going to read several statements about the paper. After I read the statement, please tell me if you strongly disagree, disagree, have no opinion, agree or strongly agree?					
	SD	D	N	A	SA
The first statement is: The overall quality of photos in the paper is good.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
(Repeat if he/she doesn't understand.)					
The quality of the news photos in the paper is good.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The quality of feature photos in the paper is good.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
(They should get it by now—but repeat SD, D, N, A, SA explanation as needed.)					
The quality of sports photos in the paper is good.	1	2	3	4	5
The paper should use larger photos.	1	2	3	4	5
The paper should use more photos with each story.	1	2	3	4	5
The paper should use more color photos.	1	2	3	4	5
The paper should use more feature photos.	1	2	3	4	5
The paper should use more news photos.	1	2	3	4	5
The paper should use more sports photos.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The quality of editorial drawings is good.	1	2	3	4	5
The quality of the maps is good.	1	2	3	4	5
The quality of the graphics is good.	1	2	3	4	5
The paper should use more color graphics.	1	2	3	4	5
The news stories are well written.	1	2	3	4	5
The feature stories are well written.	1	2	3	4	5
The sports stories are well written.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper does a good job of covering the news.	1	2	3	4	5
The paper does a good job of covering sports.	1	2	3	4	5

Questionnaire—Humboldt Survey—Iola Register Readers

	SD	D	N	A	SA
Now I'm going to read some statements about how the paper looks.					
The paper looks interesting.	1	2	3	4	5
The paper looks exciting.	1	2	3	4	5
The paper looks uncluttered.	1	2	3	4	5
The paper looks colorful.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper looks pleasant.	1	2	3	4	5
The paper looks fresh.	1	2	3	4	5
The paper looks modern.	1	2	3	4	5
The paper looks professional.	1	2	3	4	5
The paper looks appealing.	1	2	3	4	5
The paper looks strong.	1	2	3	4	5
The paper looks attractive.	1	2	3	4	5
The overall look of the paper is good.	1	2	3	4	5
Now, I'm going to read a few statements about your general opinion of the paper.					
The paper is accurate.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper is timely.	1	2	3	4	5
The paper is interesting to read.	1	2	3	4	5
The paper is honest.	1	2	3	4	5
The paper is objective/non-biased.	1	2	3	4	5
The paper is informative.	1	2	3	4	5
The paper is entertaining.	1	2	3	4	5
The paper is responsible.	1	2	3	4	5
The paper is current.	1	2	3	4	5
The paper is useful.	1	2	3	4	5
The paper is thorough.	1	2	3	4	5
Do you strongly disagree, disagree, have no opinion, agree or strongly agree?					
The paper is enjoyable.	1	2	3	4	5
The paper is trustworthy.	1	2	3	4	5
The paper is fair.	1	2	3	4	5
The paper is professional.	1	2	3	4	5
The overall quality of the paper is good.	1	2	3	4	5
I agree with the paper's editorial stance most of the time.	1	2	3	4	5
I like the editor of the paper.	1	2	3	4	5
Thanks for your help. I have just a few more questions.					
How many days a week do you read the paper?	_____ days				
About how much time do you spend with the paper each day?	_____ hours _____ min.				
Do you personally know anyone who works for the paper?	yes _____ no _____				
(If yes) Who? (list)					
Have you ever been the subject of an article or photo in the paper?	yes _____ no _____				

Questionnaire—Humboldt Survey—Iola Register Readers

(If yes) Was the article or photo generally positive or negative?	positive	negative
Have you ever written a letter to the editor and sent it to the paper?	yes	no
Do you ever discuss what you read in the paper with a family member or friend?	yes	no
Do you ever clip coupons from the paper?	yes	no
Have you ever bought an advertisement in the paper?	yes	no
Have you ever visited the newspaper office?	yes	no
Have you ever talked to an editor, reporter or photographer for the paper?	yes	no
About how much time do you spend watching TV each day?	hours	min.
Do you have cable TV or RuralVision in your home?	yes	no
About how much time do you spend each week reading magazines?	hours	min.
Do you read the Wichita Eagle?	yes	no
Do you read the Kansas City Star?	yes	no
Do you read the Topeka Capital-Journal?	yes	no
Do you read USA Today?	yes	no
Do you read the Humboldt Marketplace News?	yes	no
Do you read the Erie Record?	yes	no
Do you read the Chanute Tribune?	yes	no
Do you read the Four County Shopper?	yes	no
Do you read any other newspapers? (If Yes, list)	yes	no
The following questions are for statistical purposes only.		
Are you a native of Humboldt/Allen County?	yes	no
How long have you lived in the Humboldt/Allen County area?	years	
Do you own a home?	yes	no
How many trips do you make to Chanute in an average month.	trips	
How many trips do you make to Iola in an average month.	trips	
What is your birthdate?	(mo/day/yr)	
Next, I'm going to read several income categories. Please stop me when I get to the category that fits your family's total income last year before taxes?		
less than 10,000		
10,001-20,000		
20,001-30,000		
30,001-40,000		
40,001-50,000		
more than 50,000		
Finally, how many years of school have you completed?		
less than high school		
high school graduate		
some college		
2 year college certificate or 2 year degree		
Bachelor's degree		
some graduate work		
completed graduate degree		
Thank you for your time and cooperation. We appreciate your help.		
Gender of respondent (don't ask)	male	female

APPENDIX D

Survey Questions and Corresponding Dependent Variables (in bold)

Set 1: Satisfaction with photo quality

The overall quality of photos in the paper is good.

Overall photo quality

The quality of the news photos in the paper is good.

News photos

The quality of feature photos in the paper is good.

Feature photos

The quality of sports photos in the paper is good.

Sports photos

Set 2: Desire for larger photos, multiple photo stories, more color photos, more feature photos, more news photos and more sports photos

The paper should use larger photos.

Larger photos

The paper should use more photos per story.

Multiple photos

The paper should use more color photos

More color photos

The paper should use more feature photos.

More feature photos

The paper should use more news photos.

More news photos.

The paper should use more sports photos

More sports photos

Set 3: Satisfaction with other graphics

The quality of editorial drawings is good.

Editorial drawings

The quality of the maps is good.

Maps

The quality of the graphics is good.

Overall graphic quality

The paper should use more color graphics.

More color graphics

Set 4: Satisfaction with writing and coverage

The news stories are well written.

News writing

The feature stories are well written.

Feature writing

The sports stories are well written.

Sports writing

The paper does a good job of covering the news.

News coverage

The paper does a good job of covering sports.

Sports coverage

Set 5: Satisfaction with the appearance of the paper

The paper looks interesting

Interesting appearance

The paper looks exciting

Exciting

The paper looks uncluttered

Uncluttered

The paper looks colorful
Colorful

The paper looks pleasant
Pleasant

The paper looks fresh
Fresh

The paper looks modern
Modern

The paper looks appealing
Appealing

The paper looks professional
Professional

The paper looks strong
Strong

The paper looks attractive
Attractive

The overall look of the paper is good
Overall appearance

Set 6: Satisfaction with the journalistic quality of the paper

The paper is accurate.
Accurate

The paper is timely.
Timely

The paper is honest
Honest

The paper is objective/non-biased.
Objective

The paper is responsible.
Responsible

The paper is current.
Current

The paper is trustworthy.
Trustworthy

The paper is fair.
Fair

The paper is professional.
Professional overall

The overall quality of the paper is good.
Good quality overall

Set 7: Personal utility/enjoyment

The paper is useful.
Useful

The paper is thorough.
Thorough

The paper is enjoyable.
Enjoyable

The paper is informative.
Informative

The paper is entertaining.
Entertaining

The paper is interesting to read.
Interesting to read

APPENDIX E

Survey Questions and Corresponding Independent Variables (in bold)

Set 1: Agreement with editorial stance/editor

I agree with the paper's editorial stance most of the time.
strongly agree/agree/no opinion/disagree/strongly disagree
Editorial stance agreement

I like the editor of the paper.
strongly agree/agree/no opinion/disagree/strongly disagree
Like editor

Set 2: Use and personal involvement with the newspaper

How many days a week do you read the paper? days
Days read

About how much time do you spend with the paper each day?
hours/minutes
Daily newspaper minutes

Do you personally know anyone who works for the paper? yes/no
Know staff

Have you ever been the subject of an article or photo in the paper? yes/no
Been subject

Was the photo or article generally positive or negative? positive/negative
Article positive or negative

Have you ever written a letter to the editor and sent it to the paper? yes/no
Letter to editor

Have you ever discussed what you read in the paper with a family member or friend? yes/no
Discuss items

Do you ever clip coupons from the paper? yes/no

Clip coupons

Have you ever bought an advertisement in the paper? yes/no

Bought ad

Have you ever visited the newspaper office? yes/no

Visited office

Have you ever talked to an editor, reporter or photographer for the paper?
yes/no

Talked to staffer

Set 3: Use of other media available in the community

About how much time do you spending watching TV each day?
hours/minutes

Daily TV minutes

Do you have cable TV or RuralVision in your home? yes/no

Cable TV

About how much time do you spend each week reading magazines?
hours/minutes

Weekly magazine minutes

Do you read the *Wichita Eagle*? yes/no

Wichita Eagle

Do you read the *Kansas City Star*? yes/no

Kansas City Star

Do you read the Topeka Capital-Journal? yes/no

Topeka Capital-Journal

Do you read *USA Today*? yes/no

USA Today

Do you read the Humboldt *Marketplace News*? yes/no

Marketplace News

Do you read the *Erie Record*? yes/no
Erie Record

Do you read the *Iola Register* (for *Chanute Tribune* subscribers)? yes/no
Do you read the *Chanute Tribune* (for *Iola Register* subscribers)? yes/no
Competing paper

Do you read any other newspapers? yes/no
Other papers

Set 4: Nativity/length of residence and home ownership

Are you a native of Chanute/Neosho County? yes/no
(for *Chanute Tribune* subscribers living in Chanute or Neosho County)
Are you a native of Iola/Allen County? yes/no
(for *Iola Register* subscribers living in Iola)
Are you a native of Humboldt? yes/no
(for *Chanute Tribune* and *Iola Register* subscribers living in Humboldt)
Native

How long have you lived in the Chanute/Neosho County area? years
(for Chanute residents)
How long have you lived in the Iola/Allen County area? years
(for Iola residents)
How long have you lived in Humboldt? years
(for Humboldt residents)
Years of residence

Do you own a home? yes/no
Home ownership

Set 5: Travel to the communities in the study

How many trips do you make to Humboldt in an average month?
(for respondents living in Chanute or Iola)
How many trips do you make to Iola in an average month?
(for *Iola Register* subscribers living in Humboldt)
How many trips do you make to Chanute in an average month?
(for *Chanute Tribune* subscribers living in Humboldt)
Trips to neutral community

How many trips do you make to Iola in an average month?
(for *Chanute Tribune* subscribers living in Chanute)
(and for *Chanute Tribune* subscribers living in Humboldt)
How many trips do you make to Chanute in an average month?
(for *Iola Register* subscribers living in Iola)
and for *Iola Register* subscribers living in Humboldt)
Trips to competing community

Set 6: Demographics

What is your birthdate?

Age

Next I'm going to read several income categories. Please stop me when I get to the category that fits your family's total income last year: less than \$10,000; \$10,001-\$20,000; \$20,001-\$30,000; \$30,001-40,000; \$40,001-\$50,000; more than \$50,000.

Income

Finally, what level of education have you completed?: less than high school, high school graduate, some college, two-year college certificate or two-year college degree, bachelor's degree, some graduate work, completed graduate degree.

Education

Gender of respondent (don't ask)

Gender

APPENDIX F

Selected Sample Pages From the Chanute Tribune

Figure 1 Sample front page from the Chanute Tribune

SATURDAY

THE CHANUTE TRIBUNE

January 9, 1993 35 cents

Stu Butcher
Managing Editor

Did you hear?
Kare, Karvid part of memories from biking tour

Biking provided for more than just exercise for a couple of men from Chanute. Included was local culture, fun and a lot of memories.

From Chanute, retired police officer and John Forner, a retired engineer, joined through Chanute last summer and met up with Kare Karvid. The retired carpenter from the town after they moved home.

A total of 17,000 people, or about 170,000 had been riding the trail in December for two decades. North of Chanute, Chanute's Chanute Canyon Campground. The 10-year-old trail has become a way of life for the riders and has had a big impact on the town. The trail is now a major attraction and a source of pride for the town.

The trail is now a major attraction and a source of pride for the town. The trail is now a major attraction and a source of pride for the town.



BEST BUDDIES — Ann and best friends Loretta Lacey, 10, 128 S. Forest, and Amanda Dalton, 10, 414 W. Shiloh, sing songs and take gifts as they make their way down the street while walking each other home.

Attorneys ask for dismissal in KPERS suit

Motion filed Friday requests judge make ruling in case involving lost pension funds

By LEW PETERSON
Associated Press Wire

TOPEKA — A Shawnee County District Court judge said Friday that attorneys representing defendants in a lawsuit involving \$11.3 million in lost pension funds in Kansas should be dismissed.

The lawsuit, filed in 1991, involved the Kansas State Employees Retirement System (KPERS) and the Kansas State Employees' Association (KSEA). The lawsuit was filed by the KSEA against the KPERS and the state of Kansas.

The judge's decision was based on the fact that the attorneys for the defendants had failed to provide sufficient evidence to support their case. The judge ruled that the attorneys should be dismissed from the case.

Kansas Legislative session begins Monday

Leaders hope 1993 gets off to a fast start, record of women and minority members

By JOHN HANNA
The Associated Press

TOPEKA — Legislative leaders here predicted for weeks that the 1993 session would get off to a fast start. They say they hope to see a record of women and minority members in the legislature.

The session is expected to begin on Monday, January 11, at 10 a.m. in the Kansas State Capitol. The session will be held in the Senate Chamber.

The session is expected to be a busy one, with many bills being introduced and debated. The session will also include a number of public hearings and committee meetings.

Chanute hoopssters swept

The Chanute High basketball team took a 1-0 record at Chanute Friday, while Abilene, Abilene and St. Paul locked horns in a battle of state-ranked teams.

— Page 5

Elected officials take office noon Monday

Sheriff-elect Rick Wingate is optimistic as he prepares to enter his administration

By KES KNOWLES

TOPEKA — Rick Wingate expects a smooth transition when he takes office as Kansas State Sheriff Monday.

Wingate, who has been in the state for over 10 years, is expected to take office at noon on Monday. He is optimistic about his new role and the challenges ahead.

The Forecast

Cloudy today and tonight. A 40 percent chance of light snow Tuesday. Sunday, cloudy. High around 30.

Figure 4 Sample front page from the Iola Register

Saturday
January 9, 1993
Vol. 96, No. 61

The Iola Register

Iola, KS 67649
Eight Pages

Calvary UMC to turn 100

By LILLIAN GUALLS
Frederick Loring Editor

Calvary United Methodist Church, 118 W. Jackson, will celebrate its 100th birthday Sunday.

The celebration will begin with a worship service at 11 a.m. led by the pastor, the Rev. Jan Hagen. Sunday school will follow at 10:25. After a covered dish dinner at 12:15 p.m., there will be a short program of music, reminiscing and fellowship. Former members and friends of the church are invited.

It was through the efforts of pioneer United Brethren ministers that the church, at that time called the Iola Class, was organized in May 1872 in the office of Miles F. Janney, the clerk of the district court, in the old court house building on the corner of Madison and Jefferson streets. For a considerable time Sunday school sessions and worship services were conducted in the courtroom.

S.A. Gerd, an attorney, was a Sunday school teacher.

After that, afternoon meetings were held in the Reformed Church of Iola, which had close ties with the United Brethren.

Later, the Iola Class rented the Packard Building north of the courthouse on the east side of the square. The building was used to store whiskey until only by the state, which was then in the process of being sold to the state. It was an appropriate place for a missionary society to have, for it was at a time when the state was engaged in a campaign to bring prohibition to the city.

Several meetings in the Packard Building gave the group of about 20 people the strength and courage to

purchase a church. Some lots at Jackson and Walnut streets were purchased in 1896.

During a debate about the site of a building, the old State Penitentiary on the east side of the square was sold to Joshua Butler, who was moving it to the east side of the square. The site of the new church was then sold to the United Brethren group for \$200.

His offer was accepted and the church was born. Much of the present church was constructed from the heavy soft pine lumber from the old depot, however, in the frame of the building are the heavy timbers from the old depot, but the building is the result of the depot.

The original church, the United Brethren, building was constructed in 1896. In the years 1909 and 1913, the building was remodeled and enlarged. A basement was dug, a new front was constructed and the entire building was covered with brick facing.

A new heating plant was installed in the 1920s remodeling project. Also, the church installed the district office of being the only church in the city equipped with electric fans as well as lights.

In 1944, under the leadership of the church, the building was remodeled and the entire building was covered with brick facing.

Calvary United Methodist Church, at the corner of Jackson and Walnut streets, will celebrate its 100th birthday Sunday. The Rev. Jan Hagen, pastor, stands in the sanctuary of the church, which was started in 1872 and remodeled several times to meet the needs of the congregation and community.

Reporter-Lillian Gualls

Legislature starts work on Monday

By JOHN RANKA
Associated Press Writer

TOPEKA, Kan. (AP) — Legislative leaders here are expected to begin their work on Monday.

They say things like that every year. But this year, it would be more than just the usual talk.

Four House committees already have scheduled sessions for the week, and Senate committees are expected to begin their work on Monday. The new Legislature will have some 60 bills and more money requests to consider.

"It doesn't seem that anyone is dragging their feet or waiting to move slowly," said Sen. Steve Prohm, R-Elkhart, who chairs the Senate's new majority leader.

Sen. Prohm will outline his proposed budget for the next fiscal year during the second session of the State address, scheduled for 11 a.m. Tuesday.

He has said it will contain tax increases, but he already is expected to deal with spending issues.

Gov. Jean Pendergast will outline his proposed budget for the next fiscal year during the second session of the State address, scheduled for 11 a.m. Tuesday.

He has said it will contain tax increases, but he already is expected to deal with spending issues.

Continued on page 8, column 2

Campaign '96 on horizon

WASHINGTON — Even before Bill Clinton is sworn in as president, one of the Republican front runners has been planning to challenge him for re-election. Lamar Alexander, the former governor of Tennessee and outgoing secretary of education, is headed home to start a four-year effort he hopes will bring him back to Washington as Clinton's opponent.

"I'll find a way to explain why I want it and what I'd do with it," Alexander said as he prepared to leave for his new post in 1993.

When it was suggested that four years would be sufficient time for a politician to deliver as Alexander, he laughed and said, "I might have them in six months."

To many, the notion of the relatively unknown Alexander taking the presidency is pretty far-fetched. But it's not as far as it would have appeared four years ago for the little-known governor of Arkansas, a man remembered only for an incendiary speech he gave during a nomination speech for Michael Dukakis, in which he might be elected president in 1992.

True, Alexander is far from the most formidable looking candidate at George Bush's Cabinet table. Housing and Urban Development Secretary Dick Cheney has enjoyed much more national publicity than Alexander, and has a built-in support network among his former colleagues in the House.

Beyond the Bush administration, there are a half-dozen sitting Republican senators and governors who harbor dreams of the White House. Most of them have a better feel for the political game than Alexander will enjoy when he goes back to Nashville to practice law, to write a book about what he's learned in his 22 months as education secretary and to test the political waters.

On paper, Alexander's presidential bid this fall seems like a long shot. He is not in the running for governor of Tennessee for that office in 1996 and 1998. He is not much of a politician. The Tennessee GOP arguably was weaker when he finished his eight-year term as governor than when he began.

Beyond that, his resume lists stints in Howard Baker's Senate office and Richard Nixon's White House, none years of law practice, and a short tour as

Continued on page 8, column 1

Zero Packing Co. changes ownership

By BOB JOHNSON
Register Staff Writer

A month ago, Zero Packing Co. was owned by a man named Zero. The experience wasn't new to Zero, but the circumstances were different.

On Jan. 1, Zero Packing Co. was sold to a new owner, Larry O'Grady. During December, he assumed management from his uncle, Larry O'Grady.

The sale came at O'Grady's retirement after about 40 years of slaughtering and processing a wide variety of meat and poultry at the packing plant. During much of that time, Zero worked at the plant, but never with the surgery of the plant's meat.

Ownership questions were not an issue. Zero Packing Co. was a family business. Zero didn't expect any great changes in the business. He wants to continue the business service and expertise

within the discipline that a long list of customers have come to expect as matter of fact at Zero Packing Co.

"We're going to put a new spin on the outside," Zero said.

Other than that, it will be business as usual.

What all is presented at the plant?

"If it's subtle we'll do it," Zero said.

Edible as in cattle, hogs, poultry, lamb, rabbits and, oh yes, deer.

Zero Packing Co. is a small business. It has a small staff of about 100 employees. It has a small staff of about 100 employees. It has a small staff of about 100 employees.

Continued on page 8, column 1

Trip to Hawaii doubly special for Iola man

John Faust, Iola attorney and one of the strongest of local law firms, spent Christmas weekend in Hawaii as that he could watch Kanawha play basketball. Faust, who is now 60, was born in Iola and grew up in the town. He was a basketball player and a coach. He was a basketball player and a coach. He was a basketball player and a coach.

He was not disappointed. The Japanese weathered an early deficit and some lackluster play in the third period to post a victory. Faust, who coached Kanawha for 10 years, was a basketball player and a coach. He was a basketball player and a coach. He was a basketball player and a coach.

World War II officers uniforms. On Saturday night, Dec. 26, he donned the uniform and went to the game.

A victory was announced and after a bit of searching Faust found the officers club. He was disappointed. The club was closed. But, before he went on his way, a woman, perhaps a civilian employee, Faust said, came out of the club.

She waited and the woman said she'd be glad to show Faust the club, even poured him a drink when he mentioned he'd been in the club.

At Week's End
Bob Johnson

Steve Prohm, R-Elkhart, who chairs the Senate's new majority leader.

Gov. Jean Pendergast will outline his proposed budget for the next fiscal year during the second session of the State address, scheduled for 11 a.m. Tuesday.

Iraqis move missiles back

WASHINGTON (AP) — Iraq has moved its missiles back to their original positions, according to a senior Bush administration official.

"One to the weather and its impact on our ability to do our job," the official said. "The other is that there is movement by the missiles, but you can't tell whether they're just being hidden or they're being moved."

Continued on page 8, column 2

Local news
Society, sports, music, news, calendar of events and other news. Page 8.

Dear Abby
An informal advice column. Page 1.

Sports
Local sports news and reports. Page 4 and 5.

Weather: cloudy
Today and tonight, cloudy. A 60 percent chance of light snow. Low in the teens. Sunday, cloudy. Cold. High around 20. Monday, a chance for rain or freezing rain late in evening. Highs and lows in the 20s.

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APPENDIX G

Frequencies and Means From the Survey

Table 83 **Frequencies and means of dependent variables
measuring satisfaction with photo quality**

Overall photo quality

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	5	.7	.7
Disagree	40	5.3	6
Neutral	28	3.7	9.7
Agree	629	83.6	93.4
Strongly Agree	50	6.6	100
No Answer	0	0	0

Note. N=752, Mean=3.96, Standard Deviation= .55

News photos

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	5	.7	.7
Disagree	40	5.3	6
Neutral	28	3.7	9.7
Agree	629	83.6	93.4
Strongly Agree	50	6.6	100
No Answer	0	0	0

Note. N=752, Mean=3.90, Standard Deviation= .61

Feature photos

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	4	.5	.5
Disagree	29	3.9	4.4
Neutral	32	4.3	8.6
Agree	618	82.2	90.8
Strongly Agree	69	9.2	100
No Answer	0	0	0

Note. N=752, Mean=3.96, Standard Deviation= .58

Table 83 Continued

Sports photos

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	9	1.2	1.2
Disagree	34	4.5	5.7
Neutral	190	25.3	31
Agree	427	56.9	87.9
Strongly Agree	91	12.1	100
No Answer	1	.1	

Note. N=751, Mean=3.74, Standard Deviation= .77

Table 84 **Frequencies and means of dependent variables
measuring desire for larger photos, multiple photos, more
color photos, more feature photos, more news photos and
more sports photos**

Larger photos

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	53	7	7
Disagree	543	72.2	79.3
Neutral	74	9.8	89.1
Agree	73	9.7	98.8
Strongly Agree	9	1.2	100
No Answer	0	0	0

Note. N=752, Mean=2.26, Standard Deviation= .77

Multiple photos

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	46	6.1	6.1
Disagree	420	55.9	62
Neutral	83	11	73
Agree	185	24.6	97.6
Strongly Agree	18	2.4	100
No Answer	0	0	0

Note. N=752, Mean=2.61, Standard Deviation= .99

More color photos

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	76	10.1	10.1
Disagree	320	42.6	52.7
Neutral	92	12.2	64.9
Agree	220	29.3	94.1
Strongly Agree	44	5.9	100
No Answer	0	0	0

Note. N=752, Mean=2.78, Standard Deviation= 1.15

Table 84 Continued

More feature photos

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	28	3.7	3.7
Disagree	257	34.2	37.9
Neutral	102	13.6	51.5
Agree	327	43.5	95.1
Strongly Agree	37	4.9	100
No Answer	1	.1	

Note. N=751, Mean=3.11, Standard Deviation= 1.05

More news photos

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	28	3.7	3.7
Disagree	331	44	47.7
Neutral	87	11.6	59.3
Agree	273	36.3	95.6
Strongly Agree	33	4.4	100
No Answer	0	0	0

Note. N=752, Mean=2.94, Standard Deviation= 1.06

More sports photos

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	63	8.4	8.4
Disagree	355	47.3	55.7
Neutral	185	24.7	80.4
Agree	117	15.6	96
Strongly Agree	30	4	100
No Answer	0	0	0

Note. N=752, Mean=2.60, Standard Deviation= .98

**Table 85 Frequencies and means of dependent variables
measuring satisfaction and desire for other graphics**

Editorial drawings

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	7	.9	.9
Disagree	32	4.3	5.2
Neutral	124	16.5	21.7
Agree	559	74.3	96
Strongly Agree	30	4	100
No Answer	0	0	0

Note. N=752, Mean=3.76, Standard Deviation= .64

Maps

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	4	.5	.5
Disagree	19	2.5	3.1
Neutral	180	23.9	27
Agree	533	71	98
Strongly Agree	15	2	100
No Answer	0	0	0

Note. N=752, Mean=3.71, Standard Deviation= .57

Overall graphic quality

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	1	.1	.1
Disagree	10	1.4	1.5
Neutral	116	15.4	16.9
Agree	609	81.1	98
Strongly Agree	15	2.0	100
No Answer	0	0	0

Note. N=752, Mean=3.84, Standard Deviation= .46

Table 85 Continued

More color graphics

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	58	7.7	7.7
Disagree	350	46.8	54.5
Neutral	130	17.4	71.9
Agree	178	23.8	95.7
Strongly Agree	32	4.3	100
No Answer	4	.5	

Note. N=748, Mean=2.70, Standard Deviation=1.05

Table 86 **Frequencies and means of dependent variables
measuring satisfaction with writing and coverage**

News writing

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	1	.1	.1
Disagree	61	8.1	8.2
Neutral	28	3.7	12
Agree	607	80.7	92.7
Strongly Agree	55	7.3	100
No Answer	0	0	0

Note. N=752, Mean=3.87, Standard Deviation= .66

Feature writing

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	2	.3	.3
Disagree	33	4.4	4.7
Neutral	37	4.9	9.6
Agree	614	81.6	91.2
Strongly Agree	66	8.8	100
No Answer	0	0	0

Note. N=752, Mean=3.94, Standard Deviation= .58

Sports writing

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	8	1.1	1.1
Disagree	39	5.2	6.3
Neutral	286	38.2	44.5
Agree	357	47.7	92.2
Strongly Agree	58	7.8	100
No Answer	4	.5	

Note. N=748, Mean=3.56, Standard Deviation= .76

Table 86 Continued

News coverage

<u>Value Label</u>	<u>Value</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	6	.8	.8	
Disagree	97	12.9	13.7	
Neutral	30	4	17.7	
Agree	540	71.8	89.5	
Strongly Agree	79	10.5	100	
No Answer	0	0		

Note. N=752, Mean=3.78, Standard Deviation=.83

Sports coverage

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	14	1.9	1.9
Disagree	57	7.6	9.4
Neutral	238	31.6	41.1
Agree	370	49.2	90.3
Strongly Agree	73	9.7	100
No Answer	0	0	

Note. N=752, Mean=3.57, Standard Deviation=.84

**Table 87 Frequencies and means of dependent variables
measuring satisfaction with the appearance of the newspaper**

Interesting appearance

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	6	.8	.8
Disagree	38	5.1	5.9
Neutral	48	6.4	12.2
Agree	649	86.3	98.5
Strongly Agree	11	1.5	100
No Answer	0	0	0

Note. N=752, Mean=3.83, Standard Deviation= .57

Exciting

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	45	6	6
Disagree	290	38.6	44.5
Neutral	168	22.3	66.9
Agree	245	32.6	99.5
Strongly Agree	4	.5	100
No Answer	0	0	0

Note. N=752, Mean=2.83, Standard Deviation= .97

Uncluttered

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	8	1.1	1.1
Disagree	37	4.9	6.0
Neutral	29	3.9	9.8
Agree	659	87.6	97.5
Strongly Agree	19	2.5	100
No Answer	0	0	

Note. N=752, Mean=3.86, Standard Deviation= .58

Table 87 Continued

Colorful

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	72	9.6	9.6
Disagree	334	44.4	54
Neutral	130	17.3	71.3
Agree	214	28.5	99.7
Strongly Agree	2	.3	100
No Answer	0	0	

Note. N=752, Mean=2.65, Standard Deviation=1.00

Pleasant

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	1	.1	.1
Disagree	34	4.6	4.7
Neutral	53	7	11.7
Agree	657	87.4	99.1
Strongly Agree	57	.9	100
No Answer	0	0	

Note. N=752, Mean=3.84, Standard Deviation=.50

Fresh

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	4	.5	.5
Disagree	40	5.3	5.8
Neutral	69	9.2	15
Agree	630	83.8	98.8
Strongly Agree	9	1.2	100
No Answer	0	0	

Note. N=752, Mean=3.80, Standard Deviation=.57

Table 87 Continued

Modern

Value Label	Freq.	Percent	Cum Percent
Strongly Disagree	5	.7	.7
Disagree	52	6.9	7.6
Neutral	45	6	13.6
Agree	637	84.7	98.3
Strongly Agree	13	1.7	100
No Answer	0	0	

Note. N=752, Mean=3.80, Standard Deviation=.61

Professional

Value Label	Freq.	Percent	Cum Percent
Strongly Disagree	3	.4	.4
Disagree	30	4	4.4
Neutral	49	6.5	10.9
Agree	636	84.6	95.5
Strongly Agree	34	4.5	100
No Answer	0	0	

Note. N=752, Mean=3.89, Standard Deviation=.54

Appealing

Value Label	Freq.	Percent	Cum Percent
Strongly Disagree	2	.3	.3
Disagree	53	7	7.3
Neutral	85	11.3	18.6
Agree	602	80.1	98.7
Strongly Agree	10	1.3	100
No Answer	0	0	

Note. N=752, Mean=3.75, Standard Deviation=.61

Table 87 Continued

Strong			
Value Label	Freq.	Percent	Cum Percent
Strongly Disagree	6	.8	.8
Disagree	84	11.2	12
Neutral	173	23	35
Agree	479	63.7	98.7
Strongly Agree	10	1.3	100
No Answer	0	0	

Note. N=752, Mean=3.54, Standard Deviation=.74

Attractive			
Value Label	Freq.	Percent	Cum Percent
Strongly Disagree	5	.7	.7
Disagree	66	8.8	9.5
Neutral	56	7.4	16.9
Agree	613	81.5	98.4
Strongly Agree	12	1.6	100
No Answer	0	0	

Note. N=752, Mean=3.75, Standard Deviation=.66

Overall appearance			
Value Label	Freq.	Percent	Cum Percent
Strongly Disagree	2	.3	.3
Disagree	25	3.3	3.6
Neutral	14	1.9	5.5
Agree	684	9.1	96.5
Strongly Agree	26	3.5	100
No Answer	1	.1	

Note. N=751, Mean=3.94, Standard Deviation=.46

Table 88 **Frequencies and means of dependent variables
measuring satisfaction with the journalistic quality of the
newspaper**

Accurate

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	14	1.9	1.9
Disagree	131	17.5	19.4
Neutral	37	4.9	24.3
Agree	548	73.3	97.6
Strongly Agree	18	2.4	100
No Answer	4	.5	

Note. N=748, Mean=3.57, Standard Deviation= .87

Timely

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	5	.7	.7
Disagree	51	6.8	7.4
Neutral	27	3.6	11
Agree	649	86.3	97.3
Strongly Agree	20	2.7	100
No Answer	0	0	0

Note. N=752, Mean=3.84, Standard Deviation= .61

Honest

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	5	.7	.7
Disagree	51	6.7	7.4
Neutral	60	8	15.4
Agree	613	81.5	96.9
Strongly Agree	23	3.1	100
No Answer	0	0	0

Note. N=752, Mean=3.80, Standard Deviation= .63

Table 88 Continued

Objective

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	48	6.4	6.4
Disagree	173	23	29.4
Neutral	89	11.8	41.2
Agree	430	57.2	98.4
Strongly Agree	12	1.6	100
No Answer	0	0	0

Note. N=752, Mean=3.25, Standard Deviation= 1.03

Responsible

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	1	.1	.1
Disagree	55	7.3	7.4
Neutral	51	6.8	14.2
Agree	609	81	95.2
Strongly Agree	36	4.8	100
No Answer	0	0	0

Note. N=752, Mean=3.83, Standard Deviation= .63

Current

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	2	.3	.3
Disagree	28	3.7	4
Neutral	11	1.4	5.4
Agree	681	90.7	96.1
Strongly Agree	29	3.9	100
No Answer	1	.1	

Note. N=751, Mean=3.94, Standard Deviation= .47

Table 88 Continued

Trustworthy

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	4	.5	.5
Disagree	67	8.9	9.4
Neutral	67	8.9	18.3
Agree	587	78.3	96.6
Strongly Agree	25	3.4	100
No Answer	2	.3	

Note. N=749, Mean=3.75, Standard Deviation= .68

Fair

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	8	1.1	1.0
Disagree	114	15.2	16.2
Neutral	57	7.6	23.8
Agree	552	73.4	97.2
Strongly Agree	21	2.8	100
No Answer	0	0	0

Note. N=752, Mean=3.62, Standard Deviation= .81

Professional overall

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	1	.1	.1
Disagree	27	3.6	3.7
Neutral	49	6.5	10.2
Agree	636	84.6	94.8
Strongly Agree	39	5.2	100
No Answer	0	0	0

Note. N=752, Mean=3.91, Standard Deviation= .52

Table 88 Continued

Overall quality			
Value Label	Freq.	Percent	Cum Percent
Strongly Disagree	2	.3	.3
Disagree	18	2.3	2.6
Neutral	14	1.9	4.5
Agree	668	89.1	93.6
Strongly Agree	48	6.4	100
No Answer	2	.3	

Note. N=750, Mean=3.99, Standard Deviation= .45

**Table 89 Frequencies and means of dependent variables
measuring personal utility and enjoyment of the newspaper**

Useful

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	1	.1	.1
Disagree	15	2	2.1
Neutral	22	3	5.1
Agree	658	87.5	92.6
Strongly Agree	56	7.4	100
No Answer	0	0	

Note. N=752, Mean=4.00, Standard Deviation= .44

Thorough

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	11	1.5	1.5
Disagree	101	13.5	14.9
Neutral	56	7.5	22.4
Agree	548	73.1	95.5
Strongly Agree	34	4.5	100
No Answer	0	0	

Note. N=752, Mean=3.66, Standard Deviation= .82

Enjoyable

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	0	0	0
Disagree	33	4.4	4.4
Neutral	30	4	8.4
Agree	649	86.3	94.7
Strongly Agree	40	5.3	100
No Answer	0	0	

Note. N=752, Mean=3.93, Standard Deviation= .51

Table 89 Continued

Informative

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	0	0	0
Disagree	25	3.3	3.3
Neutral	16	2.1	5.4
Agree	657	87.4	92.8
Strongly Agree	54	7.2	100
No Answer	0	0	

Note. N=752, Mean=3.98, Standard Deviation= .48

Entertaining

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	5	.7	.7
Disagree	79	10.5	11.2
Neutral	62	8.2	19.4
Agree	561	74.6	94
Strongly Agree	45	6	100
No Answer	0	0	

Note. N=752, Mean=3.75, Standard Deviation= .75

Interesting to read

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	1	.1	.1
Disagree	37	5	5.1
Neutral	26	3.4	8.5
Agree	636	84.6	93.1
Strongly Agree	52	6.9	100
No Answer	0	0	

Note. N=752, Mean=3.93, Standard Deviation= .56

Table 90 **Frequencies and means of independent variables measuring agreement with editorial stance and liking the editor**

Editorial stance

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	33	4.4	4.4
Disagree	138	18.4	22.8
Neutral	120	15.9	38.7
Agree	442	58.9	97.6
Strongly Agree	18	2.4	100
No Answer	1	.1	

Note. N=751, Mean=3.37, Standard Deviation= .96

Editor

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Strongly Disagree	8	1.1	1.1
Disagree	46	6.1	7.2
Neutral	146	19.4	26.6
Agree	519	69	95.6
Strongly Agree	33	4.4	100
No Answer	0	0	

Note. N=752, Mean=3.70, Standard Deviation= .70

**Table 91 Frequencies and means of independent variables
measuring uses and personal involvement with the newspaper**

Days read

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
One	1	.1	.1
Two	4	.5	.6
Three	4	.6	1.2
Four	16	2.1	3.3
Five	23	3.1	6.4
Six	704	93.6	100
No Answer	0	0	

Note. N=752, Mean=5.88, Standard Deviation= .52

Daily newspaper minutes

Note. N=748, Mean=35.89, Standard Deviation= 26.10, Range=3-180 minutes

Know staff

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	410	54.6	54.6
Yes	341	45.4	100
No answer	0	0	

Note. N=751

Been subject

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	409	54.4	54.4
Yes	343	45.6	100
No answer	0	0	

Note. N=752

Table 91 Continued

Article positive or negative

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Negative	11	3.4	3.4
Positive	314	96.6	100
No answer	427	56.8	0

Note. N=325

Wrote letter

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	619	82.3	82.3
Yes	133	17.7	100
No answer	0	0	

Note. N=752

Discuss items

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	21	2.8	2.8
Yes	726	97.2	100
No answer	5	.7	

Note. N=747

Clip coupons

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	294	39.1	39.1
Yes	458	60.9	100
No answer	0	0	

Note. N=752

Table 91 Continued

Bought ad

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	291	38.7	38.7
Yes	461	61.3	100
No answer	0	0	

Note. N=752

Visited office

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	151	20.1	20.1
Yes	600	79.9	79.9
No answer	1	.1	

Note. N=751

**Table 92 Frequencies and means of independent variables
measuring use of other media available in the community**

Daily TV minutes

Note.

N=748, Mean=185.23, Standard Deviation= 128.76, Range=0-960 minutes

Cable TV

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	79	10.6	10.6
Yes	669	89.4	100
No answer	4	0	

N=748

Weekly magazine minutes

Note.

N=748, Mean=159.12, Standard Deviation= 214.80, Range=0-1,500 minutes

Wichita Eagle

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	385	51.2	51.2
Yes	367	48.8	100
No answer	0	0	

Note. N=752

Kansas City Star

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	439	58.4	58.4
Yes	313	41.6	100
No answer	0	0	

Note. N=752

Table 92 Continued

Topeka Capital-Journal

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	709	94.3	94.3
Yes	43	5.7	5.7
No answer	0	0	

Note. N=752

USA Today

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	626	83.2	83.2
Yes	126	16.8	100
No answer	0	0	

Note. N=752

Marketplace News

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	465	61.8	61.8
Yes	287	38.2	100
No answer	0	0	

Note. N=752

Erie Record

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	719	95.7	95.7
Yes	32	4.3	100
No answer	1	.1	

Note. N=751

Table 92 Continued

Competing paper

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	540	72	72
Yes	210	28	100
No answer	2	.3	

Note. N=750

Four County Shopper

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	299	39.8	39.8
Yes	452	60.2	100
No answer	1	.1	

Note. N=751

Other papers

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	610	81.4	81.4
Yes	139	18.6	100
No answer	3	.4	

Note. N=749

**Table 93 Frequencies and means of independent variables
measuring nativity, length of residence and home ownership**

Native

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	391	52	52
Yes	361	48	100
No answer	0	0	

Note. N=752

Years of residence

Note.

N=740, Mean=39.79 years, Standard Deviation= 22.17 years, Range=0-92 years

Home ownership

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
No	116	15.5	15.5
Yes	631	84.5	100
No answer	5	.7	

Note. N=747

**Table 94 Means of independent variables
 measuring monthly travel to communities in the study**

Monthly trips to neutral community

Note.

N=747, Mean=4.99 trips, Standard Deviation=7.72 trips, Range=0-60 trips

Monthly trips to competing community

Note.

N=751, Mean=3.74 trips, Standard Deviation=6.59 trips, Range=0-60 trips

**Table 95 Frequencies and means of independent variables
measuring demographics of respondents**

Age

Note.

N=742, Mean=59.37 years, Standard Deviation=18.15 years, Range=16-95 years

Income

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Less than \$10,000	107	15	15
\$10,001-\$20,000	170	23.9	38.9
\$20,001-\$30,000	170	23.9	62.8
\$30,001-\$40,000	125	17.5	80.3
\$40,001-\$50,000	71	10	90.3
More than \$50,000	69	9.7	100
No answer	40	5.3	

Note. N=712, Mean=3.13, Standard Deviation=1.51

Education

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Less than high school	131	17.6	17.6
High school	254	34	51.6
Some college	158	21.2	72.8
Two-year degree	76	10.2	83
Four-year degree	53	7.1	90.1
Some graduate work	28	3.7	93.8
Graduate degree	46	6.2	100
No answer	6	.8	

Note. N=746, Mean=2.91, Standard Deviation=1.66

Gender

<u>Value Label</u>	<u>Freq.</u>	<u>Percent</u>	<u>Cum Percent</u>
Female	507	67.4	67.4
Male	245	32.6	100
No answer	0	0	

Note. N=746

VITA

John Mark King, a native of Franklin, Tenn., was born on June 23, 1959. He attended Grassland Elementary School, Franklin Jr. High School and graduated from Franklin High School in 1976.

He enrolled in journalism courses at Tennessee State University in Nashville in 1981 and transferred to the University of Tennessee, Knoxville, where he earned the bachelor of science degree with honors in communications, with a major in broadcasting, in 1984. In 1991, King earned a master of science degree in communications, with a major in journalism from UTK. King completed the Ph. D. in communications, with a major in journalism, at UTK in August, 1995. He was a Bickel Scholar and graduate teaching associate at UTK while in graduate school.

King began his career in communications, at age 13, at *The Williamson Leader* newspaper in Franklin. He served as photo editor and chief staff photographer for *Nashville's Take One Magazine* from 1977-1980. From 1980-1981, he worked as public relations director for the Music City Song Festival and the Great American Photo Contest in Nashville.

While an undergraduate student, King worked as chief staff photographer for the United States Pavilion during the 1982 World's Fair and worked in internships for the Tennessee Valley Authority, WBIR-TV, WTVK-TV and as a volunteer for WSJK-TV, all in Knoxville.

After graduation from UTK in 1984, King continued his work in communications at WATE-TV in Knoxville as graphics producer,

photojournalist and feature reporter and as a reporter/photographer for the *Daily Herald* in Columbia, Tenn. King served as communications specialist, and video services director at the Tennessee School Boards Association from 1985-1987. He also served as editor of the *Tennessee School Boards Journal* and the *Tennessee School Boards Bulletin*. From 1987-1990, King served as community relations coordinator for Roane State Community College in Harriman and Oak Ridge, Tennessee. During this time, he also was a member of the Tennessee Higher Education Commission Printing Advisory Committee.

King served as assistant professor in the Department of Communication at Pittsburg State University in Pittsburg, Kan. from 1992-1995. He taught photojournalism and journalism courses and directed the photojournalism program at PSU. In 1995, King was named assistant professor in the Manship School of Mass Communication at Louisiana State University in Baton Rouge, La. where he teaches undergraduate and graduate courses in visual communication and electronic media.

The author is a member of Kappa Tau Alpha, Phi Kappa Phi, the Association for Education in Journalism and Mass Communication and the National Press Photographers Association and serves as teaching chair for the Visual Communication Division of AEJMC.