Quantifying Newspaper Quality: "I Know It When I See It"

Philip Meyer and Koang-Hyub Kim

The bottom-line benefits of reducing newspaper quality are immediate and visible. The long-term costs in reduced reader loyalty are slower to materialize. We are taking the first small steps toward making those costs more visible. We survey current editors to get their collective judgment on valid indicators of newspaper quality. Then we use factor analysis to reduce their fine-grained rankings to five operable indicators: ease of use, localism, editorial vigor, news quantity, and interpretation.

Philip Meyer is Knight Professor of Journalism, University of North Carolina at Chapel Hill.

Koang-Hyub Kim is a third-year PhD student at the University of North Carolina at Chapel Hill.

Delivered to the Newspaper Division, Association for Education in Journalism and Mass Communication, Kansas City, Mo., July 30, 2003

Inquiries to
Philip Meyer
CB 3365 Carroll Hall
University of North Carolina
Chapel Hill, NC 27599

Philip_meyer@unc.edu

919 962-4085

Introduction

The connection between journalism quality and business success has long been a concern of media scholars (Giles, 1987; Udell, 1978). For the newspaper industry, as it faces competition from disruptive new technologies, the issue has taken on new urgency. Profitability is not as certain as it used to be. Investors and their advisors tend to focus on short-term financial results, and this puts pressure on newspaper managers to cut back on resources in order to maintain steady earnings growth from year to year.

Jack Fuller (2002), head of the Tribune Company, identified the problem at a meeting at the Poynter Institute when he argued that, "those of us who put out newspapers are important … participants in the system of public governance. If we take that seriously, as we should, our jobs as leaders of newspaper enterprises is to find the sweet spot where we can fulfill both our fiduciary obligation to the shareholders and our social obligation to provide communities the kind of information they need in order for people to make their sovereign choices wisely."

The problem has also been called the profit controversy, the apparent conflict between managing high quality and making a profit (Udell, 1978). A number of studies argue that high quality is related to readership (Blankenburg, 1989; Cole, 1995; Lacy & Fico, 1991; Stone, Stone, & Trotter, 1981). The assumption of such studies is that readership is related to profitability. This is true most of the time, although some newspaper companies have begun to tailor their products to more specific audiences and increase profitability by reducing readership and circulation to customers less desired by advertisers.

The concept of the "sweet spot" suggests that the relationship between journalistic quality and business success is not linear. It probably follows a bell curve where quality is measured on the horizontal axis, profitability on the vertical. Increasing quality improves profitability up to the peak of the curve. Beyond that point, additional quality fails to bring enough new readers to add to the value of advertising or pricing power, and becomes net cost. The sweet spot is defined by two lines near the peak of the curve. The left boundary marks the point at which reducing quality will harm profits. The right boundary is where increasing quality shifts from net benefit to net cost.

From our own observation of the behavior of publicly-owned newspaper companies and their investors, we believe that many are being managed as though they were on the right or downhill side of the curve. In fact, we believe, they are clustered on the left, or uphill side, where degrading quality creates an imminent danger.

Providing evidence to support this intuitive observation requires many steps, of which this paper takes only one. The proof requires multiple measurements over a long period of time of both profitability and journalistic quality. Our contribution is to help explicate and operationalize the concept of quality.

We stand on the shoulders of Leo Bogart (Bogart, 1989). In addition to replicating and comparing some of the results of Bogart's 1977 study of editors, we try to reduce his many indicators to a manageable few.

Literature review

John Merrill (1968) addressed the concepts of newspaper quality when he ranked the world's greatest newspapers into "the pyramid of the elite papers": primary elite, secondary elite, tertiary elite, near elite, general newspapers, and mass papers. He developed the marks of the free elite paper for rating newspaper quality for determining a leading quality paper from several surveys (Merrill, 1968). Table 1 summarizes these quality indicators.

Table 1. Five point guideline from John Merrill (1968)

Newspaper quality indicators
1. Independence; financial stability; integrity; social concern; good writing and editing.
2. Strong opinion and interpretive emphasis; world consciousness; nonsensationalism in articles and makeup.
3. Emphasis on politics, international relations, economics, social welfare, cultural endeavors, education, and science.
4. Concern with getting, developing and keeping a large, intelligent, well educated, articulate and technically proficient staff.
5. Determination to serve and help expand a well-educated, intellectual readership at home and abroad; desire to appeal to, and influence, opinion leaders everywhere.

Note. From *The Elite Press (1968).*

However, criticisms were brought against his criteria of newspaper quality as being too tough to qualify newspapers as elites and being too subjective (Cole, 1995). In his book, Merrill (1968) argued that because newspapers are read

and judged by different people with different criteria, researchers should not shrink from evaluating newspaper quality with their subjective criteria. Later, Merrill with Lowenstein (Merrill & Lowenstein, 1971) also suggested common internal (newspaper-related) and external (audience-related) criteria for evaluating newspaper quality. These are more objective and operationalizable than the previous guidelines. However, they are still not practical nor easily employed in research studies. Table 2 shows these internal and external criteria.

Table 2. Internal and External Criteria for Evaluating Newspaper Quality

Internal (using newspaper itself)

1. Good typography and makeup techniques
2. Editing and proofreading care
3. Correct spelling, punctuation, and grammar
4. Picture reproduction and printing excellence
5. Balance in editorial/news material
6. Concern with staff quality
7. Concern with editorial policy
8. Concern with self-evaluation and outside criticism

External (audience-related)

1. Frequency of quotation and allusion
2. Frequency of library subscriptions
3. Reputation among journalists/historians
4. Reputation in politics, government, diplomacy
5. Reputation in academic circles

Note. From *Media, Messages and Men (1971).*

Ghiglione (1973) used journalist judges to determine the quality of newspapers in New England. In this project, judges were asked to write critiques about every daily newspaper in the region. These judgments were explained in detail for each paper. They were based on an examination of 109 dailies, answers to questionnaires, and personal interviews with the editors and publishers of these newspapers (Ghiglione, 1973). He summarized several newspaper quality indicators from these critiques. Based on the data from Ghiglione's study, a second analysis was conducted (Becker, Beam, & Russial, 1978). They found a correlation between newspaper performance and circulation. These studies used quantifiable newspaper indicators such as staff size and starting salary. However, most of them are external rather than internal measures.

As another attempt, George Gladney (1990) surveyed newspaper editors of all sizes in his study regarding organizational standards affecting newspaper quality. The organizational standards used in study were: integrity, staff enterprise, community leadership, editorial independence, staff professionalism, editorial courage, decency, influence, and impartiality (Gladney, 1990). Past studies provide evidence that generally editors share common values regardless of the size of their papers (Gladney, 1990). However, he found that small paper editors evaluate their newspapers somewhat differently than do large paper editors (Gladney, 1990). According to his findings, editors of larger papers value staff enterprise, staff professionalism, and comprehensive news coverage more than small paper editors do. Also, small paper editors place greater value on community leadership, strong local news

coverage, and the community press standards (Gladney, 1990). Standards in this study are divided into two categories: organizational and content-related. They also appeared difficult to measure quantitatively.

In another study (Stone et al., 1981), researchers used external indicators from the study of Merrill and Lowenstein: the image or reputation of the newspaper in the field. They asked judges to rank-order their state's superior and inferior newspapers (Stone et al., 1981). They found that newspaper quality is related to newspaper circulation (Stone et al., 1981). 25 percent of variance in the circulation is attributable to the newspaper quality. However, the quality indicators in this study, the image or reputation of the newspaper, are also very subjective criteria.

Unfortunately, these kinds of very interesting indicators do not lend themselves to a large scale analysis of newspaper quality (Bogart, 1989). Although these subjective quality criteria might be frequently used by editors or professors for assessing newspaper quality, they are hard to replicate (Bogart, 1989). Also, they might be inherently correlated with newspaper circulation considering that large newspapers get more positive evaluation. What we needed are more objective measurements of newspaper quality that can lead to consistent replication over time regardless of situations and judges. In this sense, Bogart's survey of editors is a landmark for measurable newspaper quality indicators. He prioritized newspaper quality indicators from the responses of editors and came up with the 23 newspaper quality indicators that can be objectively applied to any newspaper (Bogart, 1989). Table 3 summarizes these 23 newspaper quality indicators.

Table 3. Newspaper Quality Indicators

Rank	Quality Indicators
1	Ratio of staff-written copy to wire service and feature service copy
2	Total amount of non-advertising content
3	Ratio of news interpretations and backgrounders to spot news reports
4	Number of letters to the editor per issue
5	Diversity of political columnists
6	High "readability" score
7	Ratio of illustrations to text
8	Ratio of non-advertising content to advertising content
9	Ratio of news to features
10	Number of staff-bylined features
11	Ratio of sports news and features to total news content (TNC)
12	Presence of news summary
13	Presence of an "action line" column
14	Number of editorials per issue
15	Number of wire services carried
16	Ratio of cultural news, reviews, and features to TNC
17	Ratio of service journalism news to TNC
18	Ratio of business news, features to TNC
19	Number of political columnists
20	Number of comic strips
21	Length of average front page story
22	Presence of an astrology column
23	Ratio of state, national, world news to local news

Note. From *Press and Public (1989).*

In his study, Bogart surveyed 746 newspaper editors with a 56% response rate. In addition to subjective criteria they would use to evaluate newspaper quality, he asked them to rate the above attributes of newspaper quality (Bogart, 1989). He suggested seven subjective attributes when evaluating newspaper quality: accuracy, impartiality in reporting, investigative enterprise, specialized staff skill, individuality of character, civic-mindedness, and literary style (Bogart, 1989). He argued that all these subjective attributes are beyond discussion and editors commonly use them when they evaluate their own newspapers or others. The top three ranked subjective criteria are accuracy, impartiality in reporting, and investigative enterprise. However, it was argued that these subjective attributes could not be used in a large-scale study effectively and what we need are yardsticks that can be readily determined or actually measured (Bogart, 1989).

The most important characteristics of these indicators is that they can be easily and reliably measured using content analysis. For example, in their studies, Lacy and Fico analyzed newspaper content based on seven quality indicators from Bogart's study (Lacy & Fico, 1990, 1991). These seven indicators were: high ratio of staff-written copy to wire service and feature service copy; total amount of non-advertising copy; high ratio of news interpretations and backgrounders to spot news reports; high ratio of illustrations to text; number of wire services carried; length of average front page news story; and high ratio of non-advertising content to advertising (Lacy & Fico, 1990, 1991). In addition, they added an eighth measure to these seven indicators: the square inches of copy divided by the number of reporters listed with bylines (Lacy & Fico, 1990). The relationship of quality and circulation was determined by regressing quality indicators from 1984 newspapers against circulation figures from 1985 (Lacy & Fico, 1991). The researchers found that newspaper quality is related to a newspaper circulation size. About 22 percent of variance was explained by newspaper quality, and about 37 percent was explained by city population (Lacy & Fico, 1991).

In another study, Cole (1995) used these quality indicators to explore the relationship between quality and circulation. These quality indicators were measured in the *Dallas Morning News*. This study used Bogart's quality variables to regress against circulation figures from 1978-1991 (Cole, 1995). The results from this study indicated that newspaper quality at time 1 positively affects circulation at time 2 (Cole, 1995).

Considering these studies which successfully utilized quality indicators, Leo Bogart's work moved the definition of quality away from a panel of experts and toward an objective set of criteria that can be used repeatedly in different research studies. This successful use of newspaper quality indicators validates Bogart's notion that quality instruments can be relatively objective and reliable.

However, considering that a quarter century has passed and newspapers' competitive environment market has dramatically changed, it is worth revisiting Bogart's indicators with current editors' evaluations with a renewed effort to define and operationalize the concept of quality.

Research design

We chose 15 newspaper quality indicators to evaluate, including those ranked the highest in Bogart's survey. His population was members of the American Society of Newspaper Editors and the American Press Managing Editors. Ours consists solely of the former. ASNE membership is limited to "Directing editors of daily newspapers and people directly involved with developing content for daily newspapers." (ASNE 2003).

Inviting letters were sent to the members with the Web questionnaire address (still available at http://www.unc.edu/~hyub/newsquality.html). They were given the basic information regarding the purpose of the study and the identity of the researchers. To maximize the response rate, up to three follow-ups were made by e-mail.

Results

This newspaper quality survey was conducted from September 6 through November 18, 2002. The quality indicators are listed in Table 4 with their rankings in Bogart's study and rankings in this study as well. In addition to these quantitative indicators, an open-ended question was included to reflect editors own opinions regarding newspaper quality.

With the final 285 responses from the total number of 568 editors, the response rate was 50.2 percent. In terms of gender, there is a much higher number of male (75%) than female (24%) respondents. The largest proportion of respondents hold a college degree (49%), followed by some who have postgraduate degrees (26%) and who have completed some postgraduate work (19%). Regarding the age of respondents, the largest proportion of respondents is over 50 years of age (59%), followed by those between 36 and 50 years of age (40%). There is no respondent with the age under 36. Those respondents belong equally to privately (47%) and publicly (52%) owned newspaper companies.

Before the main analysis, univariate analysis was conducted to screen possible outliers and detect hazardous violations of statistical assumptions in the data. There were few outliers, and, considering the relatively big sample size, they are not likely to have significant effects on our main analyses. Distribution of these factors were slightly skewed but mainly bell-shaped.

Table 4. Newspaper Quality Factors

	Newspaper Quality Indicator	Rank	Rank (Bogart)
Q1	High ratio of staff-written copy to wire service and feature service copy	3	1
Q2	High ratio of non-advertising content to advertising	10	8
Q3	Total amount of non-advertising content	2	2
Q4	High ratio of news interpretations and backgrounders to spot news reports	9	3
Q5	Number of letters to the editor per issue	6	4
Q6	Diversity of political columnists	4	5
Q7	High "readability" on Flesch or similar scoring systems	7	6
Q8	High ratio of art to text	12	7
Q9	High ratio of news to feature	8	9
Q10	Number of staff-bylined stories	5	10
Q11	Number of "briefs" columns	11	
Q12	Number of editorials per issue	14	11
Q13	Vigor of editorials	1	
Q14	Number of wire services carried	13	12
Q15	Number of comic strips	15	13

First, to compare the results from this study to Bogart's study, a Spearman's nonparametric correlation method was used. The ranking from this study is highly correlated with that from Bogart's study with the correlation coefficient 0.77 ($p < 0.01$). These results show that evaluations of newspaper quality indicators have been stable over time among editors.

In addition to the ranking, we divided newspapers into 2, 3 and 4 groups according to their robustness indicating their profits. By using the independent t-test and ANOVA, evaluations of 15 variables from editors in winning or losing newspaper groups are compared. No significant difference was found among newspapers. These results are consistent with the Leo Bogart study and indicating that editors have very stable opinions regarding newspaper quality in spite of pressures from the business side.

Next, independent sample t-tests and analysis of variance with 15 indicators as dependent variables by the company type (private and public), company size (up to the circulation size of 100,000 and over 100,000), age, gender, and education level as independent variables were conducted. The evaluations of 15 indicators are not different by age and education levels of editors ($p > 0.05$). High ratio of non-advertising content to advertising, high ratio of news interpretations and backgrounders to spot news reports, total amount of non-advertising content, number of "briefs" columns, and number of wire services carried got different evaluations from editors from different company size ($p < 0.05$). Editors from larger newspapers gave higher evaluations to high ratio of non-advertising content to advertising, high ratio of news interpretations and backgrounders to spot news reports, total amount of non-advertising content, and number of wire services carried. Number of "briefs" columns was highly evaluated by editors from smaller newspapers. In terms of gender, the editors' evaluations of high ratio of non-advertising content to advertising ($p < 0.01$), high ratio of news interpretations and backgrounders to spot news reports ($p < 0.001$), high ratio of news to feature ($p < 0.05$) were

significantly different. Female editors gave higher evaluations to high ratio of non-advertising content to advertising and high ratio of news interpretations and backgrounders to spot news reports than male editors. Male editors gave higher evaluations to high ratio of news to feature than female editors. Regarding the company type, editors from publicly owned newspapers gave higher evaluation to high ratio of news interpretations and backgrounders to spot news reports than editors working in privately owned companies.

Finally, factor analysis was used to reduce the data to a few manageable concepts. To identify potential common factors underlying the editors' evaluations of newspaper quality indicators, principal axis factoring was performed. However, initially a principal components analysis, which analyzes variance, was conducted to examine the factorability of the correlation matrix and to get an indication of the optimal number of potential factors. The initial principal components analysis revealed that the correlation matrix was factorable with the Kaiser-Meyer-Olkin measure of sampling adequacy value 0.709. As the next step, we needed to decide how many factors to retain from the original 15 indicators. This is an arbitrary decision. However, there are some guidelines that are commonly used. Both the Kaiser criterion, which suggests retaining factors with eigenvalue greater than 1, and the scree plot, led us to believe that five factors are reasonable in this data set. Therefore, systematic examination of the five-factor solutions, with varimax rotation, was conducted with the extraction procedure of principal axis factoring. Factor loadings of 0.35 or above were considered as statistically meaningful in this analysis.

The factor loadings are relatively clear in this analysis. The 15 items are distributed into five factors. We interpret them as follows:

1. Ease of use (see Table 5 for details).
2. Localism (Table 6).
3. Editorial vigor (Table 7).
4. News quantity (Table 8).
5. Interpretation (Table 9).

Table 5. The first factor (Ease of use)

#	Quality Indicator	Factor Loading
Q15	Number of comic strips	.503
Q7	High "readability" on Flesch or similar scoring systems	.521
Q11	Number of "briefs" columns	.555
Q8	High ratio of art to text	.616

Table 6. The second factor (Localism)

#	Quality Indicator	Factor Loading
Q10	Number of staff by-lined stories	.502
Q1	High ratio of staff-written copy to wire service and feature service copy	.968

Table 7. The third factor (Editorial vigor)

#	Quality Indicator	Factor Loading
Q13	Vigor of editorials	.403
Q12	Number of editorials per issue	.641
Q5	Numbers of letters to the editor per issue	.663

Table 8. The fourth factor (Quantity of news)

#	Quality Indicator	Factor Loading
Q9	High ratio of news to feature	.366
Q2	High ratio of non-advertising content to advertising	.405
Q3	Total amount of non-advertising content	.410
Q14	Number of wire services carried	.538

Table 9. The fifth factor (Interpretation)

#	Quality Indicator	Factor Loading
Q6	Diversity of political columnists	.565
Q4	High ratio of news interpretations and backgrounders to spot news reports	.601

Even though many editors criticized these quantifiable quality indicators as being irrelevant, their evaluations lead to five intuitively satisfying dimensions. From the results, we conclude that measuring the dimensions ease of use, localism, editorial vigor, news quantity, and interpretation can start us on the road to a measurement system that could eventually lead to defining and locating the sweet spot.

There is more, of course. Responses to our open-ended questions show that editors still value such traditionally appreciated quality indicators as accuracy of reporting, investigative reporting, staff skills, and civic mindedness.

Quality journalism, in the minds of some, is more cost than gain. We think that perception is based, in most cases, on an erroneous perception about the costs of lowering quality. Bottom-line benefits are immediate, but the cost in diminished reader loyalty and reduced cohort replacement are slower to materialize. The industry urgently needs to find the resources to help newspaper managers position their products more precisely along the profit-service axis. In the absence of such accurate positioning, both their profitability and their social responsibility may be at risk.

The next step in attacking that problem is to validate these measures of quality by linking them to financial performance. We share our results now in the hope that these five indicators can be of use to other researchers, particularly those in the still resource-rich newspaper industry, who are concerned with this issue.

References

ASNE, FAQ, retrieved at **www.asne.org** on March 31, 2003.

Becker, L. B., Beam, R., & Russial, J. (1978). Correlates of Daily Newspaper Performance in New England. *Journalism Quarterly, 55*(1), 100-108.

Blankenburg, W. B. (1989). Newspaper Scale and Newspaper Expenditures. *Newspaper Research Journal, 10*(4), 97-103.

Bogart, L. (1989). *Press and Public: Who Reads What, When, Where, and Why in American Newspapers* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum and Associates, Inc.

Cole, K. V. (1995). *Newspaper Quality and Circulation: A Case Study*. The University of Missouri, Columbia.

Giles, R. (1987). *Newsroom Management: A Guide to Theory and Practice*. Indianapolis, Ind: R. J. Berg & Co.

Gladney, G. A. (1990). Newspaper Excellence: How Editors of Small and Large Papers Judge Quality. *Newspaper Research Journal, 11*(2), 58-71.

Lacy, S., & Fico, F. (1990). Newspaper Quality and Ownership: Rating the Groups. *Newspaper Research Journal, 11*(2), 42-56.

Lacy, S., & Fico, F. (1991). The Link Between Newspaper Content Quality and Circulation. *Newspaper Research Journal, 12*(2), 46-57.

Merrill, J. C. (1968). *The Elite Press: Great Newspapers of the World*. New York: Pitman Publishing Corp.

Merrill, J. C., & Lowenstein, R. L. (1971). *Media, Messages and Men: New perspectives in Communications*. New York: David Mckay & Company, Inc.

Stone, G. C., Stone, D. B., & Trotter, E. P. (1981). Newspaper Quality's Relation to Circulation. *Newspaper Research Journal, 2*(3), 16-24.

Udell, J. (1978). *The Economics of the American Newspaper*. New York: Hastings House.