DOCUMENT RESUME

ED 363 901 CS 508 382

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TITLE The Four-Stage Evolution of Content Analysis Methodology: An Annotated Bibliography.
PUB DATE Oct 93
NOTE 23p.; Paper presented at the Annual Meeting of the American Journalism Historians Association (Salt Lake City, UT, October 6-9, 1993).
PUB TYPE Speeches/Conference Papers (150) -- Reference Materials - Bibliographies (131) -- Historical Materials (060)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Annotated Bibliographies; *Content Analysis; Higher Education; Journalism History; *Media Research; *Research Methodology
IDENTIFIERS *Journalism Research

ABSTRACT

Noting that the technique of content analysis has become a useful tool for mass communication researchers, this annotated bibliography explains how the field evolved. The annotated bibliography's introduction suggests that: first stage issues (from the 1890s to the mid-1930s) involved efforts by journalists and educators to develop systematic measurement techniques and objective operational content category definitions; when researchers began to reach an embryonic consensus by the mid-1930s, a second stage in the evolution of content analysis had begun; and a third stage began in the late 1940s when B. Berelson and P. F. Lazarsfeld developed the first integrated picture of content analysis. The bibliography includes annotations (listed in chronological order) of 50 books and journal articles on content analysis published between 1893 and 1978. Eleven notes are included. (RS)

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Abstract

The Four-Stage Evolution of Content Analysis Methodology: An Annotated Bibliography

By

Maury M. Breecher, M.P.H., Olan Farnall, Joe Bob Hester, Edward Johnson, Bong-Hyun Kim, and William Self

(All are doctoral candidates at the University of Alabama)

A Tool Useful to Mass Communication Researchers

The technique of content analysis has become a useful tool for mass communication researchers. Berelson's classic definition of content analysis was not articulated until 1952, but the technique was first used sixty years earlier. Therefore it is important to explain how the field evolved into its modern form. This is accomplished via an annotated bibliography.

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The Four-Stage Evolution of Content Analysis Methodology: An Annotated Bibliography

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Maury M. Breecher, M.P.H.

With Olan Farnall, Joe Bob Hester, Edward Johnson, Bong-Hyun Kim, and William Self

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Content analysis is a research technique for the objective, systematic, and quantitative description of the manifest content of communication [1]

Introduction: A Tool Useful to Mass Communication Researchers

The technique of content analysis has become a useful tool for mass communication researchers. Berelson's classic definition of content analysis was not articulated until 1952, but the technique was first used sixty years earlier. Therefore it is important to explain how the field evolved into its modern form.

That evolution can be traced through several stages. *First stage-issues* (from 1890s to the mid-1930s) involved efforts by journalists and educators to develop systematic measurement techniques and objective operational content category definitions. Researchers continued to struggle with these issues, but when they began to reach an embryonic consensus by the mid-1930s a *second stage* in the evolution of content analysis can be said to have begun. In 1934 J. L. Woodward published a trailblazing article, "Quantitative Newspaper Analysis as a Technique of Opinion Research." His work was described by Krippendorff as "the first serious

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[1] This work and the others that will soon be mentioned are all listed by year in the bibliography which is the heart of this work. To aid reviewers, text references that fall outside of the 1977 cutoff or which do not fit in the content analysis bibliography for this article are footnoted.

consideration of the methodological problems of content analysis."[2] A *third stage* began in the late 1940's when Berelson and Lazarsfeld developed what has been described as "the first integrated picture of content analysis" (1948). This stage also saw the beginnings of computerized content analysis.

We are in the *fourth stage* of the evolution of content analysis now and it is possible to look and understand the problems and issues that earlier researchers encountered. Historically practitioners of content analysis have struggled with the problem of obtaining and statistically measuring intercoder reliability--the ability of two or more observers to judge the same phenomenon in the same way. Over the years, researchers have learned that they have to carefully define content category boundaries and train their coders to recognize those boundaries. Second-stage researchers have struggled, and their third and fourth-stage heirs are still struggling with, appropriate ways to measure intercoder reliability statistically.

Still, progress has been made. In 1952, second-stage researcher Guido Stempel wrote a excellent, clarifying article on "Sample Size for Classifying Subject Matter in Dailies" and followed up three years later with a classic article, "Increasing Reliability in Content Analysis." Measures of reliability agreement have developed from simple to advanced and to even more complex formulas. For example, Scott's Pi was introduced in 1955 and proved more effective than simple statistical methods which didn't consider the occurrence of intercoder agreement by chance. Robinson, in 1957, went on to describe the inadequacy of commonly used ad hoc measures of agreement. Cohen introduced the term kappa as a co-efficient of agreement for nominal scales in 1960. Krippendorff examined "Multivariate Agreement for Nominal Data" in 1971. Yet, although dozens of other articles have been written over the years, there is still no accepted standard for evaluating the reliability of coded data. The advanced and complex methods are not always the best measures of reliability agreement. The appropriate method for

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[2] Krippendorff, K. (1981). *Content analysis: An introduction to its methodology.* Beverly Hills and London: Sage Publications. 15.

reliability agreement depends on the nature of the research and coding context, such as coding scale, the number of coders and coding categories, and sample size.

Naturally, early content analysis was limited to the print media, but the technique was soon found to be useful in analyzing the content of both radio and television. Albig, a second-stage researcher, in 1938 did a classic study on "The Content of Radio Programs--1925-1935. Yet it remained for third-stage researchers to apply content analysis rigorously to television programming, and television advertising. Guback, for instance, in 1962 did a seminal pilot study comparing time devoted to public issue programs by educational and commercial radio and television stations.

In the 1970s, content analysis became a favorite tool of many third-stage researchers who focused on TV news broadcasts to investigate charges of bias. Pride and Clark in 1973 studied "Race Relations in Television News" and Everts and Stempel studied the coverage of the 1972 election campaign by television, news magazines, and major newspapers. Dominick, Wurtzel, and Lometti compared "Happy Talk/Eyewitness News" programs to traditional formats.

While most communication researchers accept content analysis as a valuable tool, historians have divided into two camps regarding the usefulness of content analysis. Historians who scorn modern content analysis intuitively feel it is a part of the quantification movement that threatens to convert history to a social science rather than a liberal art. Carl Bridenbaugh in his 1962 "Great Mutation" presidential address to the American Historical Association warned historians not to "worship at the shrine of the Bitch-goddess, QUANTIFICATION" (January, 1963 *American Historical Review*, 68, 325-326). Historians James D. Startt and W. David Sloan quote C. Vann Woodward as saying that this school of historians feel that the quantification movement challenges their authority and their humanistic values and ridicules their canons of criticism. Historians in this camp find little comfort having "their cherished classics derided as soft, impressionistic and unscientific."[5] "Quantifiers rely on material that has

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[5] Beringer, R.E. (1978) *Historical analysis: Contemporary approaches to Clio's craft.* New York: John Wiley & Sons.

the capacity to be measured," points out Startt and Sloan.[6] They then quote historian Arthur Schlesinger Jr.'s often repeated argument that "almost all the important questions [in history] are important precisely because they are *not* susceptible to quantitative answers" (December, 1962, *The American Sociological Review*, 27, 770).

Even those historians who see the value of content analysis caution that it offers only one dimension of the picture necessary for historical study. The book *Dimensions of Quantitative Research in History* (1977) states: "What is attempted in quantitative research, as in other research, is not full knowledge of reality, but an increasingly closer approximation to it....These techniques, even if they cannot produce the ultimate, can at least bring us increasingly closer to a position that we can urge with a certain amount of assurance."[8] L. D. Stephens, in his book *Probing the Past*, writes: "Quantification is useful to historical research only insofar as it helps us to understand human beings in the past."[9] The authors tend to agree with Dame Cicely Veronica Wedgwood (cited by C. G. Gustavson), who wrote, "The mansion of history has many rooms enough to accommodate all of us."[10]

Let us now examine the evolution of content analysis in the following annotated bibliography. Each stage has an overview summarizing key principles and events.

First Stage: 1890s to Mid-1930s

The first stage in the intellectual development of content analysis was led by journalists. Their simplistic idea of scientific objectivity was simply to back up subjective conclusions with what was then called quantitative newspaper analysis--the simple measurement of content in specific subject matter categories by counting column inches of text. From our perspective of

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6 Startt, J.D. and Sloan, W.D. (1989). *Historical methods in mass communication. Hillsdale, NJ: Lawrence Erlbaum Associates, 59-61.*

8 Aydelotte, W. O., Bogue, A. G., and Fogel, R. W. [Eds] (1972). *The dimensions of quantitative research in history: Princeton, NJ: Princeton University Press.*

9 Stephens, L.D. (1974). *Probing the past: A guide to the study and teaching of history.* Boston: Allyn and Bacon, Inc. 109.

10 Gustavson, C. G. (1976). *The mansion of history.* New York: McGraw Hill Book Company.7. Gustavson also reminds researchers that "those things that count the best do not necessarily count the most in history" (p. 340).

"20-20 hindsight," these early authors often had problems in operationalizing definitions for selected categories. Here are noteworthy selections from those early years.

Speed, G. J. (1893). Do newspapers now give the news? *Forum*, 15, 705-711.

Author complains that gossip, sports, and news of scandal were crowding out religious, scientific, and literary articles in New York newspapers between 1881 and 1893. Method of measurement was a simple measurement of the amount of space in column inches devoted to each type of story. This report is "Probably the first" research paper that can be called Content Analysis, according to Krippendorff. A chart from the Speed study, entitled "Columns of Reading Matter in New York Newspapers," April 17, 1881 and April 16, 1893 (p. 707).

Wilcox, D. F. (1900). The American newspaper: A study in social psychology. *Annals of the American Academy of Political and Social Science*, 16, 56-92.

The author studied 136 U.S. and 11 foreign newspapers, most for the same day in June, of 1898, but "quite a number bearing a September, 1898 date and a few issues from other months" (p. 58). Wilcox purported to have documented the fact that the "profit motive" was the cause of "cheap yellow journalism." Data from the Wilcox article are cited in Fenton, 1910, p. 352.

Matthews, B. C. (1910). A study of a New York daily. *Independent*, 68, 82-86.

Author claims that "demoralizing," "unwholesome," and "trivial" matters were forcing out "worthwhile" news items. Method of analysis: Measurement of amount of space in column inches for 177 category items. The headings were then grouped under the catch-all headings just specified. The amount of items coded under each category were as follows: "Demoralizing," with 2,289 items or 22.8 percent of the total studied; "Unwholesome," with 1,684 items or 16.8 percent; "trivial," with 2,124 items, or 21.2 percent and "worthwhile" with 3,932 items, or 39.2 percent. "Considerable difficulty was met in classifying many items," wrote Mathews. "Some

headings were unclassifiable. For instance, one person might put an item under recreation, while another sports; one might place another item under financial and while under might put it under monetary" (p. 84).

Fenton, F. (1910). The influence of newspaper presentations on the growth of crime and other anti-social activity. *American Journal of Sociology,* 16, 342-371, 538-564.

Fenton believed that by citing others she had partially documented "the influence of newspaper presentations on the growth of crime and other antisocial activity." Contains data from Mathews, Speed and Wilcox as well as other researchers of her time. Fenton admits that none of the studies provided "direct evidence of the effect of the newspaper" (p. 359). Her article might be classed as an early meta-analysis of other content analysis studies. It's weakness is she failed to establish causality.

Tenney, A. A. (1912). The scientific analysis of the press. *Independent,* 73, 895-898.

The author did a content analysis of 17 New York newspapers (five written in English, three in German, five in Italian and four in Yiddish) by counting column inches of space devoted to "each of various classes of articles" ranging from politics to culture" (p. 896). Tenney called for "a continuous analysis of a large number of journals" to predict the "social weather" with an accuracy "comparable in accuracy to the statistics of the U.S. Weather Bureau" (p. 898). The "practical applications (of a large scale continuous survey of press content) were not feasible," dryly states Krippendorff (p. 14).

Lippman, W. and Merz, C. (August 4, 1920). A test of the news. *New Republic,* 23, special 42-page supplement.

Walter Lippman and Carl Merz collaborated on a "content analysis" of the three years of coverage by the *New York Times* of the Russian Revolution. The authors concluded that "standards of journalism are not high enough," that the *Times* did not pay enough attention to its

foreign correspondents, and that the separation of news and editorial content broke down on this issue.

Luckiesh, M. (1923). *Light and color in advertising and merchandising.* New York: D. Van Nostrand Co.

This 70-year-old account is one of the earliest content analysis of visual communication in marketing. The author analyzes the use of black-and-white, two-color, and four-color ads in leading women's magazines, weeklies, and "quality monthlies" (Those most likely to use four-color) and trade publications (p. 88). Also includes response rates to different color stationary used in direct marketing (p. 80). Pink letters in blue envelopes got the best response.

Willey, M. M. (1926). *The county newspaper: A study of socialization and newspaper content.* Chapel Hill: University of North Carolina Press.

The author of this classic described the beginnings of Connecticut county weeklies, reported their circulation figures, and the content analysis part analyzed the changes that occurred in their news coverage, and speculated on their social roles in contrast to large city dailies.

Kingsbury, S. M., Hart, H., & Clark, A. (June, 1933, September, 1933, and December, 1933). Measuring the ethics of American newspapers. *Journalism Quarterly* 10, (2) Part 1, Spectrum analysis of newspaper sensationalization, 93-108, Part 2: News interest spectra of important papers, 10 (3) 181-201 and Part 3, Newspaper bias on congressional controversies. 10: (4) 323-342.

The three articles outlined the methods used to measure the social values of the American newspaper and ranked 40 newspapers on sensationalism when it came to coverage of foreign problems, stories involving money, and stories involving sex or a combination of money and sex. The *New York Daily Mirror*, a tabloid, "was found to represent the most extreme sensationalism

and the *Christian Science Monitor* most internationalized socialization" or what modern-day researchers would call objectivity (*JQ*, p. 181). Series continued in 1934.

Kingsbury, S. M., Hart, H., and Clark, A. (June, 1934, September, 1934, December, 1934). Measuring the ethics of American newspapers Part II. *JQ*, 11. Subtitles of the three articles: The headline index of newspapers, 179-199; An index of pernicious medical advertising, 276-300; and Comparative analysis of newspaper ethical codes, 361-381.

The major result of the Kingsbury, Hart, and Clark studies was the discovery of a need for more consistent coding. See Murphy comment below.

Murphy, L. W. (December, 1934). Notes on the Kingsbury-Hart study. *JQ*, 11.

The author questions the validity of the definitions and categorization of the Kingsbury et al. study. "This research does not measure...ethics....It amasses much data; it gives some notion of the proportion of space devoted to subjects....But its chief purpose is lost in a maze of work and in faulty assumptions and presumptions. The index of newspaper sensationalism does not establish a single point with reference to the good or bad of anything; the index of newspaper bias does not measure the bias of anything; the index of pernicious medical advertising does not measure the perniciousness of anything."

The Second Stage: 1934 to the Late 1940's

Researchers during this period clearly understood the need for clear, exclusive content categories. They struggled to develop them and apply content analysis to not only print, but also radio.

Woodward J. L. (1934). Quantitative newspaper analysis as a technique of opinion research. ***Social Forces*****, 12, 526-537.**

This sudy was described by Krippendorff as "the first serious consideration of methodological problems of content analysis" (p. 15). Woodward discusses three methodological problems: (1) "The securing of meaningful and at the same time stable, categories of classification; (2) the definition of the unit of enumeration; and (3) the development of a technique for sampling." The Kingsbury-Hart study could have benefited from these considerations.

Institute of Propaganda Analysis, Inc. (1937). How to detect propaganda. ***Propaganda Analysis*** **1, 5-8.**

Study says that propagandists reveal themselves by using "glittering generalities," "plain folks" identifications, "name calling" and other tricks such as "card stacking" and "band wagon" devices.

Albig, W. (1938). The content of radio programs--1925-1935. ***Social Forces*** **16, 338-349.**

This article described a way of measuring radio program content by examining what daily newspapers said the radio stations were going to play. This was a pioneer study, the first of its type for radio. The daily newspaper listings for nine American and one English broadcasting station were studied for the ten year period of 1925-1935. The unit of measurement was the number of minutes devoted to a type of program. Twenty-six different categories of program content were chosen by examining the program listings. These techniques were later adopted for studies of movies and television.

Allport, G.W. and Faden J. M. (1940). The psychology of newspapers: Five tentative laws. ***Public Opinion Quarterly,*** **4, 687-703.**

Research that attempted to explain the changes that information undergoes as it travels from point of origination to finally appearing on a newspaper page. The author and a student did a "complete sample of weekday and Sunday editions of English-language newspapers" published in Boston. The newspapers were named. Their total weekday circulation was 1.6 million. The authors studied newspapers from September 1 to November 9, 1939 and studied the topic of "neutrality legislation." They found that the issue (1) "Becomes skeletonized" or in other words simplified; (2) Newspaper influence is "well-structured;" (3) Emotional restraint is greater among editors than among readers; (4) Intensity of interest varies in time (public opinion, according to polls, changes);. (5) "Public opinion fatigues and presses toward closure." Interesting table, "Column Inches Devoted to Neutrality Legislation in Eight Boston Papers." Categories include news, editorials, columnists and letters by date.

Lasswell H. D. (1941). The world attention survey. *Public Opinion Quarterly*, 5, (3) 456-452.

Classic study of "propaganda content" looked at the amount of time and space, and the number of references devoted to the United States by foreign newspapers. "We can gain insight into the lives of others when we know what they read, see and hear," Dr. Lasswell wrote. He found from an analysis of newspapers in Great Britain and in Germany that both countries paid comparatively little attention to the United States during the opening months of World War II.

Allport, G.W. (1942). *The use of personal documents in psychological science.* New York: Social Science Research Council.

Author argues that personal documents can be used to discover motivational, psychological or personality characteristics in those who wrote them, but does little to explain how to actually do it. He defines personal documents as "any self-revealing record that intentionally or unintentionally yields information regarding the structure, dynamics, and

functioning of the author's mental life"(p. 12). He limits his domain to first-person narratives. He explains that letters especially reveal the "tie between two personalities" (p. 109).

Kaplan, A. (1943). Content analysis and the theory of signs. *Philosophy of Science.* 10 (4) 230-255.

Kaplan addressed the use of content analysis to evaluate propaganda, with the use of symbols as one category. He defined content analysis as "the statistical semantics of political discourse." He considered content analysis a sub-discipline of semiotics. His wartime examples were more anecdotal than systematic.

Yule, G. (1944). The statistical study of literary vocabulary. Cambridge, England: Cambridge University.

Groundbreaking study demonstrated the usefulness of quantification in Content Analysis. Involved counting words in documents of questionable authenticy (Thomas Aquinas' *The Imitation of Christ)* and comparing the frequencies of these words with other works by Aquinas.

White, R. K. (1947). *Black boy:* A value analysis. *Journal of Abnormal and Social Psychology*, 42, 440-461.

This was a content analysis of Richard Wright's autobiography, *Black Boy*. Analyzed were 7,166 "emphasis units" found in the book. Eight percent of these units represented openly admitted hostile or aggressive feelings. Eighty-nine percent of the descriptions of other persons were of disapproval. "The chief hate-objects are the Southern whites" (p. 460).

Third Stage: Late 1940s to 1977

Progress had been made in developing workable methodologies, yet clearly "codification" of content analysis principles and dissimulation of those principles had yet to be accomplished.

Kracauer, R.S. (1947). The challenge of quantitative content analysis. *Public Opinion Quarterly*, 16, 631-642.

The author warns that "one-sided reliance on quantitative content analysis may lead to a neglect of qualitative explorations, thus reducing the accuracy of analysis." He concludes by calling for "a codification of the main techniques used in qualitative analysis." His call that was to be answered over the years by many researchers including Berelson and Lazarsfeld (1948); Stempel (1952 and 1955); Berelson (1952) and Kassarjian (June, 1977).

Berelson, B. and Lazarsfeld, P. F. (1948). *The analysis of communication content.* Chicago and New York: University of Chicago and Columbia University.

Definitive work, "the first integrated picture of content analysis," according to Krippendorff (p. 18).

Davis, F. (1951), Crime news in Colorado newspapers. *American Journal of Sociology* 57, 324-33-.

Davis used column inch measures of crime news from four newspapers to determine if he actual crime rate and the amount of crime news that was reported correlated. This study added support to the hypothesis that public opinion about crime trends reflects the amount of crime news they read rather than actual crime rates.

Stempel III, G. H. (Summer, 1952). Sample size for classifying subject matter in dailies. *Journalism Quarterly*, 29, 333-334.

The author discusses the question, "what is an adequate sample size?" Stempel also conducted a content analysis experiment that showed that "only slight differences" occur "among samples of sizes larger than 12....We do not intend to draw sweeping conclusions from this one experiment, but we would at least like to suggest the possibility that increasing sample size may

be a poor investment of the researchers time." Good chart entitled "Sample averages and their standard errors."

Berelson, B. (1952) *Content analysis in communications research,* Glencoe, IL: The Free Press.

Contains most cited definition, "Content analysis is a research technique for the objective, systematic, and quantitative description of the manifest content of communication" (p. 18). Berelson emphasized that content analysis could be applied to private communications such as conversation or the psychoanalytic interview "just as it can be applied to public or 'mass' communications like newspapers and radio programs."

Smythe, D. W. (1954) Some observations on communications theory. *Audio-Visual Communications Review* 2 (1), 248-260.

The author called the reliance on counting qualitative data an "immaturity of science" in which objectivity is confused with quantification."

Stempel III, G. H. (Fall, 1955). Increasing reliability in content analysis. *Journalism Quarterly,* 32, 449-455.

Author educates readers on how to reduce reliability errors. Explains test/re-test method, the equivalent forms method, and the split-halves method as well as theme analysis.

Scott, W. A. (Fall, 1955). Reliability of content analysis: The case of nominal scale coding. *Public Opinion Quarterly* 19, 321-325.

Coders may have their results agree by chance. (This is similar to a student who guess at their answers on true or false tests and who still get about half of their answers correct. In this article Scott describes a formula that eliminates these coincidental agreements.

Robinson, W.S. (1957). The statistical measurement of agreement. *American Sociological Review*. 22. 17-25.

Paper discuses appropriate techniques for the statistical measurement of the agreement. The study describes the inadequacy of common ad hoc measures of agreement such as the percentage of judgments and the Pearsonian correlation between ratings. The author illustrates a distinction between intraclass correlation and Pearsonian correlation in different research situations and proposes a logically defensible coefficient of assessing agreement.

Cohen, J. (1960) A co-efficient of agreement for nominal scales. *Educational And Psychological Measurement*. 20. (1) 37-46.

Kappa, a co-efficient of agreement for nominal scales, is presented. Kappa is interpreted as the "proportion of joint judgments in which there is agreement after chance agreement is excluded." The author also proposes an estimate of the confidence interval for assessing the statistical significance of estimated levels of kappa compared to the null hypothesis of "no agreement other than by chance between judges." Finally the author explains how to figure the standard error of kappa and presents techniques for estimation and hypothesis testing.

Barcus, A.M (1961). A content analysis of trends in Sunday comics, 1900-1959. *Journalism Quarterly*. 38 (2) 171-180.

The author analyzed comic strips from three Boston newspapers dating back to 1897. Title, author, themes, and characters were all categorized. During this period, domestic situations were most commonly pictured with crime and loves scenes gaining increased exposure as time passed. Adults were depicted most often.

Guback, T.H. (1962). Public issues programs on radio and television, 1961. *Journalism Quarterly*, 39 (2), 373-376.

This seminal pilot study compared time devoted to public issue programs for educational and commercial radio and television stations. A major result of this study was the discovery of a need for more consistent coding. The authors sampled broadcasts of 17 television and 36t radio stations. Not surprisingly, they found that educational radio and television devoted more time to public issues.

Wilhoit, G.C. and Sherrill, K.S., (1968) "Wire service visibility of U.S. Senators." *Journalism Quearterly,* 45: 42-48.

Which U.S. Senators get their names mentioned most often in the news was one of the research questions in this study. The authors created an inventive computer program which, when connected to the Associated Press's main wire, searched for abbreviations of the term senator when used with a name. The program was able to sort through a huge amount of news and isolate the data of interest--senators from larger states got more mentions in the press.

Gerbner, G (1969). The television world of violence. In D. Lange, R. Baker, & S. Ball (Eds.) *Mass media and violence.* Washington, D.C.: U.S. Government Printing Office, 311-340.

Gerbner reports that programming containing violence is the main course served on TV. Although "crime-western-action-adventure style programs" lead in violence, there was a substantial amount of violence found in comedies and cartoon shows as well. The results lead to serious concerns about the effects of television viewing.

Gerbner, G. (1969). Toward "cultural indicators ": The analysis of mass mediated public message systems. In G. Gerbner et al. (Eds.) *The analysis of communication content.* (pp. 123-132). New York: John Wiley. Also in *AV Communication Review*. 17: (2), 137-138.

Gerbner identified "cultural indicators" appearing on one week of fictional TV programming a year for ten years. His cultural indicators are used to trace trends, see how various groups such as women, children, and the aged are portrayed on television and to establish violence profiles for various television networks. He used the cultural indicator data from his studies as the data-based foundation for his theory of cultivation analysis, a theory proposing subtle and complex effects of TV on environment. "Television helps define what it means, for example to be an adolescent female member of a given social class."

Shaw, D. L. (Winter, 1969). Surveillance vs. constraint: Press coverage of a social issue. *Journalism Quarterly*, 46, 707-712.

A case study of 18 daily newspapers testing opposing hypotheses about press coverage of a major social issue--news about the population crisis and family planning. The opposing hypotheses were that newspapers in cities with a relatively high family planning "need"--as evidenced by crowded housing, high fertility rate, and low personal income of its residents--would carry more population and family planning news than those in cities of relatively low family planning need. The alternative hypothesis was that newspapers with bigger news holes would carry more family planning news than those with less of a newshole. Coders measured population/family planning news in column inches for a constructed week in sample newspapers. Eighteen newspapers were sampled. Hypothesis 2 was upheld--the more space available, the more family-planning news. Although probability statistics were reported indicating the finding had a less than 5% chance of being influenced by chance, the author did not report on intercoder reliability.

Almaney, A. (1970). International and foreign affairs on network television news. *Journal of Broadcasting*, 14 (4), 499-509.

In a comparison of national and international stories broadcast on network television, the authors found that international affairs represented only a small portion of overall news coverage.

Furthermore, all three networks reported international stories only when they dealt with "crisis" situations. Network television broadcast an average of 1.4 international stories per day in comparison with the *New York Times* which broadcast an average of 19 international stories per day.

Anderson, J.A. (1971). Broadcast stations and newspapers: The problem of information control: A content analysis of local news presentations. Washington, D.C.: National Association of Broadcasters.

A good example of efficient use of key words and a computer to discover what news stories were about. This study compares data from 36 newspapers, 85 television stations, and 92 radio stations in 49 markets. He found that television statiions that were not allied to newspapers expressed more intense and negative attitudes.

Lowry, D.T. (1971). Gresham's law and network TV news selection. *Journal of Broadcasting*, 15 (4), 397-408.

Lowry examined network news broadcasts to determine whether they carried a significantly larger proportion of "bad" news as opposed to "good" news. Definitions for bad news were taken from a previous study and included international tension, civic disruption, crime and vice, and accidents and disasters. Examining 820 news items, he found only 34 percent were in the "bad" category. Former Vice-President Agnew notwithstanding, bad news does not drive out the good. Lowry is one of the few researchers to list inter-coder reliability in his published research.

Krippendorff, K. (1971). Reliability of recording instructions: Multivariate agreement for nominal data. *Behavioral Science*, 16, 228-235.

Examines the reliability of the details of complex recording instructions in content analysis based on traditional approaches. Paper primarily focuses on evaluating the sources of

unreliability such as recording instructions and illustrates a computational example to get the coefficient of instructional reliability for nominal data. Paper concludes with a warning about misleading reliability data due to sampling error.

Pride, R.A. , & Wamsley, G.L. (1972). Symbol analysis of network coverage of Laos incursion. *Journalism Quarterly,* 49 (4), 635-640.

U.S. Senator Robert Dole had claimed that CBS was biased in its reportage of the Laos incursion. In response, the authors analyzed 30 days of news reports on that news event. They used symbol coding instead of statements made by commentators as the unit of analysis. For each symbol, coders were instructed to code a direction--plus, negative or neutral-- and dimension (strength and morality). Only small, but significant differences were found between networks. These researchers also list intercoder agreement levels.

Pride, R.A. & Clark, D.H. (1973). Race relations in television news; A content analysis of the networks. *Journalism Quarterly,* 50 (2), 319-328.

This study showed how content analysis can be used to cover the impact of social issues. It revealed that the three network newscasts did not cover the race issue from 1968 to 1970 in an uniform manner. The authors found that NBC placed more emphasis on the race issue. Categories of study included story length, attribution, positioning of story and treatment of political symbols.

Lemert, J.B. (1974). Content duplication by the networks in competing evening newscasts. *Journalism Quarterly,* 51 (2), 238-244.

A 14-day period of early evening and late night network broadcasts in Eugene, Oregon were analyzed for duplication among networks. Findings indicated that 70 percent of all stories on weekday network broadcasts were duplicated on at least one other network. Duplication was

higher on week nights than weekends. ABC was found to broadcast less news than the other networks and thus did not duplicate as much as the other two networks.

Evarts, D., & Stempel, G.H. III. (1974) Coverage of the 1972 campaign by TV, news magazines, and major newspapers. *Journalism Quarterly,* 51 (4), 645-648.

This study showed how to do content comparisons across media. The authors did a cross-media study of the 1972 election campaign and determined that most of the media gave equal treatment to both political parties. Differences in coverage were found to be insignificant and random. The only significant finding of bias was with symbol analysis. This method indicted that magazines favored Republicans while the other two media favored Democrats.

Dominick, J., Wurtzel, A. & Lometti, G. (1975). Television journalism vs. show business: A content analysis of eyewitness news. *Journalism Quarterly,* 52 (2), 213-218.

Interesting comparison between "Happy Talk/Eyewitness News" TV news shows and those which use more traditional formats. Results showed that "Eyewitness/Happy Talk" shows devoted slightly more time to hard news than competitors using more traditional formats.

Frank, R. (1975). The IAS case against CBS. *Journal of Communication* 4, 186-189.

Critique of the book *TV and national defense: An analysis of CBS News* by Ernest W. Lefever. The book, a content analysis of CBS News during 1972-73, concludes that CBS failed to balance its advocacy of a stronger military posture and greater U.S. assistance to its allies with other views. The critique faulted the book's methodology for lacking specificity and other safeguards.

Kassarjian, H. H. (June, 1977). Content analysis in consumer research. *Journal of Consumer Research,* 4 (1) 8-17.

Classic article codifying content analysis, at least in consumer research. He offered directives for improving content analyses in the areas of objectivity, systematization, sampling, quantification, and reliability.

Gerbner, G., Gross, L., Jackson-Beeck, M., Jeffries-Fox, S., & Signorelli, N. (1977). One more time: An analysis of the CBS "Final comments on the violence profile." ***Journal of Broadcasting,*** **21, 297-304.**

This is a commentary on the way differences between CBS and Gerbner et. al. on the way that violence on television should be coded. specifically CBS claims "comic and accidental violence, and violence resulting from acts of nature" should not be included when researchers measure violence on TV. Gerbner et. al. retort that there "are no real 'accidents' or 'acts of nature' in fiction."

Resnik, A & Stern, B. L. (1977). An analysis of information content in television advertising,. ***Journal of Marketing,*** **41 (1), 50-53.**

In this seminal study of the information content of advertising, the authors developed fourteen evaluative criteria representing information cues in advertising. The evaluative criteria were an intuitive classification that has been copied by dozens of other researchers over the years. Those criteria have been used to examine advertisements in magazines, television, newspapers, and radio. Still, the authors of this bibliography find the Resnik classification lacking because it because it relies solely on the face value of information cues. It doesn't determine if the information is sound or deceptive nor does Resnik and Stern's evaluative categories distinguish between verbal vs. visual or general vs. specific information cues. Nevertheless the information cue categories in the Resnik and Stern study have been used to examine advertisements in magazines, television, newspapers, and radio. Resnik and Stern examined a total of 378 television commercials for their information content. They found that

less than one-half of the ads were informative. Institutional, toy, hobby, and transportation product categories had a higher proportion of informative advertisements than other categories.

Adams, W. & Schriebman, F. (1978). Television network news: Issues in content research. (Eds). Washington, D.C. : George Washington University.

A definitive discussion of the variables in content analysis of television including shot duration, editing pace, shot selection, scene location, and camera angle. This book is rich with valuable citations and important research findings. Adams begins with a bibliographic essay that presents a comprehensive background to the study of television news.

Summary

The citations listed above show the evolution of content analysis--how researchers have evolved methodology and used this technique to tackle a variety of research questions across several mediums. We have learned that a successful content analysis is a result of careful planning. It must start with a clear statement of objectives and hypotheses and follow explicit, consistently applied rules for proper categorization and systematic decision-making. The field has continued to evolve, but a historical study should not intrude into contemporary times which is why we have chosen 1978, fifteen years from the present, as a cutoff for this paper. The authors assume that present-day researchers are familiar with contemporary standards and methods for Content Analysis, yet realize that others may just be developing an interest in this topic. For an update on contemporary standards and methods for content analysis, they may wish to consult the sources included in the following footnote.[11]

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[11] Excellent resources for an up-to-date study of contemporary Content Analysis procedures include:

Krippendorff, K., (1980). *Content analysis: An introduction to its methodology.* Beverly Hills, CA: Sage.

Stempel, G.H. (1981). *Content analysis.* In G.H. Stempel and B.H. Westley (Eds.) *Research methods in mass communication.* Englewood Cliffs, NJ: Prentice-Hall, 119-131.

Riffe, D., Aust, C.F., and Lacy, S.R. (1993). The effectiveness of random, consecutive day and constructed week sampling in newspaper content analysis. *Journalism Quarterly,* 70 (1), 133-139.