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<td>Author(s)</td>
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Using Electronic Newspaper Text To Teach Content Analysis Strategies

By

Sam Dyer
Using electronic newspaper text to teach content analysis strategies.


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Running Head: Content Analysis Strategies.
Using electronic newspaper text to teach content analysis strategies.

Introduction

Content analysis is a widely used research strategy. It is, according to Krippendorf (1980) "a research technique for making replicable and valid inference from data to their context." He extends that it can broadly be construed to be a "method into the symbolic meaning of messages." In this paper, a method called "Newsflow Analysis" will be presented as a means of content analysis. Special emphasis in the paper is placed on the step by step process of content analysis. Two examples will be briefly presented.

For University teachers in journalism today, the availability of electronic texts of newspapers represents an important opportunity. The method outlined in this paper examines how to use electronic text to conduct content analysis. Because electronic newspaper text like Reuter's Textline and Associate Press Wire are so readily available, they represent an important opportunity for a variety of teaching activities like news editing, deadline management, and news research.

The Method

What is newsflow analysis? Newsflow analysis is the tracking and content analysis of news copy on a subject over time. It is a multi-step process that can be used to examine specific communication situations (Dyer, 1994, p. 35).

Newsflow analysis is done in seven stages: 1) data search strategy, 2) data collection, 3) reading of articles, 4) development of goal related analysis strategies, 5) coding, 6) analysis of results, and 7) report. Each of these steps will be discussed in turn with examples to help demonstrate for you how to teach these strategies to your students.

1. Data search strategy

There are so many electronic data bases available today that it boggles the
imagination. For my teaching I use the Reuter's News Service since I am located in Australasia and Reuter’s provides the broadest based coverage in my region. For practitioners located in North America, Associated Press Wire would probably be one of their first sources for information. Wire services can be a representative and useful source of information for students. In the U.S.A., for example, A.P. Wire can represent the consensus media version of a news event. It is used by more than 6,000 broadcast stations and 90% of the newspapers in the U.S., and it can be considered the backbone of news (Shaw, 1988). Associated Press Wire is available in electronic form from January 1, 1977 to the present (Nexis and Related Services, 1989). Furthermore, the A.P. Wire has been used effectively and accurately to measure the nature of news events in a variety of situations. Some of these situations include the effectiveness of public information campaign messages about the advantages of smoking cessation, the accuracy of information about the AIDS epidemic, the impact of opinion on the presidential election of 1988, and press characterizations of U.S. presidential candidates (Fan, 1985, 1989a, 1989b, and Melany and Buss, 1976).

2. Collect Data

In using electronic text from a wire service a search strategy must be developed. Essential to this is the development of a key word research strategy. For work students and I are doing in analysing press coverage of the New Zealand government's implementation of health reform called "Crown Health Enterprises" (Che), we entered the terms "Crown Health Enterprises" into the Reuter's database. This netted 96 news stories in the time period since the initial government announcement of the policy on July 31st, 1991. The Reuter's News Service gave me New Zealand Herald and National Business Review (New Zealand) articles, their dates, authors (if bylined) and page numbers where the articles actually occurred in print. Figure 1 shows the distribution of these stories over the 25 months of this study.
In the Che study, my student and I were interested in the flow of news about the reform of the health sector over time (Dyer, Bethune and Shaw, 1994). Therefore, time was an important variable in the study. For the purposes of illustration, a student and I got interested in how the news media in Australia and New Zealand were reporting public opinion polls (Dyer & Jenkins, 1994). So we became interested not so much in time as a variable as in the application of a standard of public opinion poll reportage. More on that example later. What is advantageous about using electronic text for this stage of the analysis is that it greatly eases the collection of the stories that you and your students find interesting.

3. Reading of articles

Once you and your students have collected all of your articles during the time period for the study, read all of the articles. During the reading get a general feel for how the articles are treating the subject. Some of the things to look for in the reading are: 1) sources used; write these down along with the source’s qualifications; 2) terms used in reference to your client subject. How is the news copy treating your subject? 3) issues; what are some of the key issues that are appearing time and time again? And 4) the length of articles. He and Zhu (1994) just completed a content analysis of news coverage of the Tiananmen Square democracy protests in The People’s Republic of China. They coded stories using an 11 point strategy: 1) time of the story and the occurrence of the news event, 2) news event as defined by the story, 3) place where the event occurred, 4) story lines devoted to the key actors, 5) number of people involved in the event, 6) style of the story, 7) cause of the event as described, 8) sources of information, 9) sources of quotation, 10) tone of quotation, and 11) overall tone of story (p. 39).
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Count the number of paragraphs per article. While you are reading, record significant quotes. Note especially value laden phases (either very positive or very negative) and set these aside for your report.

4. Development of goal related analysis strategies

In developing your analysis strategies you should be concerned about the overall treatment of your subject in the news copy. After reading all of the stories in the sample, you should be in good shape to identify the significance of press treatment.

For the Che study we conducted, we were concerned about the distribution of different sources in the news copy. Who was making position statements about health reform? How frequently are they being quoted in news copy? Our reading of the stories told us that we should be looking for 1) government sources, 2) opposition government sources, 3) medical professions sources, 4) interest group sources, and 5) paid professional consultants.

Also you may decide to look at various issues and groups of issues in your analysis. Develop from your reading a list of issues. Perhaps in analysing the news coverage of a major accident you might see legal, environmental and economic issues as being of particular importance to your analysis (Dyer, 1991).

5. Coding

There are two ways to accomplish your coding: human coding and computerized coding. I recommend that you use both. In reading the Che stories we developed a list of all the names and all of the permutations of the names of people that are quoted in the news copy. Also we noted that person’s qualifications. Then, using a computerized content analysis system, we coded for the frequency of mention of those sources throughout the story set (Miller, 1993). In the Che study, Figure 2
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shows the result of that search.

Figure 2

About Here

You could also code all of the stories by hand, writing down names and qualifications and noting the frequency (number of sentences or number of paragraphs) in which the source occurs. But using a computer decreases the likelihood of errors in coding the stories and also increases the speed at which results will be available for decision making.

You can use the same process in developing lists of key terms and phrases for issues or any other set of ideas or constructs that are important to evaluating your research subject. But what if you have hundreds of stories and there is no way to read all of them? Then a process of "successive filtration" is needed (Fan, 1988). First, use a computerized content analysis system to search your entire data set for attributional terms. Attributional terms are terms in news copy that identify sources being used to document ideas and quotations. Attributional terms include such words as said, say, says, spokesman, told, reported, according, announced, reports, declared, suggested, and others. Using a computerized content analysis system paragraphs from the news copy can be retained for the analysis if they contain an attributional term. Then you read just those paragraphs in developing your source and issues lists.

In coding for the positive, negative or neutral nature of a story I use human coders. Two individuals coded the Che stories for treatment based on their own judgement and a shared definition. The results are displayed in Figure 3.
A student and I became interested in poll reporting standards during the Australian Federal Election Campaign. We collected a sample of 173 stories that contained mentions of "public opinion poll" from the Reuters textline service. We then coded those stories for the incidence of each of the 8 factors of the Australian Press Council poll reporting standard. The results are displayed in Figure 4.

6. Analyze results

There is quite a bit that can be done with the results obtained from a content analysis of electronic text. With the frequency of stories displayed in Figure 1, for example, you can conduct a phase analysis. First, if you are studying a new product launch that backfired, then define the first week or month as an announcement phase. Second, define the peak of news coverage as the month with the most frequent number of stories and declare the weeks and months leading up to the peak as the crisis phase. Define the period of time after the peak of coverage as the crisis resolution phase. Then analyze your various source, issue, and treatment constructs into those phases. For a discussion of phases and issues interactions see Hainsworth, 1990 and Dyer, 1994.

A wide variety of statistical techniques are available to enhance your analysis. I like to generate log-linear models to explain the strength of relationships among these categorical variables. Accomplishing that kind of modelling is beyond the scope of this article, but it is important to investigate some of these methods to
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help decide the strength of some of the phenomena seen in figures. Table 1 shows a log-linear model that was developed for the Che data discussed earlier. The model was developed using a procedure similar to backwards step-wise regression in which insignificant model parameters were eliminated one by one until the $G^2$ was maximized. For the Che study, the interaction of variables in this exploratory research was of particular interest.

Table 1

7. Report

You are in a position to make a report about news copy that is based more on data and less on opinion. But don’t just stick to the numbers. Be sure to work qualitative components into your presentation as well. Present important parts of the news copy. Show a particularly negative article. Show a particularly positive article. Enliven your presentation with as many actual examples as you have time and space.

Conclusion

Electronic text has made available to lecturer and student a broad range of resources and news media materials. The process of analysing those materials using content analysis can help to teach research skills and writing skills to students. I wish you the best as you work to impart a critical capacity for mass communication research to your students. Thank you very much for your time.
References


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### Table 1. Maximum-likelihood analysis-of-variance table.

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About the author

Samuel Coad Dyer, Jr., Ph.D. is senior lecturer in management communication at the University of Waikato in Hamilton, New Zealand. His primary interests are crisis communications and public relations management. He has also worked as a business consultant for the past eight years. He holds both master of arts and doctor of philosophy degrees in communications.
Figure 1. Frequency of Che Stories by month.

Figure 2. Frequency of sources in newscopy by month.

Figure 3. Portrayal of Che coverage.
Figure 4. Percent of stories containing poll reportage standard: