

Use of Content Analysis in University of Alberta Clothing and Textiles Master's Theses Related to Material Culture

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The University of Alberta Department of Clothing and Textiles has offered museum related courses and programs for almost 20 years and has had a graduate program in this area for over a decade. The master's theses topics have varied, including conservation, visitor response, and material culture. Research methods have also varied, but one method that has been particularly valuable in the material culture area has been that of content analysis. The following report will provide a brief description of the method of content analysis and a discussion of some of the ways in which it has been used by graduate students under my supervision.

Content analysis is certainly not a new method. It has had lengthy history in the fields of communication research (Berelson, 1952), consumer studies (Kassarjian, 1977), and more generally in the humanities and social sciences (Holsti, 1969; Krippendorff, 1980). Specific applications in the area of material culture have been somewhat slower to develop. I first used the method in 1973 to analyse images of women in Eaton's catalogue and found the method to be extremely valuable (Lambert, 1973). My experiences were corroborated by Paoletti (1982) who strongly recommended the application of content analysis to the history of costume. As Paoletti noted, it is surprising that content analysis is not used more frequently in this field.

Holsti states that "content analysis is a multipurpose research method developed specifically for investigating any problem in which the content of communication serves as the basis of inference" (p. 2), and "is any technique for making inferences by objectively and systematically identifying specified characteristics of messages" (p. 14). Kassarjian divides the procedures of content analysis into four stages: sampling, selection of units of measurement, categorization of the units according to predetermined rules, and statistical analysis.

Many sources used by researchers in the field of material culture, and more specifically in the field of clothing and textiles, lend themselves to the process of content analysis. Sources are frequently extensive, complex and recurring such as catalogues, newspapers, magazines,

photographs, or other archival sources. Sampling, Kassarjian's first stage, provides a convenient and valid method of dealing with these particularly large bodies of information. Among the master's theses using content analysis, Kerkhoven (1986) used prize lists from agricultural fairs to analyse textile crafts, Smith (1987) used newspaper advertisements to analyse dressmaking occupations, Taylor (1990) used fashion periodicals to analyse fabric in women's costumes, Roy (1990) used tailors' pattern-drafting systems to analyse the tailoring trade, Smith (1991) used Eaton's catalogue to analyse children's clothing, and McKinnon (1992) and Prince (1992) used account ledgers of the Hudson's Bay Company. As an example of sampling, Taylor had estimated 2 520 possible issues from 21 years of Peterson's Magazine and *Godey's Lady's Book*. She selected six issues from each year from 1860 to 1880 using a random numbers table to generate a sample of 252.

Sometimes the sources were not large enough or consistent enough to allow standard sampling techniques and therefore the studies might technically be excluded from classification as content analysis in its strictest sense. Schweger (1983) used written and visual archival documents and extant artifacts to analyse footwear in Arctic Canada but found that the sources physically available to her precluded rigorous sampling techniques. Similarly, Prince (1988) found that her sources for analysing Norwegian clothing and textiles in Valhalla Centre were of a scale not requiring sampling. Artifacts and oral histories, frequently used sources for research in this field, are by their very nature difficult to sample. But when the population of artifacts is of ample size such as the women's costume analysed by Taylor or the children's clothing analyzed by Smith (1991), sampling becomes less of a problem.

The second stage of content analysis is to choose the units of measurement. For example, Taylor chose the first costume appearing in the description of the fashion plate in each issue of the sample selected from the two fashion periodicals. The unit of measurement was further defined as "only the first costume described in the fashion column which referred

to an adult female costume [not a mantle or cloak; not just a skirt or bodice; not a sports outfit (bathing or riding); not a young girl's or child's] and which refers to a specific fabric and colour [not general fabrics such as "winter goods"]" (p. 23). The selection of a unit of measurement is often more complex than it would first appear.

The third stage of content analysis involves categorization of the units according to predetermined rules. This usually requires the development of an instrument such as a coding sheet/screen and coding rules. Reliability is very important at this stage as it must be possible for someone else to reproduce the same study. The fourth stage of content analysis involves statistical analysis of the data.

Computers are obviously of great benefit in carrying out a content analysis. Indeed, some projects have only become possible with the advent of computer assistance. The thesis research discussed here was all completed with the use of the University of Alberta mainframe computer and/or a variety of microcomputers. In all cases the Statistical Package for the Social Sciences was used for statistical analysis. As microcomputers increase in power and portability and as data transfer from one computer to another becomes easier, the physical aspects of conducting such studies are enhanced. It is now possible to use notebook size computers for on-site entry of data. Data can be stored and analysed on the same computer, if powerful enough, or can be easily transferred to other computers. Rapid development of new hardware and software provides many interesting possibilities such as the use of scanners for printed word analysis or even visual analysis. The creation of many machine readable data bases within museums and other institutions makes content analysis a method of even greater potential.

Lest the high-tech trappings of such a description alienate readers more comfortable with more traditional research tools, be assured that the basics of content analysis have been intuitively used by people who have been in the field for many years. Sources such as newspapers and catalogues have long been standard sources for material historians. The main difference is that past approaches have been largely impressionistic, depending on the researcher's memory, note-taking and objectivity. Content analysis, in its more formal aspects, endeavours to ensure that the research is objective, systematic and quantitative.

Content analysis has many advantages for newly entering researchers at the master's level. The process allows them to deal with a large body of information in both an efficient and effective fashion. In the relatively short span of graduate research time, students are able to conduct research of both breadth and depth and to convey the findings to other researchers in a meaningful way. If properly conducted, studies using content analysis are replicable, thus allowing the research community to build and develop from one research project to another. All too often in the past we have lost the valuable intuitive knowledge of our colleagues who have worked in the field for many years without being able to clearly convey their findings or share their data with others.

Content analysis lends itself to comparative studies. Because the methods are replicable and the findings are quantified, it is possible to make comparisons between different sources, time periods, regions or other components of the research problem. For example, both Taylor and Smith (1991) were able to compare the artifacts in selected Canadian museums to the content of fashion periodicals or catalogues. Smith (1991) was also able to compare the Eaton's catalogues produced for the Toronto and Winnipeg regions.

Frequently the systematic gathering and analysis of large amounts of data in a content analysis provides insights not possible through other techniques. For example, Roy was able to develop a very sophisticated analysis of aspects of the tailoring trade through a content analysis of tailors' pattern-drafting systems.

Content analysis is certainly a valuable research method, but it must be seen within a broader context. Without well developed research objectives or hypotheses, content analysis could prove to be meaningless. Rarely can content analysis stand on its own without the support of other methods and sources. The quantitative approach has many advantages, but there are also many important sources that do not lend themselves to this method and many important research questions that must be considered in a qualitative rather than quantitative context. Ultimately, the quality of the research is dependent on the ability of the researcher to interpret the results. In summary, content analysis is a valuable research method that has been successfully used by graduate students and that may be useful to a wider range of researchers in the field of material culture.

Master's Theses Utilizing Content Analysis

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- Kerkhoven, M. 1986. "Analysis of textile crafts at selected agricultural fairs in Alberta and Saskatchewan 1879-1915."
- McKinnon, A. 1992. "Dress in Red River Settlement, 1815-1915."
- Prince, H. 1988. "Norwegian clothing and textiles in Valhalla Centre, Alberta; a case study and inventory in an ecomuseum framework."
- Prince, P. 1992. "Analysis of Carrier and Coast Salish Dress in the Fur Trade Period, 1830 to 1850."
- Roy, C. 1990. "The tailoring trade, 1800-1920, including an analysis of pattern-drafting systems and an examination of the trade in Canada."
- Schweger, B. 1983. "Documentation and analysis of the clothing worn by non-native men in the Canadian arctic prior to 1920, with emphasis on footwear."

- Smith, D. 1987. "Dressmaking occupations in Edmonton, 1900-1930."
- Smith, J. 1991. "Content analysis of children's clothing in Eaton's catalogue and selected Canadian museums, 1890-1920."
- Taylor, L. 1990. "Fabric in women's costumes from 1860 to 1880: a comparison of fashion periodicals and selected Canadian museum collections."

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- Holsti, O.R. "Content analysis for the social sciences and humanities." London: Addison-Wesley, 1969.
- Kassarjian, H.H. "Content analysis in consumer research." *Journal of Consumer Research* 4 (1977): 8-18.
- Krippendorff, K. "Content analysis: an introduction to its methodology." Beverly Hills: Sage, 1980.
- Lambert, A.M. "Images of women: Eaton's catalogue 1883-1973." Presentation at the Canadian Association of American Studies, Ottawa, Ontario, 1973.
- Paoletti, J.B. "Content analysis: Its application to the study of the history of costume." *Clothing and Textiles Research Journal* 1: 14-17.