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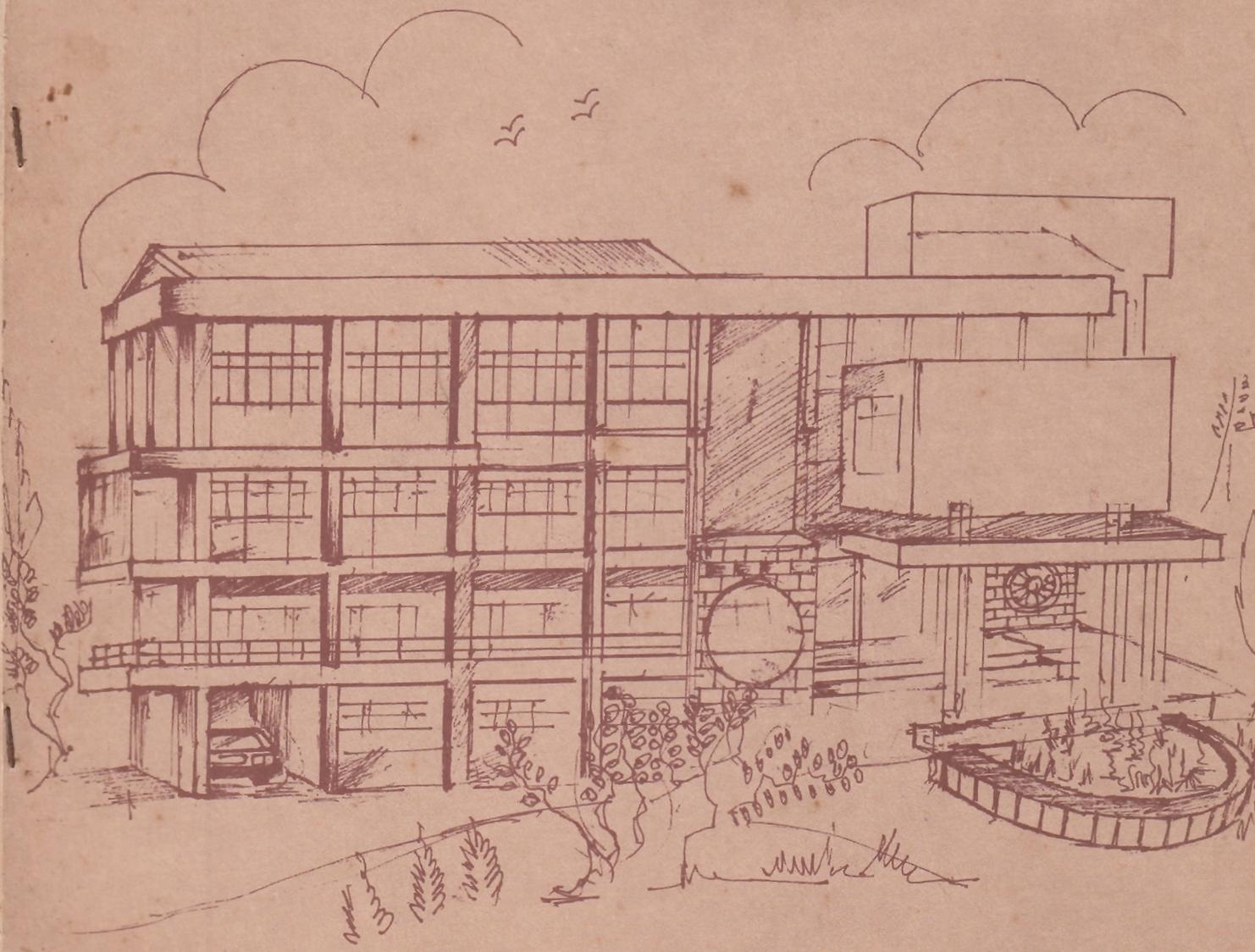
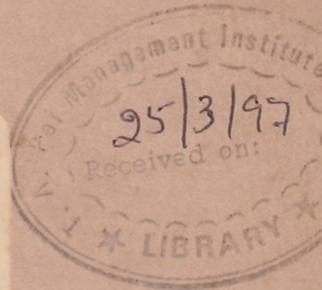
# Working Paper Series

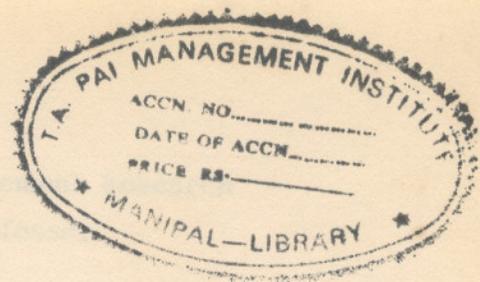
No. 7

CONTENT ANALYSIS :  
A TOOL FOR MANAGEMENT RESEARCH

By

REGI V MATHEW  
*Assistant Professor*





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**T.A.PAI MANAGEMENT INSTITUTE**  
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## CONTENT ANALYSIS : A Tool for Management Research

Regi V. Mathew, Assistant Professor

### 1.0 Introduction

Content Analysis is a qualitative research technique that uses a set of procedures to classify or categorise communication that permit valid inference to be drawn (Weber, 1990). Although content analysis may be used to extract data from a wide range of communication media (writing, speeches, movies, radio and television, for example), management research has utilised the technique primarily to draw inferences from textual communications of managers. (D'Aveni & Macmillan, 1990). As such, the methodology provides researchers with opportunities to unobtrusively study the values, sentiments, intentions and ideologies of managers generally inaccessible to researchers. This provides researchers with a methodology for systematic analysis of the information contained in corporate documents thus opening rich data source that has been often neglected.

In recent years, this has been applied to compare media or 'levels' of communication, identify the intention and other characteristics of the communicator, detect existence of propoganda, describe attitudinal and behavioural responses to communication and describe trends in communication content.

Compared to other data-generating and analysis techniques, content analysis has several advantages (Weber, 1990):

- \* Communication is a central aspect of social interaction. Content-analytic procedures operate directly on text or transcripts of human communications.

- \* Content analytic studies use both qualitative and quantitative operations on texts. Thus it combine what are thought to be antithetical modes of analysis.

- \* Compared with techniques such as interviews, content analysis usually yields unobtrusive measures in which neither the sender nor the receiver of the message is aware that it is being analysed. Hence there is little danger that the act of measurement itself will act as a force for change that unfounds the data.

- \* Documents of various kinds exist over long periods of time. Culture indicators generated from such documents constitute reliable data that may

span even centuries. (e.g. Nameworth and Weber, 1987).

## 2.0 Content Analysis Methodologies

Content Analysis Methods can be classified into three broad types; 1. Human Scored Scheme 2. Individual-word-count Systems 3. Computerised Systems using artificial intelligence.

### 2.1 Human Scored Scheme

In the human scored scheme text is classified into specific categories. In disciplines such as psychology where content analysis is a more frequently utilised research technique, specialised coding systems such as the Gottschlark-Gleeses method enable consistent classification of text by coders trained in the method. No classification methods or scheme have yet been created for the classification of management variables, thus requiring researchers to create their own coding systems and limiting the cross-comparability of research studies.

### 2.2 Individual-Word-Count Systems

Individual word count systems classify the text by assigning words to pre-specified semantically equivalent categories. For example, words such as worker, researcher, associate, staff or human resources are all classified as relating to employees. Frequency count or occurrences of words in each category are then analyzed to determine the relative concerns given each category by the texts author. Although this type of analysis can also be performed by human coders, simple computerised coding systems of this type are considered superior due to their near perfect reliability and cost effectiveness.

### 2.3 Artificial Intelligence Systems

Computerised content analysis vis artificial intelligence approaches differs from individual-word-count systems primarily in the way in which problems with the classification of words that have more than one meaning are resolved. Computerised Systems incorporating artificial intelligence features attempt to consider both the syntax and lexicon of words. The expectation is that by increasing the precision of text classification, these systems are more accurate in coding the symbolic meaning of the text (Weber, 1990).

### 3.0 Reliability and Validity Issues

If valid inferences about the symbolic content of the message are to be drawn, the content analysis classification scheme must be reliable in terms of consistency and reproducibility. Reliability problems in text classification are typically due to the ambiguity of word meanings, category definitions or other coding rules. Studies utilizing human raters or coders as described above, have relied upon multiple coders to deal with reliability concerns by permitting a quantitative assessment of the interrater reliability achieved.

Similarly, classification scheme must be valid - in terms of the extent to which the variables that result from it are correlated with some other measures of the same construct. That is the extent to which it "behaves" as it is supposed to in relation to other variables or the extent to which categorization scheme appear to measure the construct it is intended to measure (face validity) (Weber, 1990). In content analysis, semantic validity or the extent to which persons familiar with the language and texts agree that the list of words placed in the category have similar meanings or connotations must also be demonstrated.

Exhibit 1 and 2 gives two examples of content analysis; one from U.S. and other from Indian setting. These demonstrate the versatility of content analysis in utilising data generated through different media (T.V. and Press ads).

### 3.0 Application in Management Research

Content analysis methodologies add an effective tool for management research by permitting researchers to utilize data sources that have not been widely used in previous research. Data from corporate reports and other firm generated texts could be utilised to address a variety of management research questions such as:

a) Do firms behave in a manner consistent with their stated intention or do they adopt socially responsible stances in their annual reports just to interest investors in their stock?

b) Does the strategic forces or environmental scanning focus of strategists shift with changes in external environmental factors? The unobtrusiveness of the content analysis technique proves especially important in this type of investigation.

## COMMUNITY RESOURCES AND ECONOMIC DEVELOPMENT MARKETING STRATEGY

The study (McKee,D. and A.Biswas, 1993) examines whether a community's economic development marketing strategy is related to the 'richness' or munificence of its resources. This is tested using data from content analysis of economic development advertising and from secondary socioeconomic data on 177 US communities.

The sources for the advertisements content analysed in this study was 'Site Selection and Industrial Development', which is a primary vehicle for economic development advertising. Twelve issues, from August 1989 through June 1991, were chosen for coding purposes. Multiple ads for each community were grouped together and treated as a single advertisement. The result was a final sample size of 177 sets of community advertisements.

Initially five advertisements were randomly selected and coded by two judges. They were asked to read the entire copy and examine the illustrations of each ad and then to rate it on the 12 variables relating to cost leadership and differentiation, a five point scale was used indicating the degree to which each variable was emphasized in the ad. These variables are then related to socio-economic variables about the region.

The result indicate that resource constrained communities are likely to market themselves as locations for firms proving a cost based strategy, while there is little evidence that resource rich communities attempt to differentiate themselves.

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## ZEE (NDAGI); Content Analysis of Advertisements on ZEE T.V.

The objective of the study (Srikandath,S., H.Uchil, S.Menon, 1995) was to achieve an insight into the depiction of women as portrayed by advertisements aired on ZEE T.V.

A sample of 144 ads was selected without any duplicates. The coding framework had a list of 12 categories and the authors did the coding together to avoid any bias. A detailed explanation of each of these categories was prepared and this was needed to decide on the categorisation of the advertisements.

It was found that domestic management (housewife) is the one where most of the ads featuring women fall into i.e nearly one-third of the ads. In some cases women have been portrayed as modern mother.

It could either mean that the advertising professionals have not woken up to the changing scenario or they are afraid to move out of the fixed paradigms.

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c) Is the nature of the multibusiness firm sufficiently distinct from that of a single business firm to warrant differences in the form of the mission statements?

#### 4.0 Concluding Remarks

Researchers considering use of content analysis methodologies in their research must also consider the following general concerns about the utilisation of content analysis as a tool for understanding organisation.

1. Uncertainty of the authorship of the text. Although signed by the CEO of the firm, most letters to shareholders are written by individuals other than the president. Hence care must be taken in attributing messages contained in the text to specific individuals when authorship is unknown.

2. Uncertainty of the link between professed and intended positions. Documents prepared for public audience may contain statements for public relations purposes (professed position) that may differ substantially from the firm's intended position.

3. Uncertainty of the link between intended and realised positions. Researchers must take care in interpreting the results of content analysis of public documents in that firms' realised or implemented position may differ substantially from the one stated.

4. Uncertainty of the link between frequency of word appearance and management concern with the topic. Content analysis research typically presumes a direct relationship between the number of times a topic appears in a document and the intensity of the author's concern for the topic. This count of occurrence may mask author's real concern for the topic.

It is important that researchers are aware of the ways in which validity of the result is hampered. For some topics computerised content analysis may provide researchers with a methodology that is more stable, reliable and comparable (Weber, 1990) than other methodologies.

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