ANALYZING MEDIA MESSAGES

USING QUANTITATIVE CONTENT ANALYSIS IN RESEARCH

3RD EDITION

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STEPHEN LACY AND
FREDERICK FICO

ANALYZING MEDIA MESSAGES

Analyzing Media Messages is a primer for learning the technique of systematic, quantitative analysis of communication content. Rich with examples of recent and classic applications, it provides solutions to problems encountered in conducting content analysis, and it is written so that students can readily understand and apply the techniques.

This thoroughly revised third edition includes current and engaging examples for today's students, in addition to a number of historically important cases. It emphasizes communication of visual imagery and studies of advertising content. Resources on the book's companion website provide additional materials for students and instructors, including existing protocols, web links, and a bibliography of content analysis methods articles.

This volume is intended for use as a primary text for content analysis coursework, or as a supplemental text in research methods courses. It is also an indispensable reference for researchers in mass media fields, political science, and other social and behavioral sciences.

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ANALYZING MEDIA MESSAGES

Using Quantitative Content Analysis in Research

Third Edition

Daniel Riffe, Stephen Lacy, and Frederick Fico

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Daniel Riffe
For Florence, Ted, and Eliza

Stephen Lacy
For I. P. Byrom, N. P. Davis, and A. G. Smith

Fred Fico
For Beverly, Benjamin, and Faith

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PREFACE

The purpose of this book is to help facilitate the development of a science of communication, in particular, as it relates to mediated communication. A communication science is at the heart of all our social sciences because communication increasingly defines what we do, how we do it, and even who we are individually, socially, and culturally.

In fact, never before in human history has mediated communication been so central, pervasive, and important to human civilization. A good communication science is necessary if humanity is to fully understand how communication affects us. Absent good understandings from such a communication science, we will always be at the mercy of unintended, unforeseen, consequences.

But absolutely necessary to the development of a communication science is a means of logically assessing communication content. Broadly speaking, communication content varies based on a large set of factors that produce that communication. And, in turn, the variations in communication content affect a large set of individual, group, institutional, and cultural factors. In other words, understanding communication content is necessary and central to any communication science in which the goal is to predict, explain, and potentially control phenomena (Reynolds, 1971).

More specifically, we believe the only way to logically assess communication content is through quantitative content analysis, the topic of this book. Only this information-gathering technique enables us to illuminate patterns in communication content reliably and validly. And only through the reliable and valid illumination of such patterns can we hope to illuminate content causes or predict content effects.

We bring to this effort our experiences conducting or supervising hundreds of quantitative content analyses in our careers as researchers, examining content ranging from White House coverage, to portrayal of women and minorities in advertising, to the sources given voice in local government news. The content

analyses have included theses and dissertations, class projects, and funded stud-
ies and have involved content from sources as varied as newspapers, broadcast
media, and Web sites. Some projects have been descriptive, whereas others have
tested hypotheses or sought answers to specific research questions. They have been
framed in theory about processes that affect content and about the effects of
content.

If conducting or supervising those studies has taught us anything, it is that
some problems or issues are common to virtually all quantitative content analyses.
Designing a study raises questions about sampling, measurement, reliability, and
data analysis, fundamental questions that arise whether the researcher is a student
conducting her first content analysis or a veteran planning her 20th, whether the
content being studied is words or images, and whether it comes from an online
or a "traditional" medium.

In preparing this book for the third edition, we reengage these recurring ques-
tions. Our goal is to make content analysis accessible, not arcane, and to produce
a comprehensive guide that is also comprehensible. We hope to accomplish the
latter through clear, concrete language and by providing numerous examples—of
recent and "classic" studies—to illustrate problems and solutions. We see the book
as a primary text for courses in content analysis, a supplemental text for research
methods courses, and a useful reference for fellow researchers in mass communi-
cation fields, political science, and other social and behavioral sciences.

We owe thanks to many for making this book possible: teachers who taught
us content analysis—Donald L. Shaw, Eugene F. Shaw, Wayne Danielson, James
Tankard, G. Cleveland Wilhoit, and David Weaver—colleagues who provided sug-
gestions on improving the book; and our students, who taught us the most about
teaching content analysis. Finally, our deepest appreciation goes to our families,
who often wonder whether we do anything but content analysis.

—Daniel Riffe, Stephen Lacy, and Frederick Fico

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INTRODUCTION

Consider the diversity of these quantitative content analyses:

Researchers examined 986 jokes told by three late-night television hosts (David Letterman, Jay Leno, and Conan O'Brien) to describe the type of humor, topic, "stance" (e.g., antiwar), tone, and other characteristics of jokes about the 2003–2007 U.S. war in Iraq (Haigh & Heresco, 2010).

Two traditionally marginalized groups—women and protestors—were the focus of a four-and-a-half decade (including before and after 1973's *Roe v. Wade* case legalizing abortion) content analysis of *New York Times* and *Washington Post* abortion protest coverage (Armstrong & Boyle, 2011). Despite the "uniqueness of the issue to women, (and) to the feminist movement" (p. 171), men appeared more often as sources.

Visitors to the political blogosphere may assume that its news content is qualitatively different from mainstream media that are often dismissed as partisan, pro-status quo, or slaves to advertisers. Leccese (2009) coded more than 2,000 links on six widely read political blogs, discovering that 15% looped readers back to another spot on the blo*g*, 47% linked to mainstream media Web sites, and 23% linked to other bloggers. Only 15% linked to primary sources.

Lacy, Duffy, Riffe, Thorson, and Fleming (2010) compared daily newspapers' sites with citizen news and blog sites, concluding that citizen sites had less timely reporting, had fewer site features (e.g., interactive and upload features), and were more likely to take readers "off-site" than were dailies' sites.

To examine how one political "tradition"—"going negative" with advertising—has fared in Web-era politics, Druckman, Kifer, and Parkin (2010) content analyzed more than 700 congressional candidate Web sites from three election cycles (2001, 2004, and 2006), and compared candidates' Web site and television advertising negativity. Contrary to predictions (e.g., Wicks & Souley, 2003) that Web

advertising would be *more* negative, Druckman et al. (2010) found 48% of candidates went negative on the Web, but 55% went negative in their television ads.

"Arab Spring" protests that peaked in 2011 pitted citizens against authoritarian regimes in Tunisia and Egypt. Using custom-written computational scripts to manage and organize more than 60,000 tweets, followed by human coding of a sample of tweets, Lewis, Zamith, and Hermida (2013) and Hermida, Lewis, and Zamith (in press) showed how NPR reporter Andy Carvin gave greater voice to non-elite sources by retweeting them, than he did to elite sources or other journalists. Such a "hybrid" approach, "to enhance, rather than supplant, the work of human coders," retained the "systematic rigor and contextual awareness" of traditional content analysis, while "maximizing the large-scale capacity of Big Data and the efficiencies of computational methods" (Lewis et al., 2013, p. 47).

Systematic content analysis showed that *Survivor,* a long-running "reality" television program, routinely offered viewers high doses of antisocial behavior, with indirect aggression (behind the victim's back) the most common (73% of antisocial behaviors), followed at 23% by verbal aggression and deceit at 3% (Wilson, Robinson, & Callister, 2012).

After Danish newspaper cartoons mocked Islamic prophet Muhammad, some countered that media portrayals of Christians were harsher than those of Muslims. Drawing a year's cartoons from databases, Kaylor (2012) recorded tone, topic, and identity or role of those attacked in a cartoon. While cartoons portraying Christianity negatively were more frequent, the *percentage* of negative cartoons about Muslims (85%) was larger than the percentage about Christianity that was negative (76%).

Coyne, Callister, Stockdale, Nelson, and Wells (2012) analyzed profanity in popular youth novels. The books—targeting children aged 9 and older—averaged 34.46 instances of profanity, though one logged 492 instances, with 60% of those being the infamous "seven dirty words" that cannot, by FCC rule, be used on broadcast television.

Ivory, Williams, Martins, and Consalvo (2009) looked for profanity within a sample of 150 top-selling video games (half were rated "E for Everyone" 5 years old or older). One in five games included profanity, the mean per game was 2.99 instances, profanity increased as game age rating increased, and 8.3% of games contained one of the seven FCC-banned words.

Ki and Hon (2006) explored Fortune 500 companies' Web communication strategies, coding company sites' ease of use, openness (availability of information ranging from press releases to annual reports), and public access (phone numbers, email addresses, etc.), as well site promotion of firms' corporate social responsibility (CSR) activities involving education, the community, and the environment. Few sites, they concluded, communicated effectively about CSR.

The past half-century has witnessed a continuing decline in number of daily newspapers (Lacy et al., 2012). Drawing a probability sample of U.S. central cities

and suburbs, Lacy et al. analyzed local government news coverage in 162 dailies and 133 weeklies, concluding that dailies, "whatever their growing weaknesses and the competition facing them, continue to do the 'heavy lifting' when it comes to informing citizens about matters affecting them" (p. 35).

Although these studies differ in purpose, focus, techniques employed, and scientific rigor, they reflect the range of applications possible with *quantitative content analysis,* a research method defined briefly as *the systematic assignment of communication content to categories according to rules, and the analysis of relationships involving those categories using statistical methods.*

Usually, such content analysis involves drawing representative samples of content, training coders to use category rules developed to measure or reflect differences in content, and measuring the reliability (agreement or stability over time) of coders in applying the rules. The collected data are then usually analyzed to describe typical patterns or characteristics or to identify important relationships among the content qualities examined. If the categories and rules are sound and are reliably applied, the chances are that the study results will be valid (e.g., that the observed patterns are meaningful).

This skeletal definition deliberately lacks any mention of the specific goal of the researcher using quantitative content analysis (e.g., to test hypotheses about late-night political humor), any specification of appropriate types of communication to be examined (e.g., corporate reports on Web sites, profanity in video games, or contents of political blogs), the types of content qualities explored (e.g., placement or length of a news item, presence of a dominant or competing frame, levels of negativity on candidate Web sites), or the types of inferences that will be drawn from the content analysis data (e.g., concluding that antisocial behavior goes unpunished in reality television).

Such specification of terms is essential to a thorough definition. However, before a more comprehensive definition of this versatile research method is developed in chapter 2 (this volume), we first offer an overview of the role of content analysis in mass communication research followed by examples of its use in other fields and disciplines.

Mass Communication Research

Whereas some scholars approach mass communication messages from perspectives associated with the humanities (e.g., as literature or art), many others employ a social science approach based in empirical observation and measurement. Typically that means that these researchers identify questions or problems (either derived from the scholarly literature or occurring in applied mass communication), identify concepts that "in theory" may be involved or at work, and propose possible explanations or relationships among concepts. Implausible explanations are discarded, and viable ones tested empirically, with theoretical concepts now measured in concrete, observable terms.

If members of an ethnic minority, for example, believe that they are underrepresented in news media content (in terms of their census numbers), a researcher may propose that racism is at work or that minorities are underrepresented among occupational groups that serve more often as news sources in the news. Each of these interpretations or explanations involves different concepts that can be "operationalized" into measurement procedures, and each can be tested empirically. Similarly, if researchers want to address how social media help achieve concerted action during a crisis, operational procedures can be developed and used to collect data on social media content, which can be compared with data for official media.

Put another way, explanations for problems or questions for such researchers are sought and derived through direct and objective observation and measurement rather than through one's reasoning, intuition, faith, ideology, or conviction. In short, these mass communication researchers employ what is traditionally referred to as the scientific method. The centuries-old distinction between *idealism* (an approach that argues that the mind and its ideas are "the ultimate source and criteria of knowledge") and *empiricism* (an approach that argues that observation and experimentation yield knowledge) continues to hold the attention of those interested in epistemology or the study of knowledge (Vogt, 2005, pp. 105–106, 149). Content analysis assumes an empirical approach, a point made more emphatically in later chapters.

Another important distinction involves reductionism and holism. Much of mass communication social science adheres implicitly to a *reductionist* view—the argument that understanding comes through reducing a phenomenon to smaller, more basic, individual parts (Vogt, 2005, p. 267)—rather than *holism,* an assumption that wholes can be more than or different from the sum of their individual parts (Vogt, 2005, p. 145). From the holistic perspective, the whole "is literally seen as greater than the sum of its parts" (McLeod & Tichenor, 2003, p. 105), so that, for example, collectivities like communities have properties or characteristics that are more than the aggregate of individuals within them. Although the reductionism-holism debate most often involves the place of individuals in larger social systems, it might as easily address the distinction between individual communication messages or message parts, and "the media," news and entertainment as institutions.

Content Analysis and Mass Communication Effects Research

The scholarly or scientific study of mass communication is fairly new. Historians have traced its beginnings to early-20th-century work by political scientists concerned with effects of propaganda and other persuasive messages (McLeod, Kosicki, & McLeod, 2009; Rogers, 1994; Severin & Tankard, 2000). In addition to scholars in journalism or mass communication, researchers from disciplines such as sociology and psychology have focused on mass communication processes and effects, contributing their own theoretical perspectives and research methods. Regardless of whether they were optimistic, pessimistic, certain, or uncertain

about mass communication's effects, researchers have often recognized content analysis as an essential step in understanding those effects.

Powerful Effects?

One particularly important and durable communication research perspective reflects a behavioral science orientation that grew out of early-20th-century theories that animal and human behaviors could be seen as stimulus-response complexes. Some communication researchers have viewed communication messages and their assumed effects from this same perspective.

Researchers interested in these effects typically have adopted experimentation as their method for testing hypotheses. Experimental participants were assigned to different groups; some were exposed to a stimulus within a treatment (a message), whereas others were not (the control participants). Under tightly controlled conditions, subsequent differences in what was measured (e.g., attitudes about an issue, or perhaps purchasing or other behavioral intention) could be attributed to the exposure-nonexposure difference.

Meanwhile, for most of the first half of the 20th century, there existed a widespread assumption—among scientists and the public—that stimuli such as mass persuasive messages could elicit powerful responses, even outside the experimental laboratory. Why?

Propaganda, as seen during the world wars, was new and frightening (Lasswell, 1927; Shils & Janowitz, 1948). Reinforcement came in the form of a 10-volume summary of 13 Payne Fund Studies conducted from 1929 to 1932 that showed movies' power "to bring new ideas to children; to influence their attitudes; stimulate their emotions; present moral standards different from those of many adults; disturb sleep; and influence interpretations of the world and day-to-day conduct" (Lowery & DeFleur, 1995, p. 51).

Anecdotal evidence of the impact in Europe of Communist or Nazi oratory or, in America, the radio demagoguery of Father Charles E. Coughlin (Stegner, 1949) heightened concern over mass messages and collective behavior. Broadcast media demonstrated a capacity for captivating, mesmerizing, and holding people in rapt attention and for inciting collective panic (Cantril, Gaudet, & Hertzog, 1940). With the rise of commercial advertising and public relations agencies, carefully organized persuasive campaigns used messages that were constructed to make people do what a communicator wanted (Emery, Emery, & Roberts, 2000; McLeod et al., 2009). Communication media were increasingly able to leapfrog official national borders and boundaries and were believed capable of undermining national goals (Altschull, 1995).

These assumptions about powerful media effects were consistent with the early-20th-century behaviorist tradition and contributed to early models or theories of communication effects that used metaphors such as *hypodermic needle* or *bullet*. In the language of the latter, all one had to do was shoot a persuasive message

(a bullet) at the helpless and homogeneous mass audience, and the communicator's desired effects would occur. Some of the data generated in experimental studies of messages and their effects on attitudes were interpreted as supporting these assumptions of powerful effects.

Of course, the assumption that audience members were uniformly helpless and passive was a major one. Methodologists dating back to Carl Hovland warned of the artificiality of controlled and contrived conditions in laboratory settings and cautioned that experimental attitude-change findings lacked real-world generalizability (Hovland, 1959). Still others suggested that scientists' emphasis on understanding how to best do things to the audience was inappropriate; Bauer (1964) questioned the "moral asymmetry" (p. 322) of such a view of the public.

Nonetheless, content analysis found a legitimate home within the powerful effects perspective because of the implicit causal role for communication content described in the models, tested in the experiments, and ascribed—by the public as well as many scientists and policymakers—to content, whether the content in question was propaganda, popular comics or films, pornography, political promises, or persuasive advertisements.

In short, communication content was important to study because it was believed to have an effect (Krippendorff, 2004a; Krippendorff & Bock, 2009). Scholars scrutinized content in search of particular variables that, it was assumed, could affect people. One researcher might thus catalog what kinds of suggestions or appeals were used in propaganda, another might describe the status or credibility of sources in persuasive messages, another might describe the values reflected in films starring a popular star, and still others might analyze whether antisocial behavior was sanctioned, applauded, or ignored in popular television programs.

Limited Effects?

However, the assumption that powerful effects were direct and uniform was eventually challenged as simplistic and replaced by more careful specification of factors that contribute to or mitigate effects (Severin & Tankard, 2000). Experimental findings had, in fact, suggested that in some cases, mass media messages were effective in changing subjects' knowledge but not the targeted attitudes or behaviors. Researchers conducting public opinion surveys brought field observations that ran counter to cause-effect relations found in laboratory settings.

Examination of how people are exposed to messages in the real world and the mixed results on real-world effectiveness of persuasive message "bullets" suggested that a more limited effects perspective might be worth exploring (Chaffee & Hochheimer, 1985; Klapper, 1960). Under natural, nonlaboratory field conditions, members of the audience (who, it turned out, were not uniformly helpless or passive, nor, for that matter, very uniform in general) used media and messages for their own individual purposes, chose what parts of messages—if any—to attend, and rejected much that was inconsistent with their existing attitudes, beliefs,

and values. Social affiliations such as family and community involvement were important predictors of people's attitudes and behaviors, and networks of personal influence were identified as key factors influencing their decisions (Carey, 1996).

Real-world (nonlaboratory) audience members had only an opportunity to be exposed to particular media content. They were not forced to attend to the message like experimental participants. Their decision to accept, adopt, or learn a message was a function of their existing psychological and social characteristics and not necessarily of mere exposure to, perhaps, the manipulated, artificial credibility of a source trying to persuade as part of an experimental treatment.

Contingency Effects?

Research during the last half century suggests that the effects—powerful or limited—of mass media are contingent on a variety of factors and conditions. This contingency effects approach allows theorists to reconcile conflicting conclusions of the powerful and limited effects approaches. Rather than being the result of any single cause (e.g., the message), communication effects reflected a variety of contingent conditions (e.g., whether the message is attended to alone or as part of a group). Of course, some contemporary research on content—particularly that aimed at impressionable children, whether online, in video games, or elsewhere—continues to adhere implicitly to powerful effects assumptions.

However, despite increasing interest in what people do with media messages and how or if they learn from them—rather than a powerful effects focus on what media do to people's attitudes—content analysis remained an important means of categorizing all forms of content. The communication messages that might previously have been analyzed because of assumed persuasive effects were now related to differences in psychological or social gratifications consumers gained from media use (e.g., escape from boredom, being "connected" to what is going on, or having something to talk about), to differences in cognitive images they developed and retained (e.g., views of appropriate gender roles, of how safe or "mean" the world is, or of the acceptability of antisocial acts), and to different views of what was important on the news media agenda (e.g., what issues in a political campaign were worth considering and what attributes of issues were critical).

In short, different theories or hypotheses about varied cognitive (not attitudinal) effects and people's social and psychological uses and gratifications of media and media content were developed that reflected a view of the audience experience far different from the "morally asymmetrical" view criticized by Bauer (1964, p. 322). These triggered additional studies aimed at measuring content variables associated with those uses and effects.

For example, content analysts have categorized entertainment content to answer questions about how ethnic and gender stereotypes are learned (Mastro, 2009; Smith & Granados, 2009). They have looked at content ranging from daytime soap operas to reality programs because of guiding assumptions about

psychological and social gratifications people achieve by viewing those shows (Rubin, 2009). They have examined victim gender in "slasher" horror movies because of concern that the violence in such films has a desensitizing effect (Sapolsky, Molitor, & Luque, 2003; Sparks, Sparks, & Sparks, 2009). They have analyzed movement of political issues on and off the media's agenda during political campaigns, assuming that readers can recognize the priorities journalists give issues and issue attributes (by emphasis, placement, and repeated coverage), internalize that agenda, and use it as a basis for voting decisions (McCombs & Reynolds, 2009; McCombs & Shaw, 1972). And, systematic content analysis has shown how different communicators "frame" the same events, because scholars argue that frames shape interpretations (Reese, Gandy, & Grant, 2001; Tewksbury & Scheufele, 2009). Tankard's (2001) definition of framing in news is illustrative: "A frame is a central organizing idea for news content that supplies a context and suggests what the issue is through the use of selection, emphasis, exclusion, and elaboration" (pp. 100–101).

Content analysis remains an important tool for researchers exploring more directly how individual-level cognitive processes and effects relate to message characteristics (Bradac, 1989; Oliver & Krakowiak, 2009; Shrum, 2009). For example, scholars have argued that important differences between one message's effects and another's may be due less to the communicator's or audience member's intent (e.g., to inform or be informed) than to different cognitive or other processes (e.g., enjoyment, entertainment, arousal, mood management, and so on) triggered by content features or structure (Bryant, 1989; Bryant, Roskos-Ewoldsen, & Cantor, 2003; Oliver & Krakowiak, 2009; Thorson, 1989; Vorderer & Hartmann, 2009; Zillmann, 2002).

Content Analysis and the Context of Production

Thus far, our discussion has implicitly viewed communication content as an antecedent condition, presenting possible consequences of exposure to content that may range from attitude change (in a powerful effects, attitude-change perspective) to the gratifications people obtain from media use or the cognitive images they learn from it. However, content is itself the consequence of a variety of other antecedent conditions or processes that may have led to or shaped its construction. One classic example is suicide notes. Suicidal people write notes that include clues that experts recognize as links to—and consequences of—the multiple factors that collectively constitute the writer's emotional and psychological state (Osgood & Walker, 1959).

Less dramatic, one can view news content as the consequence of a number of antecedents. A news Web page might be conceived as reflecting, or being a consequence of, the news organization's selection from an array of possible stories, graphics, interactive features, and other content. In terms of the individual site manager or editor, that page's content is a consequence of editors' application of