RISK COMMUNICATION IN THE WORKPLACE:
AN ANALYSIS OF COMMUNICATIONS TOOLKITS
AS RHETORICAL PRACTICE

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by

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TABLE OF CONTENTS

FIGURES........................................................................................................vi
TABLES...........................................................................................................vii
ACKNOWLEDGEMENTS .................................................................viii

Chapter 1: Occupational Risk Communication: Literate Practice, Rhetorical Frameworks, and the Mission of Safety.....1
  Risk Communication: Definitional Considerations......5
  Occupational Risk Communication.......................8
  Workplace Rhetoric.........................................................13
  Complications of Workplace Risk Communication .....19
  Relevance of Study.........................................................24
  Research Questions......................................................29
  Chapter Synopses.........................................................30

Chapter 2: Field Site, Enthymemes, and Topoi: Theoretical and Methodological Background........................33
  Data and Analysis........................................................34
  The Automotive Manufacturing Plant.......................35
  Participants in Study......................................................37
  The Safety Department.................................................41
  The Toolkit Talks.........................................................48
  What are Enthymemes?................................................50
Appendices....................................................187
References....................................................197
List of Figures

2.1 Construction of the Communications Toolkits.................45
List of Tables

2.1 Percentage of Occurrences for All Categories of Topoi found in Demonstration............................73

3.1 Percentage of Occurrences Occurring across Corpus for Common Categories of Topoi..............................102

4.1 Percentage of Occurrences Occurring across Corpus for Special Categories of Topoi.............................119

4.2 Frequency of Risk-specific Vocabulary Found in Corpus....121
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Chapter 1

Occupational Risk Communication:
Literate Practice, Rhetorical Frameworks,
and the Mission of Safety

This dissertation focuses on rhetorical practices in occupational risk communication. The National Research Council (1989) defines risk communication as an “interactive process of exchange of information and opinion among individuals, groups, and institutions; often involves multiple messages about the nature of risk or expressing concerns, opinions, or reactions to risk messages or to legal and institutional arrangements for risk management.” Accordingly, occupational risk communication restricts such process and messages to issues concerning the workplace.

The study that follows examines the Communications Toolkits written at a Fortune 500 automotive manufacturing plant. The Toolkits are a weekly document written by the
plant’s Safety Department for the purpose of teaching employees to avoid injuries that may result in lost work days. Though not stated as such by Safety Department personnel, it would be fair to critically read the Toolkits as a mechanism designed to mitigate the plant’s liability in the event of injury to employees. The Toolkits are constructed to address every conceivable risk confronting plant employees, and it stands to reason that employees can ultimately be held responsible if they are found to have incurred injuries because they neglected healthy precautions, practices, and work environments recommended in the Toolkits. Those considerations, while they exist of course, are not within the scope of this study — even if the liability issue exists, the Safety department still attempts to persuade its employees to be safer.

First published during 1999, the Communications Toolkits were envisioned as part of the “Internal Communication Strategy,” the emerging team concept, in other words, developed by their division. Taking into account their use as everyday texts, the examination observes and analyzes the manner by which the
Communications Toolkits constitute a form of risk communication. At the same time, the examination considers how the Communications Toolkits complicate existing representations of risk communication and, more specifically, occupational risk communication. To these ends, this study assesses qualities of the Toolkits and suggests that a sub-discipline of the field exists that may be more narrowly distinguished as safety communication. Accordingly, the study explores the ways by which the Toolkit’s textual qualities can be re-envisioned for greater effectiveness as a practice of safety communication to better serve safe working conditions for all employees.

More specifically, this study develops systematically-derived taxonomies of written discourse based on Aristotle’s taxonomy of enthymemes and topoi. The main data set evaluated by the taxonomies is a corpus of 39 sequential Communications Toolkits that begins with the December 8, 2003 edition of the Toolkit and concludes with the October 25, 2004 edition. This data set is drawn from a larger data collection between November 2003 and February 2005 that itself included a range of complementary texts
The enthymemes offer a systematic approach to identifying how arguments are structured in texts and serve as heuristic for constructing and interpreting discourse. The categories point toward storehouses of commonly-held values, mechanisms for uncovering warrants, and generative tools for developing content with respect to a specific topic. An enthymematic approach to the study of discourse thus concerns common informal argument consistent with the disciplinary, literate, and political culture of the discourse community, the workplace.

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1 This study uses Kennedy's (2007) translation of Aristotle's Rhetoric.
In brief, this study finds the Toolkits are comprised of topoi that focus on deliberating about future safety and praising current actions rather than analyzing past problems. These findings suggest a need to more carefully ascribe and delineate the way that arguments are constructed, characterizing them as belonging to the safety communication subfield and to what end within the larger scope of occupational risk communication.

This chapter first introduces the study, discussing the ways in which risk communication has been studied, providing definitions of key terms, and locating the gaps which this study addresses. Next, this chapter frames this study in terms of the scholarship risk communication, including its links with work in occupational risk communication and work place literacy. From this background emerge the problems motivating the disciplinary field and involving rhetorical issues from which the application of enthymemes to the Toolkits comes.

**Risk Communication: Definitional Considerations**

What is risk communication? To respond, this section offers an existing definition on which the analysis begins,
and links it to the *Communications Toolkits*, the documents produced by the Safety Department at the automotive manufacturing plant. I chose this definition because of its long-term broad acceptance and use within the field (see below).

As previously stated, the National Research Council (1989) defines risk communication as an “interactive process of exchange of information and opinion among individuals, groups, and institutions; often involves multiple messages about the nature of risk or expressing concerns, opinions, or reactions to risk messages or to legal and institutional arrangements for risk management.” Within this, “exchange,” or the reciprocal giving and receiving of viewpoints\(^2\), is central to the construction of the *Toolkits* (see p. 48 for detailed discussion of the *Toolkits*). Prior to the writing of the weekly *Toolkits*, Safety Department personnel consider recent conversations with Team Leaders and Team Members from the production-

\(^2\)Examples of risk communication applicable to and abstracted from the workplace include mission statements of nuclear waste facilities, the surgeon general’s warning on a pack of cigarettes, insurance policies, newspaper editorials debating consequences of overseas military intervention, and the World Health Organization’s (WHO) travel advisory concerning severe acute respiratory syndrome (SARS).
floor and sometimes, from this communicative exchange, develop content for the Toolkits. During the drafting and revising of the Toolkits, the Safety Personnel who write the texts verbally exchange information and perspectives with one another regarding relevant content. Once a draft has been written, the Communications Department reviews the Toolkits and sometimes returns the drafts to the Safety Department with recommendations for further revision (see “Chapter 2”).

Exchange is also central to the dissemination of the Toolkits. Every week, the Toolkits serve as the basis for toolkit talks, meetings during which Team Leaders deliver the content of the Toolkits orally. During these meetings, the Team Leaders converse with Team Members who wish to raise questions or concerns. Exchange continues beyond the meetings as Team Leaders and Team Members are always welcome to stop by the Safety Office to continue discussing issues addressed in the Toolkits. Exchange of perspectives relating to issues of uncertain harm or loss would include the occasional encouragement for employees to be “their brother’s keeper.” Certainly, it is fair for plant
employees to determine as precisely as possible how much harm and loss a workplace colleague can be spared if they do not demonstrate adequate sense of personal responsibility.

The phrase “multiple messages about the nature of risk” corresponds to rates of recordable injuries and lost workdays that are occasionally recounted in editions of the Toolkits. These recounts tend to take place when the rates for a given month have been above or below average. Such variance demonstrates the uncertainty of the nature of risk within the occupational environment and the need to deliberate about it.

**Occupational Risk Communication**

As an exchange of information and perspectives relating to issues of uncertain harm or loss, the Communications Toolkits are consistent with the essential characteristics of risk communication. Specific to workplace issues, the corpus also belongs to the more focused field of occupational risk communication. In the workplace, occupational communication is designed to help reduce the number of injuries and lost workdays, in effect,
to reduce the costs of workers’ compensation. Workers’ compensation, according to the most recent statistics made available by the National Safety Council (2004), totaled $156.2 billion, $30.9 billion from medical expenses alone. The remaining billions total from lost wages and lost productivity; 115,000,000 work days were lost (p. 51).

Accounting for some of the expense of these lost work days, UAW Local 2209 (2008) estimates that U.S. automakers lose $17,000 for each lost workday. These costs of workplace injury increase every year and include more than dollars and cents. The National Safety Council (2004) also reported 4,500 unintentional work-related deaths and 3,400,000 disabling injuries (p. 48). Despite recent advances in occupational technology and in legislat ed regulation of occupational demands, risk still pervades the workplace.

At present, workplace risk poses the greatest threat to blue-collar professionals. The U.S. Bureau of Labor Statistics (2005) writes that seven of the top ten professions reporting the most days away from work due to
nonfatal occupational injuries are blue-collar professions.\textsuperscript{3} That is not to say risks are not inherent to a range of professions; consider, for example, the increased risk of tuberculosis to medical workers and homeless shelter assistants during the 1990s (Field, 2001). Nonetheless, for blue-collar professionals, chemicals and particles such as benzene, asbestos, and lead can induce greater risks of, respectively, leukemia, asbestosis, and destruction of reproductive capabilities (Beauchamp and Bowie, 1993).

The comparatively greater risk confronting blue-collar workers includes not only cumulative effects but also catastrophic occurrences. Gegax, Gerking, and Schulze (1991) report that catastrophic risks for white-collar and non-union workers are comparatively absent. Catastrophic risk for blue-collar employees is certainly apparent; Mazzola (2000) notes that personnel working on offshore platform installations face exposure to toxic, flammable gasses released from pipelines ruptured by dropped loads

\textsuperscript{3}The profession listed as reporting by far the most days away from work due to nonfatal occupational injury is truck drivers. The remaining nine occupations, in order of rank beginning with the most days away from work, are nursing aides, nonconstruction laborers, construction laborers, janitors and cleaners, carpenters, assemblers, cooks, stock handlers and baggers, and registered nurses.
during crane activities. Certainly, working-class individuals and working-class communities regularly face potential physical harm and, in effect, financial harm across a broad range of frequency and magnitude. Thus, as Gegax, Gerking, and Schulze (1991) assert, the cost of safety for white-collar workers and non-unionized employees is almost nonexistent compared to the cost of safety for blue-collar workers. Yet, coal miners and construction workers often find long-term disability insurance far more expensive than for workers in many other occupations (Braus, 1994).

While the Communications Toolkits are consistent with the essential characteristics of risk communication artifacts, the corpus belongs to the more focused field of occupational risk communication because of its attempts to lessen injuries for plant workers. Risk communication, however, has become concerned with occupational safety only more recently. As Vincent Covello and Jeryl Mumpower (1985) note in their historical perspective of risk analysis and risk management, workers’ compensation statutes and standard-setting societies weren’t established
until the late-nineteenth and early-twentieth centuries. Similarly, Alan Gross (1997) notes the twentieth-century development of occupational epidemiology (the study of epidemics and their distribution) and the late-twentieth century emergence of corporate liability for workplace safety as examples of the recent development of occupational risk communication. Studying the Toolkits can inform these more recent disciplinary developments.

Consistent with the context established in the previous section of this chapter, the Communications Toolkits are part of the larger, industry-wide effort to lessen the annual multi-million-dollar costs of medical expenses, lost wages, and decreased productivity resulting from workplace injury. At their foundation, then, is the effort to reduce injuries to employees as prerequisite to the economic objectives. Such foundation is consistent with the goals underlying Mazzola’s (2000) study of risk. The Toolkits can inform studies of occupational risk, especially as documents involving deliberation to prevent accidents.

Workplace Rhetoric
In addition to its links to occupational risk communication, the Toolkits belong to and can inform work on workplace literacy and rhetoric. Just as occupational risk tends to pose the greatest threat to blue-collar professionals, Communications Toolkits are aimed primarily at production-floor employees rather than at salaried personnel. Understandably, the degree of risk as assessed by employers for various tasks within the automotive manufacturing plant sometimes differs from the degree of risk as assessed by plant employees. This section shows how some workers are very literate, while perhaps not demonstrating the same literacy skills ascribed to rank and file personnel. Indeed, workplace studies of written communication have identified literate practices or, in some cases, their ascription, as an agent of stratification between blue-collar workers and white-collar employees. For example, studying the interaction of text, genre, and political contexts within a large agricultural manufacturing corporation, Winsor (2000) observes that the literate practices of blue-collar technicians were not perceived by managers to be as extensive as the literate
practices of white-collar engineers. To explain, noting that the technicians supplemented work orders with other kinds of writing such as “service manuals, standard instruction sheets, marks on parts, drawings, and even Polaroid photos” (p. 174), Winsor observes that the supplementary texts were confined to the technicians’ work spaces while the work orders moved into the area of organizational record. Once the work orders are fulfilled, Winsor explains, “much of the knowledge-generating work that is unique to the technicians vanishes, and only the engineer’s planning seems to remain” (p. 176). Thus,

The social systems in which blue-collar workers function may be one of the factors that leads to their being considered less literate than are white-collar workers, because opportunities for and definitions of literacy reflect the work of the dominant group. (p. 181)

Because the work orders and the supplementary texts integrate the work of the technicians and engineers in the building and testing of agricultural equipment, the stratified literate practice observed by Winsor are not easily identified. Given the lack of obvious consequences when employees’ professional work does not become part of
organizational record, the effects of stratification go unrecognized. Similar operations are in effect with the construction and dissemination of the Toolkits, where content originating from the corporate website accessible to plant management is not typically cited in the texts.

Studies of workplace literacy also reveal more overt stratification. Examining workplace interactions contextualized by institutional, social, and cultural practices, Hull (1999) observes that manufacturers in a Silicon Valley electronics factory had limited ability to read and follow directions for labeling assembled circuit boards largely because their access to global knowledge about the organization’s manufacturing process was restricted. Accordingly, Hull suggests employers “might do well to rethink their notions of workers’ literate abilities and their understanding of what workers need to know” (p. 406). By extension, the enthymemes found more and less frequently in the Toolkits raise questions concerning the fields of knowledge more or less accessible to production-floor employees.

Other studies of literate practice in the workplace
note stratification that occurs before the workday begins.
Shirley Brice Heath (1983) witnessed pre-employment
stratification while observing the literate practices of
two working-class communities in the Piedmont Carolinas,
Roadville and Trackton. She reports that applications for
potential mill employees were filled out not by the
applicants but by the personnel manager during the
interview process. In reference to the post-hiring stage,
Heath (1983) further notes that, beyond space-labeling
signs and bulletin board announcements, the mills offer “no
need or direct incentive” for employees to “read and write
more than they already do” (p. 234). While all plant
employees may contribute ideas for the Toolkits, the
process by which the texts are constructed and disseminated
follow a generally hierarchical path.

In addition to Heath’s examples of literate practices
used for authoritative ends, other inquiries reveal that
literate practices increasingly complicate union activity.
Studying the impact of sharply rising literacy standards,
Deborah Brandt (2001) draws from an interview with Dwayne
Lowery, an interview that also reveals the rhetorical
effects of rising literacy standards. As a water meter reader for a municipal utility department, Lowery began active union participation during the early 1970s and is now retired. After a training experience that included helping to organize sanitation workers in the West, Lowery was hired as a field staff representative for a union local near his state capital. During the early 1970s, as Brandt explains, "the union was growing in strength and influence, reflecting in part the exponential expansion in information workers and service providers within all branches of government" (p. 53). According to Lowery, union representatives were, for a time, far more capable in the negotiating than were employer representatives because the union representatives were experienced in the work itself. "'They were part-time people,'" Lowery explains, "'And they didn't know how to calculate. We got things in contracts that didn't cost them much at the time but were going to cost them a ton down the road'" (p. 53).

This competitive advantage at the bargaining table, however, was short-lived. "'Pretty soon,'" Lowery recalls, "'ninety percent of the people I was dealing with across
the table were attorneys'" (p. 54). Using specialized employer representatives forced changes in literate activity from both sides of the negotiating table, changes that Lowery believes to have severely reduced the power of workers. As Brandt explains,

all activity became rendered in writing: the exhibit, the brief, the transcript, the letter, the appeal. Because briefs took longer to write, the wheels of justice took longer to turn. Delays in grievance hearings became routine, as lawyers and union reps alike asked hearing judges for extensions on their briefs. Things went, in Lowery’s words, "from quick, competent justice to expensive and long-term justice." (p. 54)

In turn, unions started employing college graduates with heightened literacy credentials to negotiate on their behalf. Today, the demand for heightened literacy credentials continues to intensify. For example, a local prison guard named “Rupert”⁴ had applied to a law school and was asked if he hoped to become a lawyer. “No,” he replied. Rupert then explained that he would like to work as a representative for prison employees — and felt he

⁴I am using a pseudonym to protect the privacy and professional well-being of the prison guard.
would need a legal background to keep up with the complexities of communicating at the negotiating table. Both Dwayne and Rupert are confronted with a more specialized, "‘legalistic’ form of literacy” (p. 55) that results in an ongoing rhetorical struggle for political dominance between employers and employees. Thus, literacy has provided another perspective on workplace risk, one that involves, for the purposes of this study, the need to examine how risk involves deliberation in the workplace. Although my analysis does not proceed from a perspective of literate practices as such, its conclusions do inform the kinds of questions the analysis raises.

Complications of Workplace Risk Communication

The kinds of issues addressed by the scholarship indicate workplace risk communication is a growing and significant concern. For evidence, recall the growing costs of workers’ compensation discussed previously, or take note of the fact that "half of this [twentieth] century’s worst industrial accidents (those killing more than 50 people) have occurred since 1977” (Rowan, 1994, p. 391). Further, as organized labor continues to wield less
power, working-class populations may be more attuned to the material realities of injuries in the workplace. Norros (1996) accounts for the growing recognition of risk by placing the issue of cause-effect within the context of current technological developments: “The more complex the system is, and the more flexibly it is expected to function in future use, the more difficult it is to predict and specify during design” (p. 159). Undoubtedly — and unfortunately — consequences often emerge as our impetus for learning. From this study, evidence can be observed in the October 4, 2004 Toolkit, which reports that a forklift vehicle struck and killed an employee at another automotive manufacturing plant. The incident functions as warrant for observing the plant’s pedestrian-vehicle safety guidelines.

Increased interest with risk issues is underscored by the growing concern with limiting compensation expenses. Atkinson (1999) lists nine recommendations to stem compensation costs. The Toolkits coincide with Atkinson’s

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5 Briefly, pre-incident strategies include screening before hiring, careful selection of insurers, forming interdisciplinary workers' compensation teams, safety programs, and wellness programs. Post-incident strategies include proper treatment and diagnosing causality, touching base with the injured, and alternative work injured employees.
recommendation for expanded safety and wellness programs. The hiring of the Safety Office Clerk (who was injured on the production floor) is also consistent with Atkinson’s recommendation to provide alternative work for injured employees. Moreover, interdisciplinary panels have been brought together to discuss the complications of the Workers’ Compensation System (Wyman and Cats-Baril, 1994). Interdisciplinary panels within the plant include sub-committees such as those for confined space, hazardous materials, and noise.

Some blue-collar workers, however, fail to recognize the unity of their concerns or that they should even be concerned with risk. Within the plant, some production-floor employees are resistant toward wearing (or correctly wearing) all required proper protective equipment (PPE). Other employees sometimes step outside of designated walkways when traversing the plant. As Sean Creighton and Randy Hodson (1997) explain, “when technical workers do rebel, it is frequently not in solidarity with the working class, but against being treated as proletarians” (p. 85). Complicating issues of authorship and ethos, craft
technicians often make “attempts to regain middle-class status rather than [serve] as precursors to a leadership role in a new unified working class movement” (p. 85). This confusion ultimately undermines blue-collar workers’ ability to develop ways through which they can deliberate and improve their working conditions. These issues are not unrelated to the issues that prompted the creation of the Toolkits in 1999.

Accordingly, scholars offer several arguments against preserving stratified literate practices. James Gee, Glynda Hull, and Colin Lankshear argue that “‘old’ capitalist” work environments are giving way to hiring practices involving employees who can continually and flexibly “cope with change and new knowledge” in their occupation (qtd. in Pitt, 2000, p. 115). Recognizing current trends of staff reductions, extended workdays, decreased oversight, and ongoing technical change, Gee (2000) suggests that employees should expect to “collaboratively and interactively design and redesign their work process with a full knowledge of and overlap with each others’ functions” (p. 186). Such practices can
be observed at the automotive manufacturing plant, where employees are typically trained to work across different departments. Hull (1996) argues point blank, “Contrary to popular opinion, workers don’t just need the ‘basics’”; her argument recognizes the ways workers must employ reading and writing processes to carry out occupational tasks (p. 204). Collectively, such arguments indicate that literate practices can help integrate workplaces, especially if employers are serious about working in an increasingly global economy. Again, these concerns certainly are relevant to the Fortune 500 factory at which my study was conducted.

In the previous sections, risk communication has been explored in terms of its definitional affordances, these associated with deliberation and with increasing safety in workplace situations for employees, blue-collar workers especially. Building upon this exploration, the next section posits the relevant contributions of this study to the broader area of risk communication.

**Relevance of Study**

In contributing to risk communication and associated
areas, my study of the Communications Toolkits helps complicate and build on the history of an emerging discipline. To understand, risk communication is a relatively young field of study. During the past decade, Carl Dobbs and Mark Field (1993) described risk communication as "a new academic field" as part of an effort to bring a risk perspective to the field of criminal justice. According to William Leiss (1996), risk communication is the newest of the four risk subfields—the others being risk analysis, risk perception, and risk management—and is believed to have been coined during 1984. Rowan (1991) similarly points to the 1984 Bhopal disaster in India as a central influence on the emergence of the risk communication field.

Additionally, Leiss (1996) suggests that the field has evolved in three phases. Phase I (about 1975-1984) featured an "arrogance of technical expertise," resulting in a profound distrust of experts and the institutions they represent. Phase II (about 1985-1994) featured overemphasis of persuasive techniques that undermined the rational and informational content of the messages. Phase
III (about 1995-current) seeks to build partnerships between different entities involved with risk issues. This phase hypothesizes that trust in risk communication accumulates over the long term by deeds, not just words, that make responsible risk communication possible in daily practice and not just in response to crisis events. The purpose and topical content of the Toolkits are consistent with the approach of this phase, though the function of enthymemes occurring in the Toolkits at times suggest overlaps with principles of the second phase. And, by defining the Communications Toolkits as safety communication, this study opens the door to Phase IV in the evolution of the risk communication field, an extension of the first three stages observed by Leiss.

Examining the Communications Toolkits as safety communication contrasts with Steven Katz and Carolyn Miller’s (1996) landmark case study of risk communication in terms of overt controversy (i.e. the environmental gridlock in siting a regional nuclear waste storage facility). Similarly, as indicated, the concerns that inform this study also contrast with studies based on
openly-contentious and calamitous events such as the Three Mile Island incident (Cassamayou, 1993); the Wilberg coal mine fire (Sauer, 2003; Sauer, 1994); the shuttle Challenger catastrophe (Dombrowski, 1994; Walzer and Gross, 1994; Winsor, 1990); the public policy debate over newborn HIV testing in New York State (Scott, 2002); and the Brown Lung Association’s (BLA) fight for workers’ compensation and for reduced dust exposure in textile mills throughout the South (Botsch, 1993). Indeed, as David Meeker, Roger Schrum, and Sharon Williamson (1991) point out, “risk and crises” are not always “cataclysmic events or disasters” (p. 28).

In contrast, the Communications Toolkits constitute everyday texts and, more specifically, everyday technical writing, and accordingly part of a less studied kind of workplace communication. The documents address both on-clock and off-clock workplace risk issues. On-clock workplace risk issues addressed in the Toolkits include wearing proper protective equipment (PPE), following safe task procedures, maintaining aisle safety, avoiding muscle strains, getting the flu vaccine, and emergency
information. Off-clock workplace risk issues addressed in the texts include "buckling up" while driving, avoiding driving while under the influence (DUI), lighting fireworks safely on the Fourth of July, refraining from too many lifestyle changes at once, getting enough sleep, drinking limited amounts of caffeine, understanding winter safety, and practicing fire awareness at home. Although employees may stop by the Safety Office anytime to suggest content for the Toolkits, the actual drafting is done by Safety Department Personnel; revision is performed by both Safety and Communications Department personnel. These responsibilities for writing assumed by salaried staff are consistent with the hierarchical literate practices found in Heath (1983), Hull (1999), Winsor (2000), and Brandt (2001).

As everyday texts, the Communications Toolkits also inform Rowan's influential study of risk communication; for example, Katz and Miller's study (1996) cites Rowan's work as one of its motivating influences. Because risk communication attempts to persuade individuals what risks exist and how to respond to them, it can be examined as
rhetorical activity. Accordingly, Rowan (1994) uses a rhetorical model to discuss risk communication, which assumes that “risk communication situations are like all communication situations: they include sources, receivers, messages, channels, and contexts” (p. 402).

Rowan’s rhetorical model also assumes that risk communication situations “are distinct only in their topic” and that these topics are often controversial and technically difficult to understand. Therefore, risk communication is typically complicated by “feelings of suspicion, confusion, ignorance, disagreement, and apathy” (p. 402). For example, at the automotive fabrication plant, production floor employees sometimes respond with such feelings when asked to adopt specified safe practices (such as the wearing of PPE) that contradict occupational practices already in effect, even practices in effect for decades for the most experienced employees. She also offers an alternative to the democratic approach, which she criticizes for assuming the fair and full participation from all affected parties should by itself solve all risk communication problems.
My study of the Communication Toolkits responds positively to Rowan’s (1991) observation that one research problem plaguing risk communication studies is that existing research has placed too much emphasis on risk and not enough on communication. Accordingly, this dissertation study reconsiders the “rhetorical model” or risk communication posited by Rowan (1994) by examining the plant managers’ persuasive use of the Communications Toolkits.

In sum, by examining the Toolkits as an artifact of safety communication, this study supplements the work of previous scholars on risk communication, suggesting not that risk communication does not exist but that it is not the only perspective on risk and safety research can take.

**Research Questions**

Against this background, this study seeks to explore the following research questions. How do the Communications Toolkits constitute a form of risk communication? How do the Toolkits complicate existing representations of risk communication and, more specifically, occupational risk communication? In what
ways do the qualities of the Toolkits suggest the existence of a more narrow safety communication sub-discipline? How might the Toolkit’s textual qualities can be re-envisioned for greater effectiveness as a practice of safety communication?

Because the scholarship identifies deliberation and persuasion as key elements of risk communication, I have chosen to analyze the Toolkits as arguments and, from a rhetorical perspective, as enthymemes. Subsequent chapters will explain the links between enthymemes and arguments and between enthymemes and deliberation.

**Chapter Synopses**

Having provided the background on which this study of risk communication rests, Chapter 2, “Field Site, Enthymemes, and Topoi: Theoretical and Methodological Background,” begins by presenting the primary data and secondary materials, then describes the workplace and participants from which I gathered data and the local community in which the workplace is embedded. The second chapter further describes the methods and procedures used to develop a taxonomy of written discourse found in the
corpus of Communications Toolkits. Chapter 3, “The Communications Toolkits: Analysis of Common Topoi,” analyzes the enthymemes based on common topics used in a corpus of 39 Communications Toolkits and presents the frequency with which each of the categories occur across the corpus. Chapter 4, “The Communications Toolkits: Analysis of Special Topoi and their Frequency,” first presents the taxonomy of two categories of special topoi occurring across the corpus. The fourth chapter then offers a quantitative analysis of risk-specific vocabulary occurring in the corpus and addresses some of the key terminology central to common definitions of risk communication. Based on the findings from the quantitative analysis, the chapter offers further characteristics of safety communication. Chapter 5, “Discussion: The Toolkits as Safety Communication,” extends the taxonomy of written discourse by considering in detail how the Communications Toolkits complicate existing representations of risk communication. Chapter 6, “Conclusion,” discusses the purpose of the study, the results of the study, and directions for further research.
Chapter 2

Field Site, Enthymemes, and Topoi:
Theoretical and Methodological Background

First, this chapter describes the primary data set, then notes secondary materials gathered from the plant and accounts for their complementary role in this study. After identifying the amount of data collected from each of the sources, this chapter then describes the workplace from which data was gathered and the local community in which the workplace is embedded. The discussion then turns to “Participants in Study,” the individuals who participate in the construction, dissemination, and consumption of the Communications Toolkits. This chapter then discusses the mission by which the Safety Department operates and explains how the Safety and Communications Departments create and disseminate the weekly Toolkits. Finally, this chapter describes the methods and procedures used to develop a taxonomy of written discourse found in the corpus of Communications Toolkits, including a demonstration of
the four stages by which the taxonomy was constructed.

**Data and Analysis**

The data collection for this study began during November 2003 and continued for 16 months, until February 2005. The collection culminated in a corpus of 39 Communications Toolkits. The corpus begins with the December 8, 2003 edition of the Toolkit and concludes with the October 25, 2004 edition. This corpus was analyzed to find the enthymemes within it. Each enthymeme is classified according to Aristotle’s notions of common and special topoi (see Chapters 3, 4, and 5). Data from these 39 Toolkits will henceforth be referred to as the corpus.

In addition to the corpus, this study included complementary data. Specifically, the collection of data from the automotive manufacturing plant garnered approximately 115 documents⁶, four hours of formal

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⁶In addition to the data I was allowed to keep, I was also permitted to examine, on-site, 28 “Health and Safety Incident Reports,” culled from the plant department with the highest rate of injuries and near-misses. I was also permitted to examine, on-site, 2 charts. One chart was a line graph detailing “2003 Cumulative Lost Time Incidents.” The other chart was a bar graph detailing “2003 Cumulative Recordables Incidents.”
interviews\textsuperscript{7}, 176 pages of field notes, one hour of audiotape, one hour of videotape, and 3 articles of personal protective equipment\textsuperscript{8} (PPE). The complementary data sources provide the context necessary to help understand the corpus (see Chapters 4 and 5). Both the corpus and complementary data allowed this dissertation study to include events occurring inside of the plant. Together, the corpus and supporting documents reinforce my understanding of the toolkit talks.

The Automotive Manufacturing Plant

The automotive manufacturing plant is a massive division of a Fortune 500 corporation located in Ohio. The plant is situated in the middle of a quiet farming community of approximately 3,600 residents. The immediate environment notwithstanding, the plant is widely credited by regional residents and leaders as serving as the economic epicenter of the extended tri-county community of approximately 595,000 residents. The economic importance

\textsuperscript{7}My \textit{in-situ} worksite observation also included informal conversation with plant participants.

\textsuperscript{8}The personal protective equipment gathered includes Kevlar sleevelets, Howard Leight earplugs, and Norton 180 goggles.
of the plant has grown all the more in stature since the closing of most of the region’s steel mills during the late 1970s and early 1980s.

The history of the automotive manufacturing plant can be traced to 1956 when its parent corporation bought 1,075 acres of farmland. Ground was broken for the plant during 1964, and the plant’s first vehicle was produced during 1966. One of the world’s largest automotive production plants, the complex sits on 1,092 total acres that includes a 40-acre wildlife preserve where bat houses are used instead of poison for mosquitoes around the wetlands. The plant itself totals 2,309,490 square feet. This square footage is navigated by three miles of roadways and 1.6 miles of scrap conveyors. Producing an average of 350,000 vehicles per year, the plant uses 1.3 million gallons of water per day and about 253 million kilowatts of electric per year. The plant further receives 779 tons of steel per day while shipping out 429 tons.

In terms of economic impact, the plant employs about 4,000 hourly employees and about 500 salaried personnel. The plant annually pays approximately $302 million in wages
and $155 million in benefits. The plant’s contribution to the local economy includes $17 million in payroll taxes, $1.1 million in real estate taxes, $1 million in sales/use taxes, and $814 thousand in personal property taxes. During 2003, the plant donated $429,000 to the United Way and $55,000 to other charitable entities.

Participants in Study

The participants in this dissertation study include both salaried personnel and production-floor employees. There were four main categories of participants: Safety Department personnel, Communications Department personnel, production-floor Team Leaders (formerly titled as Shift Supervisors), and production-floor Team Members.

Safety Department personnel are part of the salaried workforce at the automotive manufacturing plant. Safety Department personnel include the Safety Supervisor, the Safety Representative, and the Safety Office Clerk. The Safety Department personnel are assigned by the plant’s Personnel Director and serve as an administrative branch of the worksite. The Safety Department assumes responsibility to communicate with other departments and negotiate when
competing concerns arise, such as quality issues and target production rates. At the same time, the Safety Department is afforded an authoritative position within the plant’s structural hierarchy and political framework. To explain, safety is explicitly the overriding priority in all decisions relating to plant policy and practice. Serving as an administrative entity, the Safety Department is charged with an exhaustive range of responsibilities that include but are not limited to

--Ensuring compliance with regulations set by the Occupational Safety and Health Administration (OSHA).
--Monitoring OSHA record-keeping data.
--Investigating, recording and reporting all OSHA recordable injuries and lost-time accidents.
--Answering safety-related calls that cannot be answered by the committee person or supervisor on the production floor.
--Maintaining and updating plant policy and procedures.
--Co-chairing and administering sub-committees such as those for confined space, hazardous materials, and noise.
--Approving or denying safety-related suggestions.
--Signing all purchase requisitions for plant.
--Overseeing the annual safety audit.
--Interfacing with contractor safety people.
--Approving all new equipment and power-Industrial vehicles into facility.
--Conducting weekly safety observation tours.
--Constructing daily report on any safety issue
that arises.
--Producing videotape for quarterly employee meetings.

Moreover, the Safety Department writes the text for the weekly **Communications Toolkits**, which are the focus of this study.

The Communications Department personnel are also part of the salaried workforce at the automotive manufacturing plant. Communications Department personnel include the Communications Integrator and the Communications Coordinator. While the Communications Integrator is the lead authority in the Communications office, the Communications Integrator and Communications Coordinator work collaboratively to prepare a wide range of messages for audiences within and external to the plant. For example, the Communications Integrator and Communications Coordinator help prepare newsletters including the **Tuesday Times** and the **Communicator**, internal videos aired in the production-floor break areas, external advertisements such as those aired on radio, and public speeches given on behalf of the plant. Additionally, the Communications Department personnel maintain and update facts and figures
relating to the plant, including the facts and figures shared previously in this chapter. The Communications Department personnel format the weekly Toolkits and have the latitude to edit or revise the printlinguistic text prepared by the Safety Department.

The production-floor Team Leaders (formerly called Shift Supervisors) are part of the hourly workforce at the automotive manufacturing plant. Team Leaders are responsible for making sure the Team Members they supervise are complying with safety policies and procedures established by the Safety Department. Team Leaders are also responsible for monitoring hourly performance, in other words, for inspiring their teams to meet or even exceed target production rates. To this end, an “Hourly Performance Board” sheet (see “Appendix A”) must be completed with the number of “jobs built” each hour, the “Problem” involved when target rates are not met, and the “Counter Measures” taken to solve the problem. In addition to overseeing safety and production, Team Leaders must also monitor the quality of the parts produced. In this case, a part must be examined at least every two hours with a “Last
Part Analysis Tag” (see “Appendix B”) completed to indicate whether parts are “okay for next run” or if repairs are needed. Team Leaders are responsible for verbally disseminating the content of the Communications Toolkits to their teams during the weekly toolkit talks.

The Team Members are also part of the hourly workforce at the automotive manufacturing plant. The Team Members perform the physical labor of producing parts for automobiles of various models. Parts produced by the Team Members include but are not limited to doors, chassis, hoods, floorpans, roofs, compartments, and body sides.

**The Safety Department**

This section offers a more in-depth description of the Safety Department, which authors the printlinguistic text for the weekly Communications Toolkits. To begin, the description elaborates on the mission according to which the Safety Department operates; it then discusses how the Safety Department works with the Communications Department to create the Toolkits, a process that is sketched in Figure 2.1.

The primary purpose of the Safety Department is to
limit the number of recordable accidents and reduce the number of injuries that result in lost work days. In the words of the Safety Representative,

In safety, it comes down to numbers. [Fewer] recordable accidents and fewer injuries that result in lost work days. This year, there have been 18 recordable accidents; last year at this time, there was 28. This year, so far, there have been 3 lost workdays, which is also down from last year. We like to see visible results in safety attire. Caps, sleevelets, harnesses. The investment [of the Communications Toolkits] is the constant reminding, teaching, and educating. The return is the numbers. It’s almost like golf — the lower the numbers, the better off you are. Improved numbers also offer tangible evidence of improvement to the plant manager and the regional manager who visits periodically. (personal interview)

Indeed, the automotive manufacturing plant has been burdened by the costs of workers’ compensation as discussed in “Chapter 1.” Consequently, both the plant and its parent Fortune 500 corporation have been proactive in attempting to stem compensation costs. These attempts include following Atkinson’s (1999) recommendations to stem the expense. The effort to limit recordable accidents and lost work days is facilitated through a broader vision of
goals, methods, accountability, and internal motivation. This broader vision can best be understood through the Safety Department’s Mission Statement:\footnote{Consistent with the pseudonymous practice in this dissertation, the corporate name of the manufacturing plant has been twice removed in this blocked reprint of the mission statement. In each case, the corporate name has simply been omitted with no substitute in its place. A copy of the actual mission statement is included in the Appendices, where the corporate letterhead has been omitted as well.}

\textbf{HEALTH AND SAFETY POLICY}

We are committed to protecting the health and safety of each employee as the overriding priority of this Corporation. There will be no compromise of an individual’s well-being in anything we do. The implementation of actions to help our employees realize a healthy, injury-free environment is a leadership responsibility. Continuing support of this effort is the responsibility of every one. We will lead the team to ensure that we protect the well-being of every member. (See “Appendix C”)

Consistent with this mission, the Communications Toolkits began during 1999 as a directive from corporate headquarters in Detroit. The order was issued with the belief that the Toolkits could help decrease the costs of workplace injury. The Toolkits were further envisioned as part of the emerging “Internal Communication Strategy” developed by the division. To explain, the Toolkits were
part of the emerging team concept with the goal of facilitating 1) common meetings; that 2) everyone would look forward to; 3) every week; and 4) to recognize issues of importance.

The printlinguistic text of the Toolkits is written by the Safety Supervisor and Safety Representative, sometimes with input from the Safety Office Clerk. All plant employees may make suggestions for upcoming Toolkits. To do so, employees typically contact their Team Leader who will in turn forward the suggestions to the Safety Department.

Figure 2.1 sketches the process by which the Safety Department works with the Communications Department to create the Toolkits. The Safety Supervisor and Safety Representative try to write the draft by Wednesday every week. The Communications Coordinator calls the Safety Department on Thursdays if the draft has not yet been written. Throughout the week, the Safety Supervisor and Safety Representative record notes on “Remember” cards (see “Appendix D”) based on observations made or suggestions received during their tours of the production floor. When
they write, the Safety Supervisor usually sits at the computer while the Safety Representative sits behind. As they are drafting, they ask themselves

"What happened this week?"
"What happened recently?"
"What is happening next week?"

The Safety Supervisor usually does the typing, and they both ask themselves and each other, “How’s this sound?” While asking this question, other ideas usually come to mind.

\begin{center}
\begin{tikzpicture}
\node[draw] (SS) {Safety Supervisor and Safety Representative};
\node[draw, below of=SS] (Draft) {Draft Printlinguistic Text for Toolkit};
\node[draw, left of=Draft, xshift=-3cm] (Input) {Input from Safety Office Clerk};
\node[draw, right of=Draft, xshift=3cm] (Input2) {Input from Production Floor};
\node[draw, below of=Draft] (CI) {Communications Integrator and Communications Co-ordinator Format, Edit, and Revise Text};
\node[draw, below of=CI] (PR) {Press Room Clerk Photocopies Toolkits};
\node[draw, below of=PR] (BSA) {Body Shop Annex Clerk Places Copy of Toolkits in Mailbox of Each Group Leader};
\node[draw, below of=BSA] (DoWeGetThis) {Do we get this?};
\node[draw, below of=DoWeGetThis] (Node1) {What happened this week?};
\node[draw, right of=Node1] (Node2) {What happened recently?};
\node[draw, right of=Node2] (Node3) {What is happening next week?};
\draw[->] (Input) -- (SS);
\draw[->] (SS) -- (Draft);
\draw[->] (Draft) -- (Input2);
\draw[->] (Draft) -- (CI);
\draw[->] (CI) -- (PR);
\draw[->] (PR) -- (BSA);
\draw[->] (BSA) -- (DoWeGetThis);
\draw[->] (DoWeGetThis) -- (Node1);
\draw[->] (DoWeGetThis) -- (Node2);
\draw[->] (DoWeGetThis) -- (Node3);
\end{tikzpicture}
\end{center}

\textbf{Figure 2.1: Construction of the \textit{Communications Toolkits}}
When the Safety Supervisor and Safety Representative are “pinched” for ideas, they draw from their computer library of recurrent topics or draw from the internally-accessible corporate homepage.

After the Safety Supervisor and Safety Representative finish drafting the printlinguistic text for the Toolkits, the text is then forwarded to the Communications Department. The Communications Integrator and Communications Coordinator peruse the text and ask themselves, “do we get this?” If the answer is no, the text is sent back to the Safety Department for rewriting. Whereas numbers, in other words, reducing the number of recordable injuries and lost workdays, is foremost from the Safety Representative’s perspective, it is message, in other words, reinforcement and redundancy, that is foremost from the Communications Integrator’s perspective:

The Communications Toolkit is a common message of themes pertinent to the business today. It is a timely message that must take the message and show how the message works. For example, if there was a fire, why was there a fire? Was the area not clean? Were the proper tools not in place? All messages of the Toolkits are relative to their environment today. During the winter,
the Toolkit is going to caution against slips and trips. During the summer, the Toolkit is going to caution against shedding sleevelets, against exposing one’s skin. The Toolkits are about reinforcement. “Redundancy” is highly valued.

On average, we have a 46-year-old workforce. The average employee has worked here 24-25 years. The environment becomes too user friendly, and people start taking chances. The environment is never user friendly. Employees begin to think, “it never happens,” but it does. It is the employees with 30 years experience who drop things on their foot. (personal interview)

If the forwarded Toolkit draft is coherent, the Communications personnel then format the text within the standard boilerplate design (which includes the “Supervisor’s Necktie” logo) and incorporate contingent design features such as lines, boxes, shades, and font types. The Communications personnel also edit the printlinguistic text and set typefaces not already used by the Safety personnel.

Once the Communications personnel edits and formats the text written by the Safety personnel, the Toolkits are then sent to the Press Room Clerk for photocopying. After the photocopying takes place, the copies are sent to the body shop Annex Clerk who places a copy of the Toolkits
into the mailbox of each Team Leader. Every week, 150 Toolkits are printed. Every Team Leader and Plant Manager receives a copy. The Team Members — to whom the content of the Toolkits are orally disseminated by the Team Leaders — do not each receive a copy, but extra copies are placed in holders for those who wish to take a copy.

**The Toolkit Talks**

The toolkit talks are scheduled for each Monday. At the discretion of Team Leaders, the toolkit talks may be held at alternative times during production lulls such as those caused by machine breakdowns. Also at the discretion of Team Leaders, the content of the Toolkits may be distributed over several talks during the week.

The toolkit talks take place in each department’s break area and last five to ten minutes each. There is a good measure of flexibility in how the Team Leaders conduct their toolkit talks. This flexibility certainly contrasts with, say, the rigid procedures of city council meetings typical of municipal government. In presenting the content of the *Communications Toolkits*, the Team Leaders have the
freedom to present the content extemporaneously. In other words, the Toolkits can be used as notes or an outline — with Team Leaders articulating the content of the texts as they go along, supplementing details and explanations not explicitly offered in the Toolkit texts. Alternatively, the Team Leaders can read the Toolkits verbatim. However, the overwhelming majority of the Team Leaders prefer to conduct the toolkit talks extemporaneously.

Having discussed the field site in which the study took place and the workplace and the community in which the site is embedded, and the process by which Communications Toolkits are produced and disseminated, the next section turns to the theoretical and methodological grounding informing the analysis of the Toolkits. To set up the analysis of the Toolkits and discussion of them, the remainder of this chapter describes the methods and procedures used to develop a taxonomy of written discourse found in the corpus of Communications Toolkits as well as the taxonomy itself. To these ends, the following sections review two key terms central to the study of rhetoric:
enthymemes and *topoi*. This terminology is essential to the study because it provides a lens for exploring how arguments — including those in the *Toolkits* — are constructed, grouped, and ultimately understood. This chapter concludes by demonstrating the three stages by which the taxonomy was used for analysis.

**What are Enthymemes?**

Aristotle treats enthymeme extensively in his *Rhetoric* and, in that text and to an extent, the *Topics* where he discusses syllogisms, Aristotle offers the enthymeme its systematic treatment. For Aristotle, the enthymeme is the persuasive entity overlooked by previous rhetoricians when it is in fact the “body of persuasion” (1.2.1). That is, Aristotle thinks his rivals, the sophists, discussed and taught matters unessential to rhetoric. Since Aristotle’s treatment, the enthymeme, or the rhetorical syllogism, and its distinction from dialectical syllogisms have maintained scholarly interest. This discussion first considers the dialectical syllogism because it is a standard of formal logic and, thus, more widely known than the enthymeme.

The syllogism is made up of three propositions. The
universal truth is the major premise that is logically valid. In the well-known example below, the central term in the major premise is the predicate “mortal beings.” The key term of the specific case, or minor premise, in the example is the subject “Socrates.” The conclusion then brings together the key terms of the major and minor premises, thus connecting the deductive chain of reasoning:

Major Premise: All men are mortal beings.
Specific Case: Socrates is a man.
Conclusion: Therefore, Socrates is a mortal being.

In contrast to the syllogism, enthymemes have “come to be regarded as an abbreviated syllogism — that is, an argumentative statement that contains a conclusion and one of the premises, the second premise being implied” (Corbett, 1965, p. 62). Distinguishing dialectical syllogisms from rhetorical syllogisms, or enthymemes, Aristotle states “for it belongs to the same capacity both to see the true and [to see] what resembles the true” (Rhetoric, 1.1.11). This statement is subsequently reinforced with the assertion, “it is a function of one and the same art to see the persuasive and [to see] the
apparently persuasive, just as [it is] in dialectic [to recognize] a syllogism and [to recognize] an apparent syllogism" (Rhetoric, 1.1.14). When these statements are unpacked, it is clear that Aristotle labels dialectical syllogisms as true in a logical sense. Conversely, Aristotle labels enthymemes as apparently true. Its premises are based not on logically valid premises as demonstrated in the Socrates example but on premises drawn from popular opinion, which validate the truth of the premise rather than logic. While Aristotle appreciated the logic of syllogistic reasoning, he also recognized its limitations among the scope of human affairs.

While syllogisms are based on premises which are logically valid, rhetorical syllogisms are based on endoxa, commonly accepted opinion. In contrast with the strict syllogism, the enthymeme is less consistently explicit in its architecture. Probability and tentativeness are similarly apparent in the concrete enthymeme example adapted from Edward Corbett (1965, p. 63):

Anyone who doesn’t study will fail his examination.
John hasn’t studied.
Therefore, John will fail.

Or, stated as an enthymeme, “John didn’t study, so he will fail.” The probable premise that begins this example implies that all successful students must study prior to examinations. Though true only for the most part, the conclusion is grounded in the logic of acquisition and retention of course material. This enthymeme is based on a probable premise which cannot be empirically substantiated because the future is intangible. Beyond theory, one cannot expect to prove that all students who do not study will fail their examinations, no matter how likely it is to happen. It thus follows that the tentative conclusion likewise cannot be verified (John may well achieve the highest score).

In the absence of demonstrable truth, however, probability must at times suffice to help maintain a functional society. Aristotle for his part explains,

it is necessary for an enthymeme and a paradigm to be concerned with things that are for the most part capable of being other than they are — the paradigm inductively, the enthymeme syllogistically — and drawn from few premises and often less than those of the primary syllogism.
The paradigm, an inductive form of reasoning, is based on deriving a universal conclusion from many examples. In other words, it operates in the opposite direction than the deductive enthymeme. Both are used in rhetoric. However, Aristotle states, “speeches using paradigms are not less persuasive, but those with enthymemes excite more favorable audience reaction. The cause — and how each should be used — we shall explain later” (Rhetoric, 1.2.10-11). Here, Aristotle indicates that civic audiences find the longer paradigm to be long and dull. Thus, the less educated rhetorical audience needs the concision and less formal argument supplied by the enthymeme. That is why the enthymeme is for Aristotle the body of persuasion.

Because the thoughts and actions of the polis are not usually logical but based on popular opinion, rhetorical arguments based on enthymemes, and less frequently the inductive paradigm, are the heart of civic deliberation. Enthymemes, however, should not be understood as whim or idiosyncrasy. The enthymeme uses accepted premises to make
arguments. To persuade, enthymemes must be based on insights and information that prevail within a given population.

The enthymeme is an element of logos, one of the three pisteis, or proofs, on which invention or argument is built. Prior to weighing the rhetorical effects of syllogism and enthymeme, Aristotle first designates the three categories of pisteis, which are associated with enthymemes: ethos (character), logos (logic), and pathos (emotion) (Rhetoric, 1.2.3). Thus, speakers must consider all three elements when making arguments, though he favors logos. According to Corbett (1984), “his tripartite division of the artistic proofs probably represents Aristotle’s most original and most influential contribution to the art of rhetoric” (p. xvi). Corbett’s assertion becomes all the more salient when it is recognized that consensus must be reached within groups holding divergent points of view. By incorporating collective views and redirecting them to represent mutual concerns, the rhetorician can more successfully achieve common ground with mass audiences and perhaps even persuade them to
reconsider their preconceptions and assumptions about issues. Aristotle’s tripartite division represents three powerful tools by which rhetoricians may build consensus. His enthymeme thus serves as a mechanism by which the three proofs may coalesce, although Aristotle considered them to be separate\(^\text{10}\) and wrote of enthymemes as if they belonged only to *logos*.

Robert Gaines (2000) asserts that enthymeme is “the most intensively studied of all Aristotelian subjects among communication and English scholars” (p. 5). Such prominence reflects the generative nature of these studies. As noted again by Gaines (2000), enthymeme scholarship informs understanding of practical, everyday discourse (p. 5). From this scholarship, new theoretical directions emerge for application in contemporary situations. Accordingly, the enthymeme can be identified as a way to

\(^{10}\) According to an alternative ancient tradition that contrasts explicitly with Aristotle’s, enthymemes can also be concluded “affective and kairotic” (Newman, 2005, p. 75). Newman’s analysis reinforces the centrality of enthymeme in the study of style as well as toward more holistic understanding of Aristotelian theory and practice. Along a similar vein, Fahnestock (1986) argues that audiences are conditioned by the “rhetorical life” of “scientific facts.” In other words, she argues that people must be persuaded that a condition is indeed a deficiency before they can be asked to consider root causes and decide upon remedies (pp. 290-291).
“address the limitations inherent in the rhetorical audience” whereby “enthymemes would be evaluated on the basis of their persuasiveness, not their formal validity” (Walzer, Tiffany, and Gross, 2000, p. 198). The enthymeme, then, is appropriate to the study of Communications Toolkits. Indeed, as indicated, the Toolkits are a form of everyday, practical discourse. Moreover, the Toolkits are written by individuals cognizant of constraints on the audience and of the popular opinion in their professional setting. The data and analysis from this study of occupational safety communication can offer theoretical insights applicable to the workplace.

What are Topoi?

Enthymemes, then, are arguments that follow a particular reasoning pattern. To generate premises for enthymeme, rhetors use the topoi. The Classical Greek term topoi literally translates to “place,” “location,” or “region.” With respect to the etymological origins of topoi, Corbett (1965) likens the literal translation to “store or thesaurus” drawn upon by interlocutors to develop subject-specific material by which proofs could be
presented (p. 24). More directly, Julie Lindquist (2002) explains that "topoi structure the 'common sense' of a community and let speakers know 'where to go' to find the resources for a given argument" (p. 73). Practically speaking, topoi are heuristics guiding a rhetorician's use of experience and context to generate enthymemematic arguments. Lindquist (2002) advises,

>a structure of topoi thus accounts for a community’s theory and its practice, inasmuch as it encodes a system of knowledge and identifies socially viable ‘techniques’ of persuasion. (p. 73)

In practice, topoi organize the reasoning patterns on which enthymemematic arguments are based. These arguments guide people to the resources that will help them construct arguments consistent with the disciplinary, literate, and political culture of the discourse community.

As enthymememes, then, topoi date back to the Sophists, Protagoras, Gorgias, and Isocrates. However, these early rhetoricians treat these topoi unsystematically and only in unsystematic reference to creating persuasive effects on the audience. Aristotle’s systematic discussion of topoi
in the Rhetoric and The Topics are adaptable argumentative reasoning patterns serving a range of different arguments. In the Topics, he offers topoi for dialectical syllogisms. To conform with the nature of these syllogisms (see above), such topoi must be carefully chosen to form logical premises. Essentially, there are two roles these topoi may serve when interlocutors are engaged in debate. As tools of invention, topoi may refute arguments put forth by opponents or establish and defend one’s own assertions. In either case, topoi are argumentative strategies based on logical reasoning that allow interlocutors to arrive at the premises from which their propositions or enthymemes follow.

In the Rhetoric, Aristotle represents topoi as a mechanism by which to generate enthymemes for rhetorical purposes. Like topoi used in dialectical syllogisms,

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11 Accordingly, Aristotle’s Topics offers approximately a hundred topoi made available to develop conclusions following necessarily from stated premises. These standards include whether or not the text defines the subject according to its essential characteristics, delineates some form of opposition, establishes exemplification or exception, represents homogeneity or heterogeneity, communicates in terms that are part of the lexicon typical of the discourse community. Such standards necessitate the selection of corresponding topoi in the constructed discourse. Thus, Aristotle advises “we must find the location (topos) from which to attack” (Topics VIII. 1, 155b4-5). In this statement, Aristotle puts forth “topos” as tools for countering opposing theses.
Aristotle represents topoi as categorical headings for enthymemes. Within each categorical heading, the enthymeme can appear in various forms. Thus, topoi are bases from which diverse arguments emerge. But, in contrast to the dialectical syllogism, the sources for the topoi are most often popular opinion.

Within rhetorical invention, topoi are basic categories of relationships among ideas, each of which can serve as heuristic for constructing and interpreting enthymemes. This functional quality is consistent with the derivation of topos mentioned above, which is believed to have referred to the practice of recalling successive places and the items and characteristics associated with them (Yates, 1966).

In Books I and II of the Rhetoric, Aristotle distinguishes two major classes of topoi: common topics and special topics. Common topics are applicable across genre, occasion, and types of speech. In other words, they are common in the sense that they are not specific to one single species or kind of speech, Aristotle’s three species being forensic (court), epideictic (ceremonial/memorial),
Aristotle identifies two kinds of common topics without entirely clarifying the difference between them. First, he names three koïnoi, common topics: possible and impossible, past and future fact, and degree of magnitude. Aristotle’s discussion of possible and impossible includes the following example: “And indeed we must do some things by art, and some happen to us by necessity and chance” (Rhetoric, 2.19.13). If one event happens, according to this pattern, another similar event must (or must not) happen. Illustrating past and future fact, Aristotle offers, “if it has thundered, it also lightened” (Rhetoric, 2.19.21). That is, if something happens typical, the sun rises every morning, for example, one can argue that event will happen in the future. With respect to magnitude, Aristotle offers, “If not even the gods know everything, human beings can hardly do so” (Rhetoric, 2.23.4). In this case, if the greatest entities, the divine, cannot do something, humans, lesser in magnitude, cannot do it either.

In Book II, Chapter 23, Aristotle names 28 other
common topoi. The most salient, with respect to the Toolkits, are outlined below (a more detailed operative account follows in the next chapter):

1. Similarity/Difference (e.g. Empathy, the ability to put oneself into another person’s place, is like dressing up for Halloween, but without putting on a costume or mask.)
2. Genus/Species (e.g. The pen is mightier than the sword.)
3. Partition (e.g. Empathy is an intimate understanding of the thoughts, feelings, and motives of a person widely misunderstood.)
4. Cause/Effect (e.g. Reducing the number of credit hours required for graduation would help more students graduate after four years of study.)
5. Antecedent/Consequence (e.g. The Cleveland Browns fumbled three times; the Steelers scored three easy touchdowns.)
6. Authority (e.g. Ted Kennedy endorses Barack Obama for president.)
7. Maxims (e.g. Love one another as you love yourself.)

8. Documents (e.g. This passport will allow you to visit Italy.)

9. Contradiction (e.g. The Constitution guarantees free speech, yet high school papers are censored.)

10. Magnitude (e.g. Make love not war.)

11. Possible/Impossible (e.g. Because space travel to the moon has been accomplished, travel to Mars may be possible.)

12. Past Fact/Future Fact (e.g. The fountain of youth was never discovered; people will continue to age during the foreseeable future.)

The last three topoi listed are not among the 28 common topics in 2.23 named by Aristotle but are the konoi. Again, these are argumentative strategies useful in treating varied subject matters in all three species of Aristotelian rhetoric.

Idia, or special topics, are particular to each of the
three species of speech Aristotle names: epideictic, judicial, and deliberative. Given the specificity, special topics are more narrow in focus than the more abstract common topoi. The judicial topics argue about justice and injustice. Thus, Aristotle characterizes judicial speeches as “either accusations or defenses about things done in the past and aim at showing the justice or injustice of what has been done” (Kennedy, p. 15). Examples of judicial topics include recent debates in several state courts whether rape is committed when a woman consents to having sex with a man, but then says no during intercourse. Another example of judicial topics involves the 2008 election debate whether or not delegates from Florida and Michigan should be seated at the National Democratic Convention despite Democratic Party rules that forbade the state from holding a primary before February 5.

Deliberative topics involve the good and the unworthy as well as the advantageous and the disadvantageous. Aristotle explains, “Deliberative speeches are either exhortations or dissuasions to action and aim at showing the potential advantage or harm of the action” (Kennedy, p.
15). Examples of deliberative topics include the current debate which asks if girls age 11 or 12 should be given the HPV vaccine based on whether the vaccine or the virus are more harmful.

Epideictic speeches focus on virtue and vice and function in Aristotle's terms to show that a person is honorable or shameful: “in epideictic the present is the most important; for all speakers praise or blame in regard to existing qualities, but they often also make use of other things, both reminding [the audience] of the past and projecting the course of the future” (Rhetoric, 1.3.4). For Chaim Perelman and Lucie Olbrechts-Tyteca (1969), the epideictic genre is the most important of the three species of rhetoric. While deliberative discourse eventually decides upon course(s) of action, epideictic discourse “strengthens the disposition toward action by increasing adherence to the values it lauds” (p. 50). More concisely, deliberative discourse might be said to seek adherence while epideictic genre seeks “intensity of adherence” (p. 51). It is no wonder, then, that epideictic topics are evident when targeted political leaders are compared with
Hitler when overseas military intervention is debated or conversely when 2008 Republican presidential candidates compare themselves with Ronald Reagan.

To recapitulate, both common and special topoi serve as storehouses of values or beliefs, as mechanisms for uncovering warrants, and as generative tools for developing content for arguments. If the invented interpretations and explanations are accepted by either one’s interlocutors or an audience at large, the proposition is then considered plausible. In dialectical debate, argument is facilitated through strictly logical creation and interpretation of topoi. In rhetoric, speakers base their arguments more loosely on popular opinion.

The study of topoi is also useful to the study of Communication Toolkits as they provide insight into how arguments are constructed, grouped, and comprehended by their audience. The next section recounts the procedures by which the theoretical lens were applied to the analysis.
Demonstration

For this study, the analysis begins with the June 9, 2004 Toolkit. This Toolkit was chosen because it was the first of four Toolkits accompanied by the observation of a corresponding “toolkit talk.” As indicated, toolkit talks are weekly meetings whereby each Team Leader (shift supervisor) disseminates the content of the current Communications Toolkit to their production-floor Team Members. These observations helped contextualize the discourse analysis conducted for this study.

As demonstrated, the application of the taxonomy to the June 9 Toolkit occurred in four stages. First, the enthymemes were identified. Second, the enthymemes were classified according to Aristotle’s general topoi where appropriate. Then, the enthymemes were classified according to Aristotle’s special topoi, again, where appropriate. Finally, the total number of occurring enthymemes were counted, and the specific occurrences of each category were tabulated. To determine frequency of

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enthymemes, the total of each occurring category was divided from the overall total to determine percentages. This demonstration begins with a reprint of the first article from the June 9 Toolkit:

Toolkit – June 9, 2004

Complex Power Outage
On Thursday of last week, a circuit breaker in the First Energy switchyard behind the powerhouse at the assembly plant exploded, causing a transformer to fail. As a result, the Complex lost power in most areas. By approximately 9:00 a.m. the electric company had fixed the problem allowing production to resume in both plants. Shipping of parts over the trestle was back to normal by 10:00 a.m. This outage caused minimal disruptions to our operations due to the quick reaction of all people involved.

One enthymeme concludes the excerpt: “This outage caused minimal disruptions to our operations due to the quick reaction of all people involved.” The enthymeme suggests that the quick reaction of all people involved always causes minimal disruptions. With respect to Aristotle's general topoi, this enthymeme can be classified as cause and effect. Cause and effect sets up an argument which invites the audience to consider the effects of a given cause or the causes contributing to given effects
(see “Chapter 3,” p. 91). The enthymeme invites production-floor employees to consider how emergency situations are eliminated or mitigated through knowledgeable, expedient response.

The demonstration of the process of taxonomy continues with a reprint of the first paragraph from the second article of the June 9 Toolkit:

**Reporting, Minimizing, and Controlling Emergency Situations**

Many employees within the plant are not aware of the locations of columns that provide phones, fire alarms, fire hoses, and fire extinguishers. It is necessary that each employee is able to identify the closest column(s) to his/her work area to access these emergency controls and equipment. Not only could this awareness save your co-workers’ life, but it could also save your life.

The enthymeme advises: “It is necessary that each employee is able to identify the closest column(s) to his/her work area to access these emergency controls and equipment.”

The enthymeme suggests that accessing emergency controls and equipment is always enabled by identifying the closest column(s) to one’s work area. Classified as possible/impossible, the enthymeme represents the
feasibility of a proposed event based on precedent (see “Chapter 3,” pp. 85-86). In short, this topic examines feasibility. In this case, each production-floor employee is informed that, if this saves one life, it can possibly save his/her own.

The following excerpt reprinted for this demonstration is from the third paragraph of the second article appearing in the June 9 Toolkit:

Fire Alarms: All columns with fire alarm boxes are striped red and yellow. These alarms should be pulled when there is a fire, and it is important to remember that these can also be pulled for other serious emergency situations. The activation of the fire alarm notifies Security of the location of that particular activated fire alarm. Upon activation of a fire alarm, the employee should remain at that column to guide Emergency Rescue Personnel to the fire or emergency.

There is one enthymeme in this passage. It states “These alarms should be pulled when there is a fire, and it is important to remember that these can also be pulled for other serious emergency situations.” This statement is enthymematic because it indicates that pulling fire alarms minimize and control all emergency situations.
As a common topos, this enthymeme can be classified as the possible and impossible. The proposed event is represented as either possible or impossible for the purpose of encouraging or discouraging. In short, such enthymemes examine feasibility. The first enthymeme from this passage encourages production-floor employees to recognize the range of possible situations that would warrant the pulling of the alarm.

In the June 9 Toolkit, an enthymeme can be observed in the fourth paragraph of the second article:

Fire Hoses: Fire hoses are located on various columns throughout the plant. The fire hoses are recognizable by the bright pink covers over them. The covers are labeled, “FIRE HOSE”. It is important to remember to pull the fire hose completely out before turning the pressure on. This prevents the fire hose from becoming jammed, and not being able to reach the desired distance.

The enthymeme located in this passage reads as follows: “It is important to remember to pull the fire hose completely out before turning the pressure on.” This statement is enthymematic by stating that pulling the fire hose out completely is necessary for responding to fires with adequate water pressure. In particular, this enthymeme is
magnitude, which invites the audience to look at issues of more or less (see “Chapter 3,” p. 80). In this case, magnitude invites the audience to more fully follow requisite processes in the mitigation of fire.

The final enthymeme found in the June 9 Toolkit occurs in the last paragraph of the second article:

Knowing the closest locations of these emergency controls and equipment from your work area is critical. This knowledge can reduce the time necessary to find the emergency controls or equipment, and can reduce response time of Emergency Rescue Personnel arriving to the scene. Remember, this awareness can save lives.

The enthymeme is found at the end of this excerpt: “this awareness can save lives.” This enthymeme indicates that knowledge of the closest locations of these emergency controls and equipment always saves lives. As a common *topos*, this enthymeme would be classified as another possible and impossible. The rhetorical appeal is all the more pronounced in this case as the knowledge required is not merely “necessary” or “important” but “critical.”

Accounting for the frequency of enthymemes, three categories of *topoi* are used in the June 9 Toolkit. The
most frequently occurring *topoi* in this edition is possible/impossible. As Table 2.1 indicates, possible/impossible comprises 60% of the *topoi* found in this demonstration. The remaining *topoi* found in this edition include the common *topoi* cause/effect and magnitude. Each of these categories account for 20% of the total occurrences (see Table 2.1 for the percentages of all categories).

<table>
<thead>
<tr>
<th><strong>Topoi</strong></th>
<th><strong>% of Total</strong></th>
<th><strong># of Occurrences</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible/Impossible</td>
<td>60.0%</td>
<td>3</td>
</tr>
<tr>
<td>Magnitude</td>
<td>20.0%</td>
<td>1</td>
</tr>
<tr>
<td>Cause/Effect</td>
<td>20.0%</td>
<td>1</td>
</tr>
<tr>
<td>Total Among All Topoi</td>
<td>100%</td>
<td>5</td>
</tr>
</tbody>
</table>

**Table 2.1: Percentage of Occurrences for All Categories of Topoi found in Demonstration**

After the enthymememes in the June 9 Toolkit were identified and classified, the taxonomy was applied to the entire corpus through the same four-stage process. The next chapter presents the taxonomy in full and includes descriptions of the categories and their use in the
Toolkits. Each description is reinforced with examples culled from the corpus. In subsequent chapters, this study more fully analyzes the corpus in terms of common topoi, special topoi, and risk-specific terms used. From this analysis, the ensuing discussion questions how the Communications Toolkits inform our understanding of the rhetorical function of everyday texts.
Chapter 3

The Communications Toolkits: Analysis of Enthymemes

This chapter analyzes the enthymemes used in a corpus of 39 Communications Toolkits developed by the Safety Department at a Fortune 500 automotive manufacturing plant. Specifically, the analysis derives from a taxonomy of enthymemes. After reviewing the categories of enthymemes and discussing them more extensively, the analysis presents the frequency with which each of the categories occur across the corpus. Concisely, the results indicate that twelve categories of common topoi occur in the corpus. These results contribute to a better understanding of written discourse used within an occupational setting by indicating how enthymemes function in the context of risk and, more specifically, in what I call the field of safety communication. In addition, the qualitative analysis provides insight into some of the argumentative strategies used at the manufacturing plant.
**Taxonomy of Enthymemes**

What follows is a taxonomy of the enthymemes across a corpus of 39 *Communications Toolkits* categorized in terms of common *topoi*. Full texts of the Toolkits appear in “Appendix E,” allowing the enthymemes to be viewed in the contexts in which they occurred (see “Chapter 2” on data collection). Analysis of the Toolkits revealed twelve categories of common *topoi*, introduced within the overview on enthymemes in Chapter 2. In order of their frequency of occurrence, they are similarity/difference, magnitude, genus/species, antecedent/consequence, possible/impossible, authority, partition, cause/effect, past fact/future fact, maxims, documents, and contradiction. As discussed in Chapter 2, these *topoi* serve as heuristics guiding a rhetorician’s or speaker’s choice of arguments consistent with the disciplinary, literate, and political culture of the discourse community.

Next, the categories of *topoi* occurring in the corpus are described. The descriptions begin with definitions that explicate the *topoi* and then demonstrate them with examples culled from the corpus. As noted parenthetically
in the following descriptions, definitions of the topoi with examples abstracted from the corpus may be reviewed in Chapter 2 (pp. 63-66). Ideally, every example would be a whole text (see “Demonstration” in “Chapter 2”). Likewise, examples would ideally include every *topos* that was found. However, time and space constraints necessitate the selection of extracted enthymemes. The examples culled for the following descriptions were chosen to exemplify their respective categories with minimal context cues.

**Taxonomy**

1. *Similarity/Difference*

   Similarity/Difference invites the audience to compare and/or contrast entities (see “Chapter 2,” p. 64). This class of *topoi* can be differentiated from magnitude (see “Chapter 2,” p. 63-65 and below) in that similarity/difference involves qualitative judgment of the particular characteristics of entities compared or contrasted. As such, these *topoi* function in the safety messages not so much in terms of number, size, or rank (as do *topos* of magnitude) but in terms of safety communication choices among alternatives.
Ex. “If you choose to drink, drink responsibly and have a designated non-drinking driver.”
(December 22, 2003 Toolkit)
Ex. “Wear Sleevelets with your thumb through the thumbhole and the proper gloves when handling metal.”
(January 5, 2004 Toolkit)
Ex. “Ensure all employees know what each alarm sounds like and where to assemble in an emergency.”
(March 29, 2004 Toolkit)
Ex. “Unauthorized personal computer usage (someone using a PC without consent is evident when there is a blank LogOn ID screen or an unknown LogOn ID is shown instead of the user’s).”
(May 17, 2004 Toolkit)

Concerned with choices among alternatives, the first similarity/difference example suggests (quite rightly, no doubt) that sober drivers are safer than intoxicated or drunk drivers. The second example appeals to the production-floor employees’ sense of qualitative judgment by dissuading them from taking shortcuts when fitting their personal protective equipment (PPE). Specifically, employees are to wear Kevlar gloves, gloves free of metal slivers, because they are proven safer compared to other kinds. The third topos calls for employees to hone their abilities to distinguish the similarities and differences between various emergency alarms including whooper signals,
2-tone European sirens, and continuous ringing bells.

Whereas the first and third examples among this set allow employees to discover for themselves certain appropriate knowledge concerning the subjects, the second and the fourth examples are more precise. Indeed, to wear the proper gloves when handling metal as advised, employees can simply use those provided by plant management. Likewise, breaches of security within the manufacturing plant can be reported simply by observing details such as those provided in the fourth example.

2. Magnitude

While similarity/difference involves qualitative choices, magnitude invites the audience to look at issues of more or less in terms of degree (see “Chapter 2,” pp. 63-65). If one degree or aspect of an entity is true, then a second associated entity will reveal more or less of that aspect depending on whether the second entity is more or less, respectively, than the first. As safety communication, these topoi help the Safety Department influence production-floor employees to consider extent, greatness of size, position, or rank when they perform
their occupational tasks.

Ex. “Shovel in small amounts; do not over exert yourself.”
   (December 8, 2003 Toolkit)
Ex. “When repairs are being made to dies, the appropriate number safety blocks are to be used with their wedges when applicable.”
   (December 15, 2003 Toolkit)
Ex. “Always tie-off to an approved anchorage point when working from heights greater than 6 feet.”
   (January 5, 2004 Toolkit)
Ex. “Long sleeves or sleevelets are required in all areas of the plant floor.”
   (June 28, 2004 Toolkit)

In the first example, production-floor employees are asked to consider the amount of the snow they can safely shovel in a single stroke. Small amounts will not injure the employee whereas larger amounts might. The second example asks employees to think about the number of blocks necessary for keeping the machines stable. In other words, employees are being encouraged to use more blocks, as many as are necessary to keep the stamping machines from pressing any body parts. The first two examples leave it to employees to discover for themselves an appropriate amount with respect to the subjects (i.e., exactly how much snow per stroke? Exactly how many safety blocks for the
given repair?) based on topoi asking workers to consider degrees of magnitude. In contrast, the latter two examples advise the employees more precisely about performing workplace tasks. Accordingly, the third example invites employees to consider the exact position for tying off harnesses to an anchorage point. In this example, magnitude functions emphatically, with “always” taking the concept of more to its fullest reach. The final example advises employees to wear personal protective equipment—a foremost priority among workplace responsibilities. In this example, the emphatic “all” allows no compromise with respect to degree, the missing premise being that less is not safe.

3. Genus/Species

Whereas magnitude invites decision-making based on degree, genus/species identifies subjects as part of a larger class, particularly as they share the properties of other members of that class (see “Chapter 2,” p. 64). Genus represents the broader category or class within which each species fits. In the corpus of safety communication, these topoi subordinate tasks, personnel, space, and
equipment.

Ex. “You should re-educate your employees on the evacuation procedure, take shelter procedure (where to go and what the siren sounds like), and where the safe use instructions are located for chemicals in your area.”
(March 1, 2004 Toolkit)

Ex. “Drivers and pedestrians are both to stop at stop signs, and be attentive by blind corners.”
(June 1, 2004 Toolkit)

Ex. “Make eye contact with drivers; this includes contractor vehicles.”
(February 2, 2004 Toolkit)

Ex. “Wear a Hardhat while in aerial lifts, operating a crane, performing rigging duties or while Working in their basement; wear your bump cap when entering a cell or between safety gates and dies.”
(July 19, 2004 Toolkit)

The first example, addressed specifically to shift supervisors, was written in anticipation of the plant’s annual health and safety audit. The larger class (genus) in the enthymeme is one of the areas scrutinized by the audit team: “Take shelter/emergency evacuation signals/areas.” The species which belongs within that genus of arrangement include the shelters and evacuation plans specific to each production department as well as the location of safe-use instructions. Accordingly, the shift supervisor retains the highest generic status.
The second example subordinates both personnel and space within a larger class. Drivers and pedestrians constitute a class among the more diverse production-floor employees. They are responsible for each others’ safety during travel throughout the plant. In addition to personnel, the second example subordinates space (i.e. stop signs, blind corners) and corresponding safe occupational practice (i.e. stoppage, attentiveness). The third example identifies another species of production-floor employees, contractors, and dissuades pedestrians from alternative unsafe occupational procedure.

While the first three examples relate employees in different ways within the work environment, the final example deals with PPE used by the employees as individuals. The genus is protective headgear, and its species are hardhats and bump caps. The topos in this case subordinates proper and improper occasions for wearing each species. To explain, employees occasionally wear hardhats in situations where bump caps are more appropriate. Similarly, employees occasionally wear bump caps in situations where hardhats are more appropriate. As safety
communication, the enthymeme again dissuades employees from choosing alternative unsafe occupational procedure.

4. Antecedent/Consequence

As suggested in the terminology itself, antecedent/consequence invites audiences to consider events or consequences temporally or chronologically (see “Chapter 2,” p. 65). Given the emphasis on chronological flow from earlier conditions, antecedence/consequence contrasts with cause/effect which emphasizes the precedent. In other words, cause and effect, as discussed later in this chapter, invokes workplace events and uses them to justify ways of approaching subsequent similar scenarios.

Ex. “Drink plenty of water, dehydration is a concern in winter.”
(December 8, 2003 Toolkit)
Ex. “Get rid of stored newspaper or other rubbish. Newspapers stored in a damp, warm place may ignite spontaneously.”
(December 15, 2003 Toolkit)
Ex. “Some have matting installed to reduce stress on your legs and back; however, this matting can pose a tripping hazard if the mat begins to curl.”
(January 12, 2004 Toolkit)
Ex. “Remember that short-cuts can have life-long consequences.”
(March 29, 2004 Toolkit)
Ex. “Not drawing attention to a problem could hurt
Like similarity/difference, these instances of antecedent/consequence appeal to preventive measures. With respect to the examples, dehydration can be the consequence of not drinking enough water; fires can be the consequence of excessive stores of combustible material; trips can be the consequence of worm matting on work platforms; death can be the consequence of deviations from designated walkways; and carpal tunnel injuries can be the consequence of not reporting inadequate ergonomic designs.

The results of consequence, however, are more speculative than the examples of similarity/difference because they are couched with hedges including “may,” “can,” and “could” and the indefinite phrase “is a concern.” The prior conditions that constitute antecedent are also left to a wider range of problematic behaviors. Indeed, there are many forms of “short-cuts” and “not drawing attention to a problem.” Moreover, antecedents tend to accumulate over time. To explain, it would be difficult to pinpoint the moment when dehydration, tripping
hazards, and spontaneous ignition will emerge. Hence, production-floor employees are asked to consider what consequences are likely to follow given situations. Because these involve time, the answers to these questions, however, remain to varying degrees hypothetical.

5. Possible/Impossible

Possible/impossible represents the proposed event as either possible or impossible vis-à-vis another event which functions as a precedent. In short, this topic examines safety choices involving feasibility. In the corpus, these topoi reinforce team concept.

Ex. “You can’t pick and choose those parts of an established safety program you like best and ignore others that are difficult or inconvenient to follow.” (April 26, 2004 Toolkit)

Ex. “This way, any slivers that become embedded and hidden in the gloves can be detected and removed before being shipped back to the facility.” (May 3, 2004 Toolkit)

Ex. “Team leaders with floor experience can provide critical safety information that may go unnoticed during these weekly walks.” (August 23, 2004 Toolkit)

Ex. “The walk to Cure Diabetes is an important way for you to make a difference in the lives of people living with diabetes and the more than 13,000 children that are diagnosed each year.” (August 30, 2004 Toolkit)
The first example encourages production-floor employees to fulfill all of their professional responsibilities for safe occupational practice — rules, inspections, safety contacts, training, observations, publicity, personal protective equipment and job safety analysis. Without due cooperation from the employees, management is limited in its ability to facilitate an accident-free work environment.

The second example examines feasibility in the plant’s laundering procedure. As indicated, detecting and removing slivers was made possible by an added step in the procedure: sending cleaned gloves through a metal detection device before shipping them back to the laundering facility. Hence, the enthymeme encourages production-floor employees to feel safe wearing the gloves and confident in their ability to resolve concerns through communication. Such confidence encourages the possibility of avoiding lacerations during occupational tasks.

The third example considers the feasibility of Observation Tours conducted by the Safety Department. The
enthymeme recognizes that Safety Department personnel are not omniscient and thus acknowledges their limitations. Shift supervisors are accordingly encouraged to feel empowered to offer information that will fit informational gaps. Such empowerment encourages awareness of surroundings and the possibility of positive outcomes such as making pre-op check sheets visible on all motorized vehicles such as forks, tows, die trucks, and diesel buggies.

The final example encourages employees to participate in the drive to raise funds for diabetes treatment and research. Indirectly, the enthymeme examines the feasibility of the plant’s service mission, the underlying message stating that the mission necessitates the full co-operation of the workplace community. Such co-operation enhances the possibility of making a difference for the 13,000 children who are diagnosed with diabetes each year in the US.

6. Authority

Authority explicitly or implicitly cites experts or administrators to give an argument credibility (see
“Chapter 2,” p. 65). As safety communication, these topoi enable the Safety Department to delineate divisions of responsibility or to motivate compliance.

Ex. “Obey posted signs.”
(February 9, 2004 Toolkit)

Ex. “In accordance with the Bloodborne Pathogens Protocol, any employee who uses a Syringe for a medical condition must take the syringe to plant medical for disposal.”
(February 23, 2004 Toolkit)

Ex. “Spirit Services will remedy the situation by checking the arm bands at their facility and discarding any that no longer fit properly.”
(May 3, 2004 Toolkit)

Ex. “Do not operate a conveyor unless you have been trained and are authorized to do so. Never service or repair a conveyor unless you are authorized to do so; this includes un-jamming parts, packages, or other materials.”
(Sepember 13, 2004 Toolkit)

Authority’s role as a substitute for other information is particularly apparent in the first example. The adjective “posted” is particularly curious. Despite the adjective, there is no articulation of similarity/difference or genus/species; there are no “unposted” signs within the plant. The authority cited, therefore, is again evident in the second example. Though it is clear that employees are expected, without exception, to take syringes to plant
medical for disposal, no cause/effect or antecedent/consequence pattern grounds the passage.

The third and fourth examples demonstrate how authority designates responsibility among workplace participants. While it is production-floor employees and their shift supervisors who have raised concerns that the arm bands of Kevlar sleeves have lost their elastic properties and no longer fit snugly, the designated experts must make the more meaningful evaluation through reference to the authorities' framework. The fourth example focuses on responsibility by equating occupational safety with authority in the division of labor.

7. Partition

Partition amplifies or clarifies by describing a whole and its constituent parts (see “Chapter 2,” p. 64-65). This topic differs from genus/species; while genus/species subordinates a smaller category within a broader one, partition does not classify one thing within another but instead breaks entities up into constituent components.

Ex. “To help reduce muscle soreness, have a good breakfast, drink plenty of fluid throughout the
day, get a good nights sleep and stay in shape through regular exercise.”
(January 26, 2004 Toolkit)

Ex. “Ensure all employees tie-off to the approved anchorage points, hard hats are worn, and a ground person is present (even during transportation to/from the jobsite), and pre-op check sheets are on the lifts.”
(March 29, 2004 Toolkit)

Ex. “Please bring your American Red Cross donor card, a driver’s license, or two forms of identification.”
(May 3, 2004 Toolkit)

Ex. “Help to reduce the possibility of injuries by following safe operating procedures, wearing appropriate PPE, and “TAKE TWO FOR SAFETY”: taking two minutes to pre-plan your work by identifying any hazards and making sure the appropriate corrective actions are in place before starting your task.”
(October 11, 2004 Toolkit)

Each example represents a whole that could not exist or function without any of its constituent parts. Unlike the entities assigned to genus and species, the partitioned constituents are not subordinated or superordinated with respect to one another. In the first and fourth examples, the whole is represented in terms of fullest degree. In other words, to omit even one of the requisite activities would prevent the optimal reduction of recordable injuries and lost work days. The second and third examples are more narrowly constructed in terms of function and dysfunction.
That is, to omit the tie-off, hard hats, ground person, or a pre-op check could even result in a fatality. Likewise, to forget the donor card, driver’s license, or two forms of identification results in one less blood donation.

8. Cause/Effect

Cause/effect invites the audience to consider the effects of a given cause or the causes contributing to given effects (see “Chapter 2,” p. 65). In contrast to the previous topoi antecedent/consequence, the essential distinction is the precedent that follows, rather than the chronological passage from earlier conditions. Addressing activity within and outside the plant, these topoi function as appeals for safety choices involving preventative measures.

Ex. “DO NOT LEAVE THE WORK AREA. THIS WILL CONTAIN ANY BLOOD SPILL TO THE IMMEDIATE AREA.” (February 16, 2004 Toolkit)

Ex. “There has been a delay in the full implementation of the EWSP Fire Retardant clothing due to employee concerns about the laundry process.” (March 1, 2004 Toolkit)

Ex. “If you are unsure of any situation, STOP, and talk with your group leader so you understand the task at hand.” (August 16, 2004 Toolkit)
Ex. “Fog lamps shine beneath this haze, reducing glare and improving visibility.”

(September 13, 2004 Toolkit)

The first example is concerned with establishing a precedent, not leaving the work area, that will prevent further blood spill during the event of a laceration. This enthymeme is concerned with the temporal conditions that prompted the event. In the second example, the essential details are the cause (concerns) and the effect (delay). If this enthymeme were to emphasize antecedent and consequence, the essential details would become, respectively, the flaw or perceived flaw in the laundry process and the resultant change in the process or instruction of laundering.

Similarly, the third example is concerned with the cause, stopping and asking questions, to prevent injuries associated with improper workplace procedures. This enthymeme is a catch-all, covering the myriad forms of uncertain situations. Employees could be uncertain whether or not they are using enough wedges to block a die, whether they are properly tying off to an anchorage point, whether they should be wearing a hard hat or bump cap for a
specific workplace task, or a broad range of other confusing situations. The final example is technological, involving the physical law that for every reaction there is an impetus. Accordingly, this enthymeme explains that fog lamps — rather than headlights — mitigate the effects of darkness, humidity, and moisture during rain and snow.

9. Past Fact/Future Fact

Past fact/future fact uses past events or envisioned future occurrences as the basis on which to argue for current action (see “Chapter 2,” pp. 63-66). Past fact/future fact also encourages or discourages actions.

Ex. “Noise level readings indicated the decibel level to be 90-95 during construction, which under OSHA guidelines requires the use of hearing protection.”
(December 22, 2003 Toolkit)

Ex. “Since we have been away from work for an extended period of time, there are many good safety practices that need to be reemphasized.”
(February 9, 2004 Toolkit)

Ex. “Due to the adverse health effects associated with long-term over exposure to airborne asbestos fibers, the Occupational Safety and Health Administration (OSHA) requires employers to survey their facilities to determine whether there is any asbestos present and if so, to determine the location.”
(September 27, 2004 Toolkit)
In these examples, the period away from work, noise level readings, and consequences of exposure to airborne asbestos fibers are all objectively verifiable. Respectively, these past facts are used to encourage actions: wearing of earplugs, fidelity to safe occupational procedures, and reporting of exposed asbestos fibers. Indeed, the healthy workplace behaviors necessarily follow their antecedent conditions.

10. Maxims

Maxims depend on well-known, pithy generalizations, sayings, or precepts to initiate or lend credibility to one's argument (see “Chapter 2,” pp. 65). Based on cultural values, these topoi are a means by which the safety messages institutionalize concern for others.

Ex. “If you see someone not wearing their Personal Protective Equipment, “Speak-Up” and make it PERSONAL.”
(February 9, 2004 Toolkit)

Ex. “To create a safe work environment within our plant, we must say what we do (safety policies/procedures), do what we say (follow lockout, welding/cutting . . . Procedures), and prove it (live safety, act safely) by sending the “I care” message.”
(March 1, 2004 Toolkit)

Ex. “If we all work SMARTER, we won’t lose anything
and we will gain a healthy and carefree future. Let’s get at it, TOGETHER!”
(June 1, 2004 Toolkit)
Ex. “We also know that helping them to help themselves stay safe is part of our duty to be our ‘brothers keeper.’”
(August 2, 2004 Toolkit)

The pithy quality of these enthymemes is evident in their content as well as the emphases added by the Safety Department. The use of all-capital letters, boldface, and italics in the first three examples draws attention to the safety messages. The rhetorical force notwithstanding, the gist of the enthymemes is not always explicit but contained in the popular knowledge it evokes in the workplace culture.

The first example is clearly focused on personal protective equipment. The maxim at work in this statement is, in a sense an appeal to empathy. By speaking up and making it personal, one does not receive material rewards, but rather compassion, sensitivity, and the gratitude of others. The remaining examples are deliberately general, applicable to safe operating procedures, aisle safety, emergency information, and a plethora of occupational issues. Rhetorically, the second example is Biblical in
tone, the bold directives similar to some of the proverbs found in scripture. The fourth example is more overtly Biblical, since the notion of “brother’s keeper” is rooted in the Book of Genesis. The third example, appeals to a collective sense of community. Each example cultivates concern for colleagues by appealing to values widely accepted in American spiritual and political venues as well as the specific workplace culture at this plant.

11. Documents

In these topoi, documents refer to existing texts to make their case (see “Chapter 2,” p. 65). Only two occurrences of these topoi occur across the corpus. In each case, the topos augments authority. Whereas maxims derive from the authority of individual or collective identities (for example, all four examples in the previous section reflect values reinforced by generations of leaders in the Judeo-Christian tradition), documents derive grounding from canonical or important texts, even workplace protocols and policies, whereas authority derives grounding from experts or administrators.
Ex. “Anyone interested in looking at the plant Exposure Control Plan for Bloodborne Pathogens can find this information in Plant Medical.” (June 21, 2004 Toolkit)
Ex. “The cell phone policy prohibits the use of cell phones, walkie talkies, or nextel phones while operating equipment and machinery, driving, or walking through the plant.” (August 2, 2004 Toolkit)

The first enthymeme refers to directives given in prior editions of the Toolkits. The enthymeme asks employees to recall that they are not to leave the work area after receiving a laceration (to contain the blood spill to the immediate area). The enthymeme also asks employees to recall that they are to dispose of syringes at plant medical rather than in the trash or in their work area. Both of these directives are among the policies covered in the Exposure Control Plan. In its larger context, the use of documents in the second example functions as a reminder from the Plant Safety Review Board (PSRB), a reminder motivated by observations deemed to “require leaderships’ attention.” As with authority, these enthymemes generate warrants when explicit data are lacking, but do not derive from experts or administrators. Instead, the audience must seek out the documents specified or draw from their own
occupational experience to make such connections and from the documents make choices.

12. Contradiction

Contradiction establishes that an entity cannot be and not be at the same time and in the same respect (see “Chapter 2,” p. 65). As with documents, these topics occur only twice across the corpus. In each case, production-floor employees are being encouraged to trust themselves in continuing safe occupational procedures that may seem counterintuitive.

Ex. “Following the safety procedures and using the proper personal protective equipment for the job may seem to make your job harder or may not be as comfortable; however, it is the safest way and in the long run will help to prevent you from becoming injured.”
(March 29, 2004 Toolkit)

Ex. “Don’t assume that “the experts” always know what’s right.”
(September 20, 2004 Toolkit)

The first example discourages shortcuts, for example, not following safety procedures and not wearing personal protective equipment. This enthymeme would contradict opinions of employees who equate safety with comfort. The
second example encourages employees to report problems with machine design that may cause injury or illness, such as ergonomic or guarding problems. Such an enthymeme would seem contradictory to employees who assume that specialists are always more correct than general practitioners. While the first enthymeme subordinates the employees assumptions to the precepts of Safety Management, the second enthymeme superordinates the employees’ pre-existing knowledge concerning machine operation to that of the design engineers.

In sum, the taxonomy of twelve categories of topoi occurring across the corpus is used to argue and encourage safe choices across a broad range of desired safe behaviors (and discourage alternative behaviors) on-site and off-site. Across this variety, their effectiveness is highly contingent upon shared values. Consider the aforementioned enthymeme “We also know that helping them to help themselves stay safe is part of our duty to be our ‘brothers keeper’” (August 2, 2004 Toolkit). This maxim is site-specific, being applicable to employees to ensure that colleagues tie-off to the approved anchorage points,
training colleagues to distinguish different alarm sounds, reporting unauthorized access within the plant, or serving as designated drivers off-clock. All of these applications encourage safe choice making.

Next, discussion turns to the frequency with which each of the categories of enthymemes occurred across the corpus, moving from most frequent to least frequent.

**Frequency of Enthymemes**

Twelve categories of enthymemes are used across the corpus. The two most frequently occurring categories are similarity/difference and magnitude. As Table 3.1 indicates, similarity/difference and magnitude each comprised approximately 26% of the enthymemes occurring across the corpus. Conversely, documents and contradiction accounted for approximately .5% of the enthymemes occurring across the corpus (see Table 3.1 for the percentages for all categories).

**Most Frequent**

As 3.1 indicates, similarity/difference was the largest category among the enthymemes. The Toolkits
Table 3.1: Percentage of Enthymemes Occurring across Corpus for Common Categories of Enthymemes

devolved 106 appeals to similarity/difference out of a total of 403 enthymemes across the corpus, accounting for a little more than 26% of the discourse. Magnitude is a close second among the set of twelve, a very close second to similarity/difference. This category also accounted for a little better than 26% of the enthymemes found across the corpus. There were 105 appeals to magnitude out the 403 enthymemes. Genus/species is the third largest category,
comprising approximately 15% of the total number of enthymemes across the corpus. Plant management constructed 62 of these enthymemes.

Collectively, then, similarity/difference, magnitude, and genus/species account for almost 68% of the discourse. Of the less frequent enthymemes, antecedent/consequence, was the fourth largest group in the set of twelve, accounting for better than 7% of the total number of enthymemes found across the corpus. Antecedent/consequence totaled 30 occurrences. Possible/impossible totaled 29 (7.2%) of the 403 enthymemes. Authority totaled 25 (6.2%) of the discourse. Respectively, possible/impossible and authority comprise the fifth and sixth largest groups among the set of twelve. Together, antecedent/consequence, possible/impossible, and authority comprise almost 21% of the discourse.

Of the least frequently appearing enthymemes, partition accounts for 4.2% of the discourse or 17 of the 403 enthymemes. Cause/effect and past fact/future fact were similarly among the enthymemes least frequently developed by plant management. Cause/effect totaled 12
(3.0%) of the 403 enthymemes. Past fact/future fact totaled 25 (6.2%) of the discourse. Maxims comprised just over 1% of the total number of enthymemes occurring in the corpus. Documents and contradiction both constituted the smallest category of the twelve enthymemes, each accounting for only a half percent of the discourse. Documents and contradiction both occurred twice among the 403 enthymemes. Collectively, partition, cause/effect, past fact/future fact, maxims, documents, and contradiction comprise only 11% of the discourse.

**Summary/Analysis**

The Toolkits are written to reduce the number of recordable injuries and lost work days or, in short, the costs of workers’ compensation. Enthymemes serve as heuristic for constructing and interpreting discourse. Categorical *topoi* point toward storehouses of commonly-held values, mechanisms for uncovering warrants, and generative tools for developing content with respect to a specific topic. An enthymemetic approach to the study of discourse thus concerns argument that is not empirically substantiated but ground in probability grounded in the
disciplinary, literate, and political culture of the discourse community, the workplace.

The prevalence of similarity/difference, magnitude, and genus/species demonstrate that within the automotive manufacturing plant, production-floor employees are typically asked to think in terms of comparison (see “Chapter 5” for further analysis). Production-floor employees are most often asked to consider their occupational tasks and alternative procedures in terms of similarities, differences, effectiveness, and ineffectiveness (e.g. wearing sleevelets correctly, using both hands fully to avoid muscle strain). Such terms prioritize the acquisition of factual knowledge (e.g. the differences between hard hats and bump caps, the qualities that constitute proper and improper logon IDs) and the application of that knowledge to decisions and problem solving, encouraging safe practice and reinforced team concept.

Conversely, the findings demonstrate that production-floor employees are less typically asked to think in terms of causal relationship (how precisely might a more
comfortable or efficient occupational procedure increase the possibility of injury?), contextual circumstance (were there really cases when the employee was safer walking across the plant than in their work area, as suggested in the July 26 Toolkit), and the plausibility of hypothetical situations (such as those concerning the dangers of curled matting and combustible materials in the aisle ways; also see Chapter 5). Production-floor employees, in other words, are less often asked to consider their occupational tasks and alternative procedures in terms of “why,” or to reflect on past event and actions (what events motivate the directive to not leave the work area following a laceration?). Such discourse deemphasizes learning fundamental principles, appreciating intellectual/cultural activity, and critically evaluating ideas, arguments, and points of view upon which the safety communication is premised. The Communications Toolkits, then, function primarily to motivate production-floor response to the goals and strategies articulated by management and to offer timely and frequent feedback on recent workplace events and upcoming projects that contextualize the goals and
strategies.

Conclusion

Enthymemes are by definition prevalent within technical writing in occupational settings. In this context, enthymemes are designed to motivate the thoughts, actions, and communication necessary for reduced rates of recordable injuries and lost work days in manufacturing plants.

The use of enthymemes thus supports community norms in this workplace. Enthymemes reinforce standards necessary for successful occupational practice and guide reactions to events or conditions compromising safety. Specifically, the Communications Toolkit provides awareness of plant conventions and encourage good safe choices.

Having provided a taxonomy of the functions of enthymemes, including detailed descriptions of the categories with examples, this study identifies important features of what I call safety communication. These features include qualitative rather than quantitative comparison; maxims meant to institutionalize concern for others; documents that reinforce authoritative delineations
of responsibility; community norms; and individual self-trust.

Chapter 5 extends the discussion of these safety communication features. Before that, Chapter 4 presents an analysis of special enthymemes found in the Toolkits.
Chapter 4

The *Communications Toolkits*: Analysis
of Special Topoi and their Frequency

All of the enthymemes discussed in the previous chapter are based on topoi that for Aristotle can be found in any discourse of the three species: epideictic, forensic, and deliberative. In contrast, Aristotle considered special topoi to be unique to particular types of rhetorical situations. As indicated in “Chapter 2,” Aristotle’s three categories of special topoi apply to epideictic (ceremonial), forensic (court), and deliberative (public forum). Epideictic topics assign praise or blame, or they represent subjects as honorable or shameful. Forensic topics (not found among the corpus examined in this study) articulate accusations or defenses concerning past events. Deliberative topics encourage or discourage actions among possible future alternatives. Like common

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13 Again, Neo-Aristotelian rhetoric extends rhetoric to, indeed, any discourse such as the *Toolkits*. 
topoi, special topoi function as storehouses of values or beliefs, as mechanisms for uncovering warrants, and as generative tools for developing content for arguments. Special topoi, however, are more narrow and field specific in focus than the more encompassing common topoi because they apply to particular subjects.

In the corpus, Aristotle’s special topoi appear in Toolkits in enthymemes that distinctly represent the plant’s safety mission and create a taxonomy on which to define safety communication (a definition developed the next chapter). The following section presents a taxonomy of special topoi occurring across a corpus of 39 Communications Toolkits. Full texts of the Toolkits appear in “Appendix E,” allowing the enthymemes to be viewed in the contexts in which they occurred (see “Chapter 2” on data collection). The descriptions of the special topoi begin with definitions that explicate these topoi and then demonstrate them with examples culled from the corpus. As noted parenthetically in the following descriptions, definitions of the topoi with examples abstracted from the corpus may be reviewed in Chapter 2 (pp. 63-65). As with
the descriptions of common topoi, examples would ideally include every occurrence that was found; however, time and space constraints necessitate the selection of extracted enthymemes. The examples culled for the following descriptions were chosen to exemplify their respective categories with minimal context cues. The enthymemes found are in the full texts of the Toolkits included in “Appendix E.”

After describing the categories of special topoi found in the corpus, the analysis presents the frequency with which each of the categories occur across the corpus and characterizes how they function. Concisely, the results indicate that two categories of special topoi occur in the corpus and focus in particular to establish norms and practices concerning safety. These results suggest how enthymemes function in the context of risk and, as indicated, in what I call the field of safety communication. In addition to examining the special topics, the chapter looks at certain characteristics they share, which involve the argumentative repetition of key concepts.
1. Advantage/Disadvantage

Traditionally concerned with legislative bodies, deliberative discourse addresses practical issues of what is advantageous or disadvantageous for a given community. Oriented toward future events, deliberative speech can also be thought of as exhortation or dissuasion to action and aims at showing the potential advantage or harm of the action. While Aristotle limited deliberative rhetoric to legislative situations, its appearance in contemporary discourse allows deliberative rhetoric to be extended to appropriate contexts where actions involve choices. In the corpus, then, the rhetoric of advantage and disadvantage in what I am calling “safety communication” asks production-floor employees to choose to follow established policies, objectives, and guidelines deemed by plant management to facilitate freedom from harm or injury. In so doing, it looks to future and improved prospects.

Ex. “Remember: Safety is our overriding priority. We must all be involved in matters of security for the entire site.” (May 17, 2004 Toolkit)
Ex. “If the object is to achieve a continuing year-by-year reduction of accidents, people must follow the entire program. An accident prevention program must provide all the essentials for a ‘safety diet.’” (April 26, 2004 Toolkit)

Ex. “This process will ensure that first visits to Medical that have the potential to become recordable are investigated so that corrective action can be pursued to prevent a more serious injury.” (May 24, 2004 Toolkit)

Ex. “Plant safety is a group project. It always has and always will take each of us doing our part to keep SAFETY on the forefront of our thinking and the doing of our tasks.” (June 1, 2004 Toolkit)

Ex. “This tragic and preventable incident underscores the need for each of us to strictly observe pedestrian-plant vehicle safety guidelines.” (October 4, 2004 Toolkit)

Ex. “The bottom line is, we are concerned about your safety outside the plant as we are inside. Please buckle up!” (October 18, 2004 Toolkit)

All of these examples represent the plant’s mission or are motivated by workplace events specific to the plant. They also focus on the workers themselves. In the first example, the explicit language “overriding priority” originates from the Safety Department’s Mission Statement (see “Chapter 2”). The “year-by-year reduction of accidents” anticipated in the second example is consistent with view of the Toolkits as the investment articulated by
the Safety Representative (see “Chapter 2,” pp. 56-57).
Prioritizing safety and working toward reducing accidents constitute advantages as both activities help management secure the economic viability of the plant, even the corporation. In turn, these activities help preserve not only the safety of employees but also their jobs.

The notion of occupational safety as a group responsibility articulated in the fourth example is again consistent with the expressed Safety Department Mission, particularly the passage that states a safe workplace environment is the “responsibility of everyone.” In terms of advantage, this collective responsibility is conducive to the success and profitability of the plant. Similarly, during a personal interview, the Safety Representative compared the investment of the Communications Toolkits with the sport of golf, the reduction of strokes being analogized with the occupational safety goal of fewer recordable injuries and fewer lost workdays. These goals are consistent with the stated mission of allowing “no compromise” with respect to realizing “a healthy, injury-free environment.”
The fifth example is motivated by a specific workplace event. Premised on consequence, it calls attention to the disadvantages of specific workplace behaviors. The enthymeme responds to the death of a production-floor employee at another automotive manufacturing plant after being struck by forklift vehicle. Disadvantage is more overt in this example; it focuses on the seriousness of straying from designated walkways and of failing to properly observe while traversing the plant. The third example is both representative of the plant mission and responsive to recent plant activity. On one level, the enthymeme is motivated by confusion regarding the Quick Response Process in the event of emergency, in other words, the possibility of injuries becoming more serious if not assessed by the medical team. On another level, assessment by the medical team constitutes an advantage which contributes to the plant’s success.

All of these enthymemes represent a relationship between individual worker and working community focusing on safety. With respect to the safety mission, the first, second, and fourth examples encourage employees to respect
both management and union representatives for the care they have taken in developing safety policies and procedures. This special topic also encourages employees to recognize that the policies and procedures are reviewed frequently for continuous improvement, a process that presumably prevents compliance problems in future occupational practice. Moreover, these three examples indicate the cumulative future advantages of safe individual occupational practice — fewer recordable injuries and lost work days. Such outcomes underlie exhorting employees to follow precise guidelines the plant management believes prevents harm or injury.

The third and fifth examples allude to the disadvantages that individual non-compliance imposes upon the larger community. Specifically, if the Quick Response Process is not properly followed, then workplace colleagues may experience similar workplace events and suffer more serious consequences. More concretely, a forklift vehicle struck and killed an employee at another plant because the victim was talking on a cell phone and facing away from the oncoming vehicle. Because pedestrian-plant vehicle safety
guidelines were not observed, neither the victim nor the driver saw this situation developing until it was too late. Such unfavorable circumstances prompt rhetoric involving safety, particularly preventing future loss.

2. Praise/Blame

Epideictic speech, typically associated with obituary or acclamation speeches, is oriented toward the present and takes form as praise or blame. Accordingly, these speeches show that a person, group of people, or an institution is honorable or shameful. In so doing, they create community norms. However, they often remind the audience that a person or events of the past project the course of the future. Appeals to virtue involve communally-accepted ideas of what constitutes virtuous or noble while vice appeals ideas of what is treacherous, evil, or contemptible (see “Chapter 2,” p. 67-68). The instances of this special topos in the Communications Toolkits involve communication praising employees who avoid injury and presenting them as examples of excellence. At the same time, the presence of this special topos also characterizes safety in the plant as requiring reproach for those who fail to maintain
standards.

Ex. “The month of June was not a good month for plant safety.”
(July 26, 2004 Toolkit)
Ex. “Because the area was dark and the victim was facing away from the oncoming vehicle, neither the victim nor the driver saw this situation developing until it was too late.”
(October 4, 2004 Toolkit)
Ex. “This isn’t going to be another lecture to use your PPE, but a “Thank You” for using it.”
(October 18, 2004 Toolkit)

The third example, motivated by workplace events, honors employees for the safe decisions they have made. The enthymeme represents the comprehensive quality of the Safety Department’s Mission Statement, praising employees for wearing their Personal Protective Equipment (PPE). The first and second examples assign blame to the employees for unsafe decisions they have made. The first example represents the safety mission as the enthymeme is motivated by an increased number of recordable injuries and lost work days. The second example is the epideictic grounding an argument to properly and alertly traverse the plant in ways consistent with space-labeling signs. As I discuss deliberative topoi, epideictic serves certain goals in
developing community safety norms in the plant.

**Frequency of Special Topoi**

To review, two categories of special *topoi* are used across the corpus: deliberative advantage/disadvantage and epideictic virtue/vice. Together, as Table 4.1 indicates, advantage/disadvantage and virtue/vice comprise 6.3% of all the enthymemes found in the corpus. There were 27 special *topoi* found in the corpus. Of this total, advantage/disadvantage was more frequent at 23 occurrences (85.2%). Virtue/vice was less frequent at 4 occurrences (14.8%). See Table 4.1 for the totals and percentages for all categories.

<table>
<thead>
<tr>
<th>Topoi</th>
<th>% of Total</th>
<th># of Occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advantage/Disadvantage</td>
<td>85.2%</td>
<td>23</td>
</tr>
<tr>
<td>Virtue/Vice</td>
<td>14.8%</td>
<td>4</td>
</tr>
<tr>
<td>Total Among All Topoi</td>
<td>6.3%</td>
<td>27</td>
</tr>
</tbody>
</table>

*Table 4.1: Percentage of Occurrences Occurring across Corpus for Special Categories of Topoi*

As illustrated in the taxonomy section of this chapter, repetition is explicit in the sense that all *topoi* focus on
aspects of safety.

A few attributes of the data are worth re-emphasizing. On one level, the findings reveal the broad range of common and special enthymemes used in the Communications Toolkit genre; within this range, only two special topics appear. To review, twelve categories of common topoi and two categories of special topoi occur across the corpus. This broad range demonstrates overlap. Indeed, the “Welcome Back” statements delivered in four of the Toolkits typify the range of occupational safety issues substantiated and/or problematized by the topoi. For example, the topoi share concern for the self and colleagues, for on-site and off-site behavior, and for competing missions of plant activity: safety, production, and public service (see “Chapter 5”). Before defining “safety communication” in terms of the topoi, this chapter next focuses on this shared concern, offering an analysis of risk-specific vocabulary occurring in the corpus, and addressing some of the key terminology central to common definitions of risk communication.

The data on frequency enhances understanding of the
most frequently and least frequently used discourse in the corpus of *Communications Toolkits*. To review, the two most frequently occurring categories of common *topoi* in the corpus are similarity/difference and magnitude, followed by genus/species. Occurring less frequently in the corpus are the categories of antecedent/consequence, possibility/impossibility, authority, partition, and cause/effect. The least frequently occurring common *topoi* were past fact/future fact, maxims, documents, and contradictions. Of the special *topoi* found in the corpus, advantage/disadvantage occurred far more frequently than virtue/vice. In total, special *topoi* occurred far less frequently than common *topoi*.

**Frequency and Collocation**

Respectively, the previous and current chapters presented a taxonomy of the functions of enthymemes based on special and common *topoi* found in the *Communications Toolkits* and indicated the frequency of categories occurring in the discourse. The taxonomy of enthymemes provides specific terminology, detailed definitions, and systematically-derived categories in this corpus of
workplace discourse. The taxonomy further provides a way of conceptualizing the types of discourse developed by the Safety Department at a Fortune 500 automotive manufacturing plant. The findings reveal repetition of safety terms with epideictic and deliberative features discussed here and in "Chapter 5." This chapter examines the frequency of certain concerns and characterizes them in terms of their function as special topoi.

The next section extends the taxonomy of written discourse by counting risk-specific terms occurring in the corpus. This extension addresses some of the key terminology central to common definitions of risk communication. Focusing on repetition and its enthymematic function, this extension further appraises qualities of the Toolkits that may be more narrowly distinguished as safety communication.

The corpus includes 439 risk-specific terms including the word "risk," its cognates, and associated terms. More specifically, words associated with "risk" would include recordable, injury, emergency, and their cognates. To review, risk may be defined as the possibility of suffering
harm or loss. This possibility may be referred to as danger or, more generally, consequence. Hence, risk-specific terms include harm, loss, danger, consequence, and their cognates. Risk may also be defined as actions involving uncertain danger or hazard. Based on this definition, risk-specific terms also include hazard and its cognates. Risk management includes prevention of danger; safety, health and their cognates are thus included in the quantitative account. Like health and safety, environment is considered a subfield of risk; hence, environment and its cognates belong to the account.

Not surprisingly, given the previous section’s discussion, the word “safety” is the most frequent risk-specific term in the corpus. With 164 occurrences, “safety” accounts for 37.3% of the category. The second most-frequently occurring term is safe. The 40 occurrences of safe accounts for 9.1% of the categorical total. Together, “safety,” “safe,” and their cognates constitute almost half of the risk-specific vocabulary in the corpus.

The terms “emergency,” “injury,” “injuries,” “hazards,” “health,” “recordable,” and “unsafe” occur in
the corpus comparatively more often than the remaining risk-specific terms. The remaining risk-specific terms all total fewer than 10 occurrences, 2.1% or less of the total.

Given the definition of risk and the focus on safety communication as a field mentioned above, it is worth noting that the terms, indicating “danger,” “harm,” and “consequence,” never appear in the corpus though their cognates appear only 7 times. It is also worth noting that the terms “risk” and “risks” appear seven and two times, respectively. As the Toolkits are largely motivated by the goals of eliminating recordable injuries and lost work days, it should be observed that “recordable,” “recordables,” and “lost” appear in the corpus 16, 2, and 8 times, respectively. Table 4.2 quantifies the risk-specific terms, their number of occurrences, and the percentage of each term based on the total number of risk-specific terms.

The prevalence of the word “safety” and its cognates befits the corpus’s status as technical writing, that is, the corpus constitutes documents meant to be understood easily and used safely, effectively, and efficiently. But the
repetition of the terms in the corpus also characterizes

<table>
<thead>
<tr>
<th>Term</th>
<th>Occurrences</th>
<th>% of Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>164</td>
<td>37.3%</td>
</tr>
<tr>
<td>Safe</td>
<td>40</td>
<td>9.1%</td>
</tr>
<tr>
<td>Emergency</td>
<td>34</td>
<td>7.7%</td>
</tr>
<tr>
<td>Injury</td>
<td>30</td>
<td>6.8%</td>
</tr>
<tr>
<td>Injuries</td>
<td>27</td>
<td>6.2%</td>
</tr>
<tr>
<td>Hazards</td>
<td>26</td>
<td>5.9%</td>
</tr>
<tr>
<td>Health</td>
<td>21</td>
<td>4.8%</td>
</tr>
<tr>
<td>Recordable</td>
<td>16</td>
<td>3.6%</td>
</tr>
<tr>
<td>Safely</td>
<td>13</td>
<td>3.0%</td>
</tr>
<tr>
<td>Unsafe</td>
<td>13</td>
<td>3.0%</td>
</tr>
<tr>
<td>Hazard</td>
<td>9</td>
<td>2.1%</td>
</tr>
<tr>
<td>Hazardous</td>
<td>8</td>
<td>1.8%</td>
</tr>
<tr>
<td>Environment</td>
<td>8</td>
<td>1.8%</td>
</tr>
<tr>
<td>Lost</td>
<td>7</td>
<td>1.6%</td>
</tr>
<tr>
<td>Risk</td>
<td>7</td>
<td>1.6%</td>
</tr>
<tr>
<td>Dangerous</td>
<td>4</td>
<td>0.9%</td>
</tr>
<tr>
<td>Loss</td>
<td>3</td>
<td>0.7%</td>
</tr>
<tr>
<td>Recordables</td>
<td>2</td>
<td>0.5%</td>
</tr>
<tr>
<td>Dangers</td>
<td>2</td>
<td>0.5%</td>
</tr>
<tr>
<td>Risks</td>
<td>2</td>
<td>0.5%</td>
</tr>
<tr>
<td>Safer</td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td>Safest</td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td>Consequences</td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td>Total</td>
<td>439</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4.2: Frequency of Risk-specific Vocabulary Found in Corpus

the rhetorical aims of the Toolkits. Through the frequency
of these terms, the corpus encourages employees to think in
terms of safety (see p. 128).

As technical communication, the Toolkits are characterized by their focus on safety rather than risk or danger. The corpus is oriented more toward terms that reflect appropriate practice and preventative procedure, terms such as "safety" and "safe." Conversely, the risk-specific vocabulary reflects the residual conclusions of inappropriate practice and non-preventative procedures. Terms such as consequence, danger, and harm — or even terms such as "injuries," "injury," and "emergency" — are negligible.

There are other ways in which "safety" is frequently used. Based on a partitioned examination of the collocations, the word "safety" is used as an adjective 121 times in the corpus, or 73.8% of the occurrences of the word safety. Some of these 121 adjectives include modifications of activities as evinced by the following collocations: "safety policies, safety practices, safety procedures, safety habits, safety program, safety review, and safety talk." Other collocations are constructed to modify inanimate objects: "safety glasses, safety blocks,
safety pins, safety gate, safety mat, safety equipment, and safety shoes.” The continual reinforcement caused by these repetitions encourage employees to think in terms of appropriate practice and preventative action.

These uses reinforce preventive procedures and practices. They are all the more pervasive by the 27 instances where “safety” occurs as a noun phrase by itself without modification. In a sense, these unmodified occurrences function as epideictic rhetoric; that is, the concern for the audience expresses respect for production-floor employees and offers honor while celebrating community values. As representative examples, the following two collocations appeal to the audience’s sense of belonging to the community:

--Winning in safety means no fatalities.
(January 12, 2004 Toolkit)
--In safety, we ended the year with 80 recordable injuries.
(February 9, 2004 Toolkit)

Both collocations deploy the preposition “in” to appeal to the audiences’ sense of community. The first collocation positions safety as acts of continuation rather than past
history. In other words, the collocations seek employee adherence to the community norm. The first collocation precedes the following statement, “And to win we have to do the right things when it comes to rigging; and we have to do it all the time.” The vague terms “right things” and “it” suggest the present community values should prompt employees to continue in safety. These values include the established practice of wearing hardhats and tying off from approved anchorage points during rigging. It is, by extension, honorable to wear hardhats when appropriate and to tie off from approved anchorage points in the present.

The second collocation also positions safety as an ongoing concern; in this case, this collocation is a deliberative statement calling for future actions:

What are we doing to try and prevent future injuries? We have reestablished the Laceration Committee, a joint committee who will review lacerations, look for common causes or areas, and implement solutions to prevent employees from getting cut.

(February 9, 2004 Toolkit)

Calling for reestablishing the Laceration Committee, the collocation is similar to the first; it draws from
community values. However, it functions to direct future action.

The epideictic elements include six other occurrences in which the word “safety” is collocated with passive structure to reaffirm some of the broader cultural values of the automotive manufacturing plant. These collocations include the following examples:

--Safety is our overriding priority. (May 17, 2004 Toolkit)
--Safety is still our overriding priority and everyone’s responsibility! (June 1, 2004 Toolkit)
--Plant safety is a group project. (June 1, 2004 Toolkit)
--Safety is everyone’s responsibility. (August 2, 2004 Toolkit)
--Of course, you have the right to refuse work if you believe your health or safety is at risk. (September 20, 2004 Toolkit)
--Union and management leadership agree that safety is our number one concern. (September 20, 2004 Toolkit)

The first and latter pair of these passively-constructed collocations reaffirm that the Safety Department’s mission statement espouses corporate priorities.

The second, third, and fourth of these collocations directly reaffirm the joint responsibility allocated by the
Safety Department’s mission statement, placing the burden of responsibility on all plant participants. These collocations thus constitute a written reaffirmation of community values applied in actual practice. In terms of enthymemes, each collocation places responsibility on the individual reading or listening to the content of the Toolkits. This placement is best characterized as epideictic because the phrasing is by and large in collective first or third person. Yet, if the collocations are considered collectively, one might infer the following enthymeme:

Premise: Union and management leadership agree that safety is our number one concern.

Specific Case: You have the right to refuse work if you believe your health or safety is at risk.
(September 20, 2004 Toolkit)

Tentative Conclusion: The individual employee is primarily responsible for avoiding recordable injuries and lost work days.
(September 20, 2004 Toolkit)

The key concept of the specific case, or minor premise, is
right of refusal. The conclusion then brings together the key terms of the major and minor premises, locating the burden of responsibility on production floor employees. The discourse thus focuses on honoring to affirm community values and assures safe future decisions.

As stated previously, the corpus is part of the Safety Department’s expressed, comprehensive effort to limit the number of recordable accidents and reduce the number of injuries that result in lost work days. The words recordable, recordables, and lost, however, occur only 14, 4, and 7 times respectively. Together, these three terms total only 25 occurrences, constituting only 5.7% of the risk-specific terms.

The limited occurrences of the words recordable, recordables, and lost workdays may reflect the interests of the corpus’ primary audience. In the Toolkits, employees are asked to think about workplace environment, tools, and procedures in terms of comparison, relationship, and circumstances for the purpose of minimizing danger and harm. Consistent with the derivation of topos, the topoi appeal to safe practice, consequential deviations, and
global corporate priorities. Corporate priorities, however, are not as apparent in the discourse as employees are not as concerned with reducing the annual, billion-dollar costs of workers’ compensations discussed in “Chapter 1.” Hence, the occurrences of words directly pertaining to the goals motivating the Toolkits are used sparingly to avoid calling undue attention to the corporation’s commercial interests of the corporation. When the terms are used, they show concern for the employee’s physical well-being and make distinctions between kinds of injuries, again affirming community values.

**Repetition as Argument**

Frequency not only focuses on safety but also contributes to the enthymematically arguments in the Toolkits. Repetition is typically associated with style and thus with ornament as opposed to logic. However, repetition can be understood in terms of figures of speech that function enthymematically and, thus, support the arguments made in discourse. Drawing from etymological roots and derivations, Fahnestock (1999) traces an alternative
history in which elements of style operate as enthymemematic elements of argument. This tradition is first evident in the work of Isocrates and Anaximenes.

For example, Fahnestock (2003) ascribes deliberate repetition, or epistrophe, as “convergence” (p. 130), and the ascription seems applicable to the Toolkits. To explain, the repetitions of safety terms in the Toolkits incorporate the many precautions employees are supposed to take to prevent accidents. Fahnestock explains, “The repetition itself ‘argues’ that these instances are so substantially alike that they can be characterized in exactly the same way” (p. 132). The “Safety Diet” posited in the Toolkits is one such argument as effective precautions most be cognizant of rules, inspections, safety contacts, training, observations, publicity, personal protective equipment and job safety analysis. Each occurrence of safety in the Toolkits refer to one or more of these “ingredients.”

As Fahnestock (1999) explains, enthymemes can function as argumentative “‘cappers’” (p. 29). Based on repetition, an enthymeme “summarizes and re-expresses material already
explicit in the speeches the audience is hearing” (p. 29). But, figures of speech can also function much like topoi and cap arguments. For example, as observed by Fahnestock (1999), “the argumentative intent of repetition may just as well be to keep the same signification from instance to instance as a common thread, maintaining consistency of concepts in consistency of terms” (p. 159). Fahnestock distinguishes two figures of repetition: ploche and polyptoton. Ploche, repetition of the same word, is exemplified in Martin Luther King Jr.’s I Have a Dream such as when the word “faith” is repeated in ways that help elaborate King’s “dream” of civil rights. In the Toolkits, ploche is manifest in the occurrences of safety. Polyptoton is the repetition of words derived from the same etymological root. In the Toolkits, polyptoton would include the safety cognates safe, safely, unsafe, safer, and safest. Fahnestock (1999) further explains “It is sometimes the goal of an argument to take a concept accepted by an audience in one role or category of sentence action and transfer it to others, an agent becoming an action or an action becoming an attribute and so on” (p. 171). As a
result, figures of repetition can support argumentation. Understood this way, the concerns repeated in the Toolkits support the argument they make about safety.

As for the focus on safety, the concern for self and colleagues is most evident in the following deliberative enthymeme: “Plant safety is a group project. It always has and always will take each of us doing our part to keep SAFETY on the forefront of our thinking and the doing of our tasks” (June 1, 2004 Toolkit). Likewise, the concern for on-site and off-site behavior is equally apparent in the following epideictic enthymeme: “The bottom line is, we are concerned about your safety outside the plant as we are inside. Please buckle up!” (October 18, 2004 Toolkit). Such repetitions focusing on the word safety remind employees that occupational safety is effectively achieved not merely through correctly-performed tasks but through consistent patterns of behavior. As a deliberative enthymeme, it attempts to mitigate problems by directing future practice. Moreover, the repetition supports argument by setting up and fulfilling audience expectations. Prior to the enthymeme, employees are
praised for their collective efforts in reducing recordable injuries by wearing Personal Protective Equipment (PPE). In other words, employees are celebrated for expectations fulfilled. Thus, the argument to “buckle up” takes on greater rhetorical authority as survey results indicate expectations that have been set, fulfilled, yet not sustained. The enthymeme is motivated by a 25% drop in employee seat belt usage over the prior year and a half.

Other enthymemes function similarly, that is, supported by figures of repetition, to effect future safe practices. The concern for self and colleagues is again evident in the following deliberative enthymeme: “Through fire awareness and safe practices at home and at work, you can reduce the costs of fire damage as well as save lives” (December 15, 2003 Toolkit). With the repetition of safety cognates supporting the argument, the enthymeme reinforces safety concerns for self and colleagues. Indeed, employees are encouraged to store gasoline and other flammables in tight metal containers; get rid of stored newspaper or other rubbish; keep oily, greasy rags in labeled and sealed non-glass containers; keep all chemicals and paints in
their original containers. Indeed, spontaneous ignition from stored newspaper or other rubbish can negatively impact any employee who would happen to be in that area of the plant. Similarly, the following deliberative enthymeme offers the mutually reinforcing benefits of healthy behavior on-site and off-site through the repetition of: “Therefore, this special Toolkit is dedicated to the dangers involved in driving while under the influence of drugs and/or alcohol” (December 22, 2003 Toolkit). This enthymeme is motivated by the fact that, during the previous year, over 1,000,000 people were injured in alcohol-related accidents. In response, the safety communication at work in this Toolkit recognizes that plant employees too can have difficulty steering, braking, changing lanes, and adjusting to changing road conditions even after only one drink.

It is important to recognize that repetition contributes to the cohesion and coherency of the corpus and to individual enthymematic accounts. Thus, by recognizing the unity of the topoi occurring across the Toolkits, employees can appreciate the range of responsibilities that
create a safe workplace environment. Indeed, the aforementioned examples emphasize (e.g. safety, protecting, caution) safety and consistent practices (e.g. wearing PPE, pre-operational checks, lockout technique, firework tips). Indeed, at the plant, the two constituencies who most frequently experience recordable injuries are the more-recently hired employees and the most-tenured employees.

To recapitulate, in the taxonomy section, all topoi focus on aspects of safety. It should be recognized that the repetition does not usually take place within a single enthymeme, nor do they always take place within a single Toolkit. The following deliberative enthymeme, “Remembering our plant safety policies and why they are in place is also important now that you are back to work” (January 26, 2004 Toolkit) clearly appeals to concern for oneself. Conversely, the deliberative enthymeme “Strict adherence to the lockout guidelines is critical in protecting our workforce” (August 9, 2004 Toolkit) just as clearly appeals to concern for one’s colleagues. This repetition across the corpus supports the functions of the enthymemes to create community norms and steer future
practices.

Because of its focus on safety and the repetition of the term and concepts associated with it, the distribution of categories supports understanding the Toolkits as safety communication. The next chapter explores how the Toolkits complicate risk communication by extending Rowan’s rhetorical model and more carefully by considering the definition and subtext of safety communication.
Chapter 5

Discussion: The Toolkits as Safety Communication

Based on the analysis in the previous chapters, this chapter first defines safety communication. After presenting that definition, characteristics are illustrated with the help of appropriate enthymemes. The discussion then uses this definition to extend Rowan (1991) and others’ works based on problems mentioned in “Chapter 1.” The extension responds to Rowan’s concerns that risk communication studies have placed too much emphasis on risk and not enough on communication. In essence, the study creates a sub-discipline called safety communication, focusing on safety and employing certain topoi to that end.

Defining Safety Communication

The Communications Toolkits suggest that safety communication can be defined as messages intended to encourage healthy precautions, practices, and work
environments in pursuit of the ultimate goal of an accident-free workplace. And to that end, deliberative and epideictic enthymemes are often used as well as common topoi focusing on preventative practice. As discussed in “Chapter 1,” the National Research Council (1989) defines risk communication as an “interactive process of exchange of information and opinion among individuals, groups, and institutions; often involves multiple messages about the nature of risk or expressing concerns, opinions, or reactions to risk messages or to legal and institutional arrangements for risk management.” In terms of essential characteristics, it seems that safety and risk differ in substantive ways. Specifically, safety communication looks at preventing future harm and affirming community values whereas risk communication assesses posited future harm and either remedies or measures past harm. In some cases, risk communication performs all three of these functions.

More specifically, safety communication is intended to prevent harm or injury. As demonstrated in the Toolkits, Safety communication is deliberative as it encourages or discourages among possible future alternatives and
epideictic as it develops community values to support this deliberation. Examined as safety communication, the Communications Toolkits use rhetorical practices that focus on the workplace community and treat everyday risks existing in non-crisis modes. Understanding the Toolkits as safety communication thus contrasts with Katz and Miller’s (1996) landmark case study which describes risk communication in terms of overt controversy (i.e. the environmental gridlock in siting a regional nuclear waste storage facility). As safety communication, the Toolkits complement Katz and Miller’s call for a rhetorical model of addressing danger and harm that is more interactive, dialogic, and historically-situated.

Given their purpose, the enthymemes in the Toolkits project a less imperative attitude than documents associated with the near-incident at Three Mile Island (Casamayou, 1993). Casamayou ascribes “selective attention” at the root of the problem, a prevailing insensitivity toward the role of humans in causing plant accidents. Internal technicians and external regulatory commissions such as the Nuclear Regulatory Commission (NRC)
believed well-designed hardware would take care of all safety contingencies. Early warnings of operator error were also downgraded on the basis of previous accidents and incidents being kept under control. This downgrade further illustrates the substantive difference between risk communication and safety communication. Indeed, the downgrade is an example of risk communication assessing future harm based on remedied or measured past harm. Conversely, an approach more sensitive to the role of humans in causing plant accidents would have been an example of safety communication preventing future harm and affirming community values.

At the same time, one should recall the corpus’s enthymemetic attempts to help workers acquire factual knowledge and apply that knowledge to decisions and problem solving (and away from causal relationships, contextual circumstance, and hypotheticals). Again, safety communication is deliberative as it encourages or discourages among possible future alternatives and epideictic as it develops community values to support this deliberation. In contrast, risk communication assesses
past problems. More concretely, studies of the shuttle Challenger catastrophe, where tensions between managers and engineers undermined the deliberative process (Dombrowski, 1994; Walzer and Gross, 1994; Winsor, 1990), reaffirm that only when we grapple with questions regarding the meaning and interpretation of knowledge does a valid rhetorical object emerge for technical communication. It is not that we shouldn’t have risk communication but only that it does something different. Assessing the past contributes to present and future deliberative efforts in safety communication.

Such grappling would be consistent with the alternative communicative approaches posited in Scott’s (2002) study of “knowledge enthymemes” used in the public policy debate over newborn HIV testing in New York State. Specifically, Scott integrates Flower’s “partners in inquiry” model for deliberative, problem-solving dialogue. Steps for this model include: getting story behind story, seeking out rival interpretations of the problem, envisioning a range of possible solutions, and critically examining possible outcomes. Such procedures are modeled in
the special topoi found in the corpus. That is, the special topoi represent the plant’s mission or are motivated by workplace events specific to the plant. These steps support the cultural dynamics Botsch (1993) argues are so critical to balancing central control and individual autonomy within manufacturing plants. Indeed, the rhetoric of advantage/disadvantage prioritizes safety and works to reduce accidents and thus help management secure the economic viability of the plant, even the corporation. Thus, safety communication helps preserve not only the safety of employees but also their very jobs.

The next section of this chapter uses the taxonomy of written discourse and the notion of safety communication occurring in the corpus to further complicate existing representations of risk communication, particularly in terms of the rhetorical model posited by Rowan (1994).

**Rowan Revisited**

In her work, Rowan (1994) describes technical and democratic approaches toward risk communication, identifies the types of participants likely to subscribe to each approach, explains why both approaches seem so
commonsensical to their users, and identifies the underlying models of communication each approach assumes. From this analysis, Rowan argues that technical and democratic approaches, while commonsensical, do not in fact work and must be replaced (p. 392). Accordingly, Rowan offers an alternative rhetorical model of risk communication (see graphic representation in “Chapter 1”). This rhetorical alternative illuminates characteristic tensions and goals distinctive to risk communication situations and describes the ways in which these tensions may be acknowledged and potentially resolved.

Rowan outlines her description of the two existing approaches in terms of key features. From the technical perspective, risk communication is the process in which experts inform and persuade the public about the results of “risk analysis” and the decisions of “risk managers” (p. 392). Thus, people who prefer the technical approach to risk communication feel that others should simply understand and accept the experts’ quantitative characterization of risks. While the technical response to risk situations focuses on the nature, severity, and
likelihood of the risk itself, the democratic response focuses on other factors.

Democrats, as labeled by Rowan, are concerned with the political fairness of the situation. Such advocates assess the fairness of the risk according to factors such as whether a risk is imposed or voluntarily assumed, whether it is familiar or unknown, and whether the risks and benefits are equitably distributed (p. 396). Thus, the democratic view asks who decides whether a given risk should be incurred and who benefits or is harmed is just as important, if not more, than the severity and likelihood of the risk.

Identifying the types of participants likely to subscribe to each approach, Rowan notes people who endorse the technical perspective are often trained in science and technology. Such professionals may work for government agencies, industrial corporations, or public utility companies (p. 393). In these capacities, they view risk communication as a one-way, expert-to-lay process. Perceiving how the elitism of this perspective may be aggravating to those not considered experts, Rowan advises
that it is important for audiences to understand why such professionals instinctively think in these terms. Responsible for conducting risk analyses and setting safety standards, they often take great pride in their efforts to protect the public and cannot help but feel hurt when their efforts are unappreciated and resented (p. 394). In short, technical workers see expert knowledge and continued development in science, technology, and measurement as the keys to attacking the multitude of hazards we face.

People who endorse the democratic perspective come from a broader range of backgrounds including homeowners, hunters, farmers, government representatives, environmental groups, and public interest law firms (pp. 396-397). Seeing injustice as the chief cause of risk problems, these professionals often confront risk situations that seem unfair and especially harmful to the powerless. From this point of view, risk situations should be managed by engaging all affected individuals in finding equitable solutions (p. 400). People endorsing the democratic view believe that if the average person had more say in how risks are imposed and managed, we might be subject to a
smaller and less threatening array of risks.

Delineating the problems in aspects of each approach, Rowan first addresses the technical view of ideal risk communication. People who endorse the technical view assume that if only others understood the available scientific information, they would agree with an expert’s judgment that a given risk is or is not harmful. When opposing factions fail to agree, experts assume that the disagreement is actually a misunderstanding (p. 399). Because of these assumptions, the implicit model of risk communication includes only two communication goals: informing and persuading. Despite the fact that risk assessment involves a great deal of discussion and debate among scientists with differing types of expertise, the intuitive technical model of risk communication largely ignores goals other than informing or persuading (p. 399). For instance, the technical approach does not explore ways one might pursue listening, negotiation, comforting, self-expression, or even entertainment in risk communication situations (p. 399). While recognizing that the strength of the technical response is its emphasis on gathering and
conveying accurate information, Rowan notes over-emphasis on the importance of accurate information. The weakness of the technicals’ implicit model of risk communication is that it is parochial and elitist (p. 400). The technical model focuses on the importance of one kind of expertise, technical expertise, and expects that information should by itself solve risk communication problems.

Rowan is no less critical of the democratic view of ideal risk communication. Democrats assume that if only power imbalances could be offset by interactive rules and extended dialogue could occur, reasonable solutions to risk management problems would be found (p. 400). When agreement does not occur, democrats assume the disagreement results from inherent inequities or inadequate rules for guaranteeing equitable participation (p. 400). Because of these assumptions, the democratic model emphasizes the importance of listening and forbids the pursuit of persuasion as a communicative goal. This model insists that, because the goal of risk communication is mutual understanding, persuasive efforts to gain agreement are out of place (p. 400). Rowan acknowledges that the strength of
the democratic model is its emphasis on listening, open dialogue, and privileging the disempowered assumes that all parties affected by a risk bring some expertise to discussion of risk management. Still, Rowan is concerned that the democratic model assumes that a fair process equals a fair product and fails to adequately appreciate the importance of knowledge and skill in critical thinking and communication (p. 401).

A second weakness in the democratic model, as identified by Rowan, is that the model tries to “outlaw” persuasion (p. 401). Rowan qualifies that there is nothing inherently wrong with attempts to gain agreement, just that such attempts often occur prematurely. By wrongly attempting to legislate communicative goals, democrats discourage the pursuit of all available communicative goals: self-expression, listening, informing, entertaining, negotiating, and persuading (p. 401). Drawing from Habermas (1984), Rowan reminds us that only when people have both the freedom to communicate as well as the requisite knowledge and skills for the communicative task can the best problem-analyses and the fairest
solutions emerge.

Before offering her rhetorical alternative, Rowan articulates the nature of communication in risk communication. This articulation is prefaced with the succinct reminder that the technical response reduces communication to information transmission while the democratic response reduces communication to rules for fair procedures (p. 401). Rowan contends that both reductions render invisible the analytic, goal-oriented, and naturally strategic nature of communication. Because they have no conception of communication as rhetoric — as sets of strategic situation-analysis and message-generation activities — these intuitive models cannot offer heuristics for analyzing characteristic risk communication tensions and selecting message options to address them (p. 401). Even when these intuitive approaches do inform risk communication, they generate rigid, vague, and simplistic rules. Rowan suggests that, to develop reflective and strategic risk communication, a full-fledged rhetorical model of risk communication is needed.

To further clarify what her rhetorical model of risk
communication entails, Rowan (1994) describes a research-supported heuristic for analyzing what she views as the most pervasive obstacle in risk communication: suspicion. Suspicion, Rowan explains, arises because risk by definition is dangerous, uncertain, unfamiliar, and inconsistently assessed by experts (p. 402). Rowan follows by positing a heuristic based on the notion that credibility is a function of perceived competence, trustworthiness, and dynamism. More specifically, the heuristic encourages risk communicators to project an ethos based on being trustworthy, the audience’s best interests at heart; authoritative, appropriate training and good judgment; and dynamic, confident and energetic (p. 404). The heuristic is meant to help organize strategies for enhancing a person’s or organization’s credibility among each of these dimensions. These strategies include strongly acknowledging audience’s concerns, acknowledging issues of uncertainty, and working toward mutually satisfactory solutions rather than pre-formulated ones.

As the ultimate purpose of risk communication is persuasion, Rowan is correct to examine risk communication
as rhetorical activity. Her framework, however, reveals deficiencies. Prior to offering her rhetorical alternative, Rowan’s model does not acknowledge that the technical and democratic models are themselves rhetorical. To explain, Rowan describes the two approaches in terms of key features. From the technical perspective, risk communication is the process of having experts inform and persuade the public about the results of “risk analysis” and the decisions of “risk managers” (p. 392). Thus, people who prefer the technical approach to risk communication feel that others should simply understand and accept the experts’ quantitative characterization of risks. In this description, Rowan oversimplifies a bit. First, persuading the public is by definition rhetorical. Second, rarely, if ever, are risks only characterized quantitatively. Facts always exist in contexts which render them rhetorical rather than universal. The Toolkits add this dimension to Rowan, being the discourse of safety communication.

Using one of the Toolkits as example, the July 26 Toolkit notes 12 recordable injuries and one lost workday
for the month prior. This report is followed with the suggestion, “In certain cases, employees are safer when at their job than when they are away from the work area and walking through the plant!” In this instance, the risk is recounted both quantitatively and qualitatively. That is, the statistics are quantitatively represented via magnitude and qualitatively represented via similarity/difference to encourage employees to follow standardized work practices, to have proper access to the operator station and parts, to participate as teams when setting up their work areas, and to consistently communicate with team leaders and support departments. Thus, Rowan’s technical perspective inaccurately understates the role of context in technical documents. As demonstrated in the example, the technical model is also rhetorical as the enthymeme constitutes use of language to influence the thoughts and actions of production-floor employees with respect to occupational practice.

While the technical response to risk situations focuses on the nature, severity, and likelihood of the risk itself, the democratic response focuses on other factors.
Democrats, as labeled by Rowan, are concerned with the political fairness of the situation. Such adherents assess the fairness of the risk asking whether a risk is imposed or voluntarily assumed, whether it is familiar or unknown, and whether the risks and benefits are equitably distributed. Thus, the democratic view involves deciding whether a given risk should be incurred; who benefits or is harmed is just as important, if not more, than the severity and likelihood of the risk. In this representation, Rowan again oversimplifies and leaves out an aspect that can be satisfied by considering documents as safety communication.

The Toolkits consistently characterize various risks as unacceptable through a range of topoi that include magnitude, authority, documents, maxims, and contradiction. For example, instead of encouraging incurred risk, employees are advised to reject risk when they are asked to wear sleevelets in all areas of the plant. It is assumed that nobody stands to benefit should such risk be accepted. The same can be said when employees are asked to dispose of syringes at plant medical and to avoid using cell phones when moving within the plant. These issues involve issues
of benefit and harm, but not in a way that asks employees to assume risk in their occupational procedure, in other words, in a way that varies with Rowan’s more narrow representation of risk situations.

Framed as an alternative to the technical and democratic models, Rowan’s rhetorical approach to risk communication situations begins by locating the characteristic tensions or obstacles to effective communication. Rowan posits that risk communication situations are like all communication situations; they include sources, receivers, messages, channels, and contexts. Therefore, risk communication situations are distinct only in their topic: difficult-to-understand dangers and uncertainties. Because of the nature of these topics, risk communication is characterized by certain recurrent obstacles to effective communication. These obstacles include feelings of suspicion, confusion, ignorance, disagreement, and apathy.

With respect to these obstacles, Rowan outlines five general goals at which risk communicators must aim. First, to diminish suspicion, participants need strategies for
diagnosing this problem and creating trust. Second, to mitigate confusion, strategies for awareness-creation must be developed. Third, practitioners must respond to ignorance by determining why ideas are misunderstood and by developing methods to facilitate understanding. Fourth, because risk communication situations involve frequent disagreements among the well-informed, skills in achieving agreement are needed. Fifth, to eliminate apathy in emergencies or in efforts to improve health and safety habits, risk communicators need strategies for motivating action. Rowan grounds these obstacles and corresponding goals in rhetorical traditions, noting that theorists since Aristotle have argued that communicators should establish credibility (develop trust), inform (enhance awareness and understanding), and persuade (motivate agreement and action). Through this rhetorical approach to risk communication, Rowan hopes to bridge the communicative goals of the technical approach with the legitimacy of democratic concerns.

Despite what it offers by way of a rhetorical solution, Rowan’s model has some gaps as shown in the
forthcoming assertions and examples. The gaps can be remedied by considering these workplace situations in terms of safety communication as the *Communications Toolkits* exemplify rather than as risk communication as Rowan and others think of them. As will be discussed, the extension is possible because the *Communications Toolkits* are routine documents that establish trust between employees and employer and operate as safety communication.

The first problem in Rowan’s work occurs in her representation of the technical model of risk communication:

> From the technical perspective, risk communication is the process of having experts inform and persuade the public about the results of “risk analyses” and the decisions of “risk managers.” (p. 392)

Rowan explains that people who prefer the technical approach to risk communication feel that others should simply understand and accept the experts’ quantitative characterization of risks. She offers examples to illustrate this explanation. One example is the Atomic Industrial Forum’s assertion that bicycling and walking
down the street are statistically more life-threatening than living near a nuclear reactor.

Rowan’s assertions are correct in some respects. Certain situations must be accepted or rendered acceptable. However, while the technical perspective as described by Rowan is all about convincing the audience to accept risks deemed appropriate by risk managers, it doesn’t adequately account for context and specifically the audience’s perspective. For example, the audience itself may have reasons to live near a reactor that her model does not take into account which involves more than accepting risk or how and in what ways the risks can be accepted or shared.

Understanding such situations as safety communication remedies this problem. This remedy would allow managers to help those who already live in situations at risk, help them deliberate about preventing harm rather than accepting it. This deliberation, as exemplified in the Toolkits, involves convincing production floor employees not to accept risks. By taking the employees perspectives into account, they ask them to participate in making the future safe. Consider the following enthymemes:
Ex. “Shovel in small amounts; do not over exert yourself.”
(December 8, 2003 Toolkit)

Ex. “Due to the elevated noise levels from construction occurring in Metal Assembly, please advise all employees to wear hearing protection while on the plant floor.”
(December 22, 2003 Toolkit)

Ex. “Obey posted signs.”
(February 9, 2004 Toolkit)

Ex. “Always wear slop-resistant shoes; shoes should be of the sturdy leather type, this also includes tennis shoes. **Cloth or dress shoes are not acceptable footwear for the workplace.**”
(January 12, 2004 Toolkit)

Ex. “Don’t risk serious injury by taking shortcuts.”
(October 25, 2004 Toolkit)

All of these enthymemes discourage accepting risk but rather encourage preventing it. The safety communication approach offered by the *Communications Toolkit* includes the employees’ perspective in the technical model as well as considering future actions rather than accepting past risks.

The enthymemes expose another way to extend Rowan’s technical model. To explain, the technical model of risk communication is also about convincing audiences to prioritize efficiency and convenience. Nuclear reactors
are not only described as safe; they are also encouraged as more efficient and convenient forms of energy. The examples pulled from the Toolkits, however, discourage considering workplace practices in terms of convenience and efficiency as bases for unsafe occupational behaviors. They acknowledge and include this kind of discouragement, or to put it antithetically, it encourages safe practices over convenience, a possibility added to Rowan’s model.

The second problem in Rowan’s work occurs in her representation of the democratic model of risk communication:

Ex. “Democrats are concerned with the political fairness of the situation.” (p. 396)

Rowan explains that the individual or group who decides whether a given risk should be incurred and who benefits or is harmed is just as important, if not more, than the severity and likelihood of the risk.

Again, Rowan’s representation can be used to approach risk communication. Certainly, risk communication must be concerned with political fairness. But her model leaves out the employees’ perspective. Indeed, though the
construction and dissemination of the Toolkits follow a top-down approach, they also encourage a two-way flow of communication. Production floor employees are consistently encouraged to raise concerns with their shift supervisors. Production floor employees are always welcome at the Safety Office. Moreover, the directives in the Toolkits are often supported with warrants from the production-floor employees and support their well-being.

The deficiency in Rowan’s democratic perspective is similar to the deficiency in her technical perspective. Her democratic model assumes that the goal is for risk managers to convince audiences to accept risk. In her discussion of the democratic model, Rowan cites risk managers who ask residents to accept unfamiliar chemicals in their water supply. But managers, for example, should consider the possibility that unfamiliar chemicals should not be permitted into the water supply, and allow workers to be informed and participate in the decision-making process. In this way, they deliberate about the future, based on shared values, rather than assess past problems.

Prior to offering her rhetorical alternative as
indicated (p. 167) and in discussing the technical and democratic models, Rowan does not acknowledge that they are themselves rhetorically constructed. In other words, the models are top-down directives. A key facet to Rowan’s problem is her representation of the technical perspective as the process of having experts inform and persuade the public about the results of “risk analysis” and the decisions of “risk managers”; the idea is that audiences should simply understand and accept expert characterization of risks. However, as an artifact of safety communication, the Toolkits offer a counter reasoning in the following excerpt:

Ex. No one knows the risks and problems associated with any job better than the person who is actually doing the work. Problems with machine design that may cause injury or illness, such as ergonomic or guarding problems, need to be reported by you. Don’t assume that “the experts” always know what’s right. (September 20, 2004 Toolkit)

On the surface, the last sentence seems to discourage accepting the results of ‘risk analyses’ and the decisions of ‘risk managers.’” But the passage has an unacknowledged
rhetorical element. Indeed, discouragement is still a directive from the risk managers who wrote the *Toolkit*. Nonetheless, the discouragement is based on the risk analyses that motivated the directive. The last line, an enthymeme of contradiction, does not encourage employees to distrust the judgment of the Safety Department; instead, it shifts responsibility for the machine design to the engineers who designed the equipment. By assuming that one class of experts (the engineers) can be wrong, the audience can also accept the recommendations from another class of experts (the Safety Department).

In terms of distinction, Rowan’s rhetorical model of risk communication is too restrictive. For example, she states

> Risk communication situations are like all communication situations: they include sources, receivers, messages, channels, and contexts. They are distinct only in their topic: discussion of difficult-to-understand dangers and uncertainties. (p. 402)

Although the first sentence of Rowan’s rhetorical model is consistent with the corpus, the second is problematic because it characterizes risk communication as beyond the
expertise of the production-floor employee.

Rowan’s rhetorical model would be enhanced by including the employees’ experience and knowledge in its considerations. Doing so would mitigate feelings of suspicion, confusion, ignorance, disagreement, and apathy that are typical of risk communication. If confronted in ways characterized by a Communications Toolkit, perhaps the risks typified in Rowan’s work can be lessened.

Rowan concludes her rhetorical model by naming suspicion, confusion, ignorance, disagreement, and apathy as obstacles to effective risk communication. She is correct in this ascription. Recall, however, that Rowan is focused on risk communication that asks audiences to accept risk. Conversely, the Communications Toolkits ask audiences to reject risk with rhetoric that draws from the audiences’ own experiences and deliberate to prevent future problems.

The emotions identified by Rowan are handled by different argumentative strategies in the Toolkits. Hence, the issues of trust or suspicion are points where the data set for this study could be useful. The use of
similarity/difference and genus/species, for example, encourages plant employees to suspend distrust in their own subjective occupational evaluations, and distrust of the managers offering this advice. Indeed, these topoi ask employees to develop ability to perceive their occupational environment and to accordingly process categorical distinctions of workplace practices and tools.

For the Toolkits to function effectively, production-floor employees must trust their requisite knowledge rather than their own subjective occupation evaluations. Many of the enthymemes found in the Toolkits encourage employees to make independent evaluative judgments as part of their occupational procedures. For example, the occurrences of genus and species ask employees to identify subjects as part of a larger class, as sharing the properties of other members of that class. The topoi of genus/species often prompts employees to make judgments based on their expertise and experience. With respect to the enthymemes concerning rubbish in the aisleways, one may recall the cliché “one person’s trash is another person’s treasure.” Still, employees must develop a reliable sense of reasoning
or else the work of the plant would become dysfunctional and/or unsafe. Hence, the topoi used in the Toolkits reinforce community norms in this workplace by providing awareness of plant conventions. This reinforcement is salient in the recurring “Welcome Back” messages.

In addition to genus and species, the topoi of similarity and difference also ask employees to make independent judgments based on their knowledge and expertise. Again, the success of these enthymemes depends on the audience’s ability to trust their own abilities, especially their own opinions. If anything, evaluations based on similarity and difference are all the more subjective than evaluations based on genus and species. To explain, genus and species call for judgments based on the measurable, material, or comparable (e.g. damp, warm environments; non-glass containers; small annoyances). Conversely, similarity and difference call for judgments based on the immeasurable, abstract, or incomparable (e.g. trouble spots; cooperation; comfortable pace; awkward size).

Recapitulation
Rowan’s work and my study of Toolkits examine discourse consistent with current broader definitions of risk communication. The rhetorical model of risk communication posited by Rowan, however, does not fully illuminate the Toolkits. To explain, Rowan examines risk communication in different contexts and with different perspectives than examined in this dissertation study. For Rowan, the communication is between the managers of risk and an “innocent” or non-participatory public. “Public” may be understood as people living near nuclear power plants, for example. In other words, the communication inside the nuclear power plant is closer to what is observed in the automotive manufacturing plant than the communication observed between the entity running the plant and the public it serves, the latter being the dynamic represented in Rowan’s model. Still, while Rowan’s rhetorical model does not necessarily illuminate the Toolkits, the Toolkits supplement Rowan. With respect to workplace injuries and near-misses, there has to be risk analysis within the plant. However, as the goal is achieving as few recordable injuries and lost work days as
possible, prevention discourse as defined by safety communication is what the Toolkits offer.

By presenting a perspective of safety in everyday messages, this study supplements Rowan’s scholarship. As the Communications Toolkits frame their communication in terms of risk avoidance and risk reduction, the Communications Toolkits might accordingly be characterized as artifacts of “Safety Communication.” By reasoning deliberately about the future and honoring established norms, the Toolkits attempt to avoid risk and harm rather than assess past problems. To similar ends, the Toolkits use common topoi that focus on employee community values rather than on quantitative elements of past risk. The next chapter reviews the work of this study and posits directions for future research.
Chapter 6

Conclusion

Discussion

This dissertation studies Communications Toolkits written at a Fortune 500 automotive manufacturing plant, as discussed in “Chapter 2.” To these ends, it offers categories, definitions, and examples of the enthymemes found in the corpus as discussed in Chapters 3 and 4. Enthymemes as explained in “Chapter 2” are arguments that follow a particular reasoning pattern. To generate premises for enthymeme, rhetors use the *topoi*, which function as heuristics guiding a rhetorician’s use of experience and context, to generate enthymematic arguments. These arguments guide people to the resources that will help them construct arguments consistent with the disciplinary, literate, and political culture of the discourse community. As demonstrated in “Chapter 2,” the taxonomy of the corpus was developed in four stages. First, the enthymemes were identified. Second, the
enthymemes were classified according to Aristotle’s common topoi. Third, the enthymemes were classified according to Aristotle’s special topoi. Finally, the total number of occurring enthymemes was counted, and the specific occurrences of each category were tabulated. To determine frequency of enthymemes, the total of each occurring category was divided from the overall total to determine percentages.

The taxonomy of common topoi, presented in “Chapter 3,” reveals twelve categories of common topoi: magnitude, similarity/difference, genus/species, partition, cause/effect, antecedent/consequence, possible/impossible, past fact/future fact, authority, maxims, document, and contradiction. Once developed, the taxonomies of enthymemes and account of risk-specific terms were examined through qualitative and quantitative analyses. The main data set evaluated is a corpus of 39 sequential Communications Toolkits that begins with the December 8, 2003 edition of the Toolkit and concludes with the October 25, 2004 edition. In addition to these texts, complementary sources of data such as formal interviews,
informal conversations, in-situ observations, field notes, and articles of personal protective equipment (PPE) provided contextual insight necessary for understanding the corpus. More specifically, the complementary data help contextualize the Toolkits as social acts among the chain of sequential activity within the plant — activity such as recordable injuries, near-misses, observed unsafe procedures, or successes in preventing harm. At the same time, the complementary data also contextualize the Toolkits as symbolic acts that include motives, values, and participants underlying the social activity — all of which may not be readily apparent in the corpus by itself.

Together, these contexts help inform the corpus-based findings, which reveal repetition of safety terms with epideictic and deliberative features (see “Chapter 4” and “Chapter 5”). In all, they situate the Toolkits as part of a deliberative process aimed at reducing risk and increasing safety. These features include qualitative rather than quantitative comparison; maxims meant to institutionalize concern for others; documents that reinforce authoritative delineations of responsibility;
community norms; and individual self-trust.

The quantitative distribution of the corpus is consistent with the perspective of the Communications Integrator, who sees the Toolkits as being about “message,” “reinforcement,” and “redundancy” (see “Chapter 2”). The quantitative findings for this study affirm this motivating vision. Just three of the recurring common topoi — similarity/difference, magnitude, and genus/species — account for 67.8% (see “Chapter 3”); a single category of special topoi — advantage/disadvantage — constitutes 82.8% of the total used (see “Chapter 4”).

“Chapter 4” extended the taxonomy of enthymemes by analyzing risk-specific terms occurring in the corpus. In so doing, it helps confirm the focus of the arguments in the safety Toolkits. This analysis addresses some of the key terminology central to common definitions of risk communication. Specifically, by defining a new subfield called safety communication, “Chapter 5” describes this subfield and revisits the enthymemes occurring in the corpus, considering in detail how the Communications Toolkits extend existing representations of risk
communication, particularly in terms of the rhetorical model posited by Rowan (1994).

By offering the safety communication approach to workplace communication, this dissertation study adds to the existing occupational risk communication scholarship. According to the Bureau of Labor Statistics (2005), 5,702 people were killed in work-related accidents in the United States (www.cdc.gov/mmwr/preview/mmwrhtml/mm5613a1.htm). Though this is a decrease from the 6,217 people killed in 1992, the first year the Bureau introduced the Census of Fatal Occupational Injuries, it also represents an increase from the 5,524 people who were killed on-the-job during 2002. The causes of death include transportation incidents, contact with objects or equipment, assaults or other violent acts, falls, exposure to harmful substances or environments, and fires or explosions. In addition to fatalities, the National Safety Council (2004) reports 4,500 unintentional work-related deaths, 3,400,000 disabling injuries and 115,000,000 workdays lost due to injury (48 and 51). Modern technological advances and legislated regulation notwithstanding, risk still pervades
A new subfield adds to existing work in the yet youthful field of risk communication. It has developed in response to a need to look at past practices. During the previous decade, Dobbs and Field (1993) described risk communication as “a new academic field” as part of their effort to bring a risk perspective to the field of criminal justice. According to Leiss (1996), risk communication is the newest of the four risk subfields—the others being risk analysis, risk perception, and risk management—and is believed to have been coined during 1984. Rowan (1991) similarly points to the 1984 Bhopal disaster in India as a central influence on the emergence of the risk communication field.

During this past quarter century, the risk communication field has produced a wealth of studies concerning the more narrow subfield of occupational risk. As discussed more fully in “Chapter 1,” these studies have informed the competing approaches by which workplace hazards and dangers are assessed (Dawson and Alexeef 2001; Field, 2001; Burstyn and Kromhout 2000; Mazzola 2000;

Competing approaches to occupational risk also call attention to the ways literate practices in the workplace to influence, even manipulate, perceptions of risk in the
workplace. These studies define rhetoric as the use of language to influence the thoughts and actions of one’s audience. The studies informing issues of workplace risk assessment and authorship highlight the importance of considering a text’s disposition toward the author and audience.

My study contributes to existing studies of occupational risk communication because the data examined demonstrate qualities consistent with the newly developed subfield of safety communication. Considering these qualities contributes toward Phase IV in the evolution of the risk communication field, in other words, an extension of the first three stages observed by Leiss (1996).

Accordingly, this dissertation study of rhetorical practices in occupational risk communication tested the “rhetorical model” of risk communication posited by Rowan (1994). This study of Communication Toolkits began as a study of occupational risk communication that would align with Rowan’s rhetorical model with an emphasis at the level of channel. Indeed, Rowan’s scholarship and my study of Communications Toolkits both examine discourse consistent
with broader definitions of risk communication (recall that approximately 42% of the corpus included risk-specific terms such as emergency, injury, hazards, dangerous, and their cognates). The rhetorical model of risk communication posited by Rowan, however, does not necessarily accommodate the Toolkits.

The Communications Toolkits might thus be characterized as artifacts of “Safety Communication.” Thus, this dissertation focuses attention on a neglected aspect of occupational risk communication. This focus may inform future studies of safety communication.

**Future Thoughts**

The Communications Toolkits were first published at the automotive fabrication plant during 1999 in response to a directive from corporate headquarters in Detroit. The timing of this directive coincides approximately with Atkinson’s (1999) recommendations to stem the expense of workers’ compensation. These recommendations included the pre-incident strategies of forming safety programs and the use of wellness programs, both of which are consistent with the content found in the corpus. The timing of the
corporate directive also fits within Phase III of the evolving risk communication field observed by Leiss (1996). To review, Phase III seeks to build partnerships between different entities involved with risk issues. The partnership to which the Toolkits appeal are particularly evident in the enthymematic maxims found in the corpus (see “Chapter 3”). Such partnership is also tangible in a process by which Toolkits are disseminated to production-floor employees (i.e., Team Members) no longer by Shift Supervisors but by Team Leaders, as renamed.

Prior to the Toolkits, the plant had long pursued a safety mission, as expressed in their official “Health and Safety Policy,” that calls for “no compromise of an individual’s well-being in anything we do” (see “Chapter 2”). While the mission statement assigns “leadership responsibility” to the Safety Department, it also clarifies that the support of safe occupational practice is the “responsibility of everyone.” In the Toolkits, the lack of compromise on safety is reinforced in the extensive use of magnitude among the enthymemes constituting the corpus (see “Chapter 3”). The issue of leadership and collaborative
support are again consistent with Leiss’s (1996) Phase III. The collaborative support encouraged by the “Health and Safety Policy” are reinforced by the extensive enthymemematic use of similarity/difference and genus/species and, to a lesser extent, by the use of contradiction (see “Chapter 3”). In the corpus, these three classes of common topoi encourage the informed, independent judgments that Team Members must so often make during the course of their safe occupational practice, judgments of informed independence that are also so important in balancing the competing concerns of quality and productivity in the manufacturing process.

To an extent, it is this balance between management and production floor employees that motivates the Safety Representative to see the Toolkits as being about “numbers” (see “Chapter 2”). The Safety Representative seeks fewer recordable injuries and lost workdays as the return on the investment of time, energy, and material resources devoted toward the construction of the Toolkits and away from other responsibilities incumbent upon the plant’s Safety Department. Such numeric returns are rarely evident in the
enthymemes found for this study, the topoi found in the July 26, 2004 Toolkit being one notable exception (see appendix E). From the view of the Safety Representative, the Toolkits are not just about outcomes. The investment, as explained by the Safety Representative, is also “the constant reminding, teaching, and educating.” These approaches are the themes much more tangible across the occurring topoi.

David Meeker and Roger Schrum (1991) are correct in pointing out that “risk and crises” are not always “cataclysmic events or disasters” (p. 28). The Communications Toolkits constitute everyday texts and, more specifically, everyday technical writing. Issues typical of this corpus of everyday texts include wearing proper protective equipment (PPE), following safe task procedures, maintaining aisle safety, avoiding muscle strains, and emergency information. The usually nonfatal quality of these consequential issues underscore the warrant grounding the extensive use of magnitude among enthymemes found in the corpus. As explained by the Communications Integrator, some longtime employees develop a tendency to take safe
operating procedures for granted. Likewise, my on-site perusal of accident and near-miss reports substantiates a tendency of relatively recent hires to overlook the more consequential aspects of everyday safety issues. Tendencies aside, both the accident/near-miss reports and the informal conversations with all classes of study participants confirms that injuries do confront employees from all ranges of experience within the plant.

As injuries confront employees from all ranges of experience during a time when organized labor continues to wield less power, working-class populations may need to attune themselves to the material realities of injuries in the workplace. This need, however, is complicated by segments of blue-collar workers who, in their work to preserve middle-class status, fail to recognize the need to unify in their concern with risk. The Toolkits, then, represent a way to approach these problems and focus rhetorical efforts to help remedy such deficiencies. This would represent Rowan’s (1991) observation that one research problem plaguing risk communication studies is that existing research has placed too much emphasis on risk
and not enough on communication.

Enthymemes deserve higher priority in both instructional and research agendas. Such higher priority would contribute to the field of safety communication, an area of workplace communication that would benefit from more attention. There are several ways by which this study could be extended in future scholarship. One such extension would examine the use of enthymemes in safety documents at other manufacturing plants for patterns consistent or divergent from the results of this study. Determining such patterns would provide insight into the context variables from which trust and suspicion take root and are addressed. With this insight, one could examine multimodal manifestations of topoi in the Toolkits.

Another extension would examine the use of enthymemes in safety documents within a small business setting. Grocery stores, for example, entail occupational risks such as those that may be incurred while picking up trash outside or mopping up sticky floors. At the Automotive manufacturing plant, the Green Cross Safety Calendar is marked each month to indicate the number of recordable
injuries and lost work days. Similarly, some grocery stores provide a list of each injury recorded every month, a list that is in turn initialed by employees to indicate they have read it. Studies of enthymeme use in such smaller business studies may also extend understanding of contextual variables by which trust and suspicion are manifested or avoided.

Another future study would involve gaining permission from plant management for access to additional complementary data (described in "Chapter 2"). Possibilities would include acquiring a corpus of Health and Safety Incident Reports. Health and Safety Incident reports offer accounts of workplace events that result in injuries or near-misses. As the Health and Safety Incident Reports tend to be more forensic, examining causal factors and burden of responsibility for past occurrence, they could provide a useful comparison and contrast with the Toolkits. Studying these Reports off-site would also address issues of boilerplate and reliability. Future studies of complementary data might also be benefited by observing a greater number of Toolkit Talks and videotaping
these weekly meetings. These observations of the oral aspect of workplace communication might compare and contrast in interesting ways with the written Toolkits.

Any or all of these extensions from the current study would provide new insights into the distinct subfield of safety communication. At the least, it is time to acknowledge this subfield as distinct to help workers and to prevent injury.
Appendix A

Hourly Performance Board Sheet

<table>
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<th>Plan Cum</th>
<th>Plan Hour</th>
<th>Actual Cum</th>
<th>Actual Hour</th>
<th>Difference</th>
<th>Problem</th>
<th>Counter Measure</th>
<th>Owner</th>
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Appendix B

Last Part Analysis Tag

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<tr>
<td>STYLE:</td>
</tr>
<tr>
<td>MON</td>
</tr>
<tr>
<td>DATE</td>
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<tr>
<td>OK FOR NEXT RUN</td>
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<td>DISCREPANCIES</td>
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<tr>
<td>B</td>
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<td>F</td>
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<tr>
<td>MON</td>
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<tr>
<td>DATE</td>
</tr>
<tr>
<td>FIRST TIME QUALITY?</td>
</tr>
</tbody>
</table>

(USE BACK OF HARD COPY FOR COMMENTS AND JOB LINE-UP)

WHITE - STATUS BOARD  BLUE - REPAIRMAN  CANARY - EXTRA  MFD6655 (3-00) |
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Appendix C

Safety Department Mission Statement

HEALTH AND SAFETY POLICY

We are committed to protecting the health and safety of each employee as the overriding priority of this Corporation. There will be no compromise of an individual's well-being in anything we do. The implementation of actions to help our employees realize a healthy, injury-free environment is a leadership responsibility. Continuing support of this effort is the responsibility of everyone. We will lead the team to ensure that we protect the well-being of every member.

- Automotive Strategy Board
Appendix D

Remember Card
Appendix E

Communications Toolkits
Complex Power Outage
On Thursday of last week, a circuit breaker in the switchyard behind the powerhouse at the assembly plant exploded, causing a transformer to fail. As a result, the Complex lost power in most areas. By approximately 9:00 a.m., the problem allowing production to resume in both plants. Shipping of parts over the trestle was back to normal by 10:00 a.m. This outage caused minimal disruptions to our operations due to the quick reaction of all people involved.

Reporting, Minimizing, and Controlling Emergency Situations.

Many employees within the plant are not aware of the locations of columns that provide phones, fire alarms, fire hoses, and fire extinguishers. It is necessary that each employee is able to identify the closest column(s) to his/her work area to access these emergency controls and equipment. Not only could this awareness save your co-workers’ life, but it could also save your life.

Phones: All columns with phones are striped red and white, and the columns are labeled, “PHONE”. The phones are also marked with the plant’s emergency telephone number, 5840.

Fire Alarms: All columns with fire alarm boxes are striped red and yellow. These alarms should be pulled when there is a fire, and it is important to remember that these can also be pulled for other serious emergency situations. The activation of the fire alarm notifies Security of the location of that particular activated fire alarm. Upon activation of a fire alarm, the employee should remain at that column to guide Emergency Rescue Personnel to the fire or emergency.

Fire Hoses: Fire hoses are located on various columns throughout the plant. The fire hoses are recognizable by the bright pink covers over them. The covers are labeled, “FIRE HOSE”. It is important to remember to pull the fire hose completely out before turning the pressure on. This prevents the fire hose from becoming jammed, and not being able to reach the desired distance.

Fire Extinguishers: Fire extinguishers are abundantly located on various columns throughout the plant.

Knowing the closest locations of these emergency controls and equipment from your work area is critical. This knowledge can reduce the time necessary to find the emergency controls or equipment, and can reduce response time of Emergency Rescue Personnel arriving to the scene. Remember, this awareness can save lives.
Safety

To help you celebrate safely, the Consumer Product Safety Commission and the National Council on Fireworks Safety offer the following safety tips:

- **ALWAYS READ AND FOLLOW LABEL DIRECTIONS**
- **NEVER RE-IGNITE MALFUNCTIONING FIREWORKS**
- **HAVE AN ADULT PRESENT**
- **NEVER GIVE FIREWORKS TO SMALL CHILDREN**
- **BUY FROM RELIABLE FIREWORKS SELLERS**
- **STORE IN A COOL, DRY PLACE**
- **IGNITE OUTDOORS**
- **DISPOSE OF PROPERLY**
- **HAVE WATER HANDY**
- **NEVER THROW FIREWORKS AT ANOTHER PERSON**
- **NEVER EXPERIMENT OR ATTEMPT TO MAKE YOUR OWN FIREWORKS**
- **NEVER CARRY FIREWORKS IN YOUR POCKET**
- **LIGHT ONE AT A TIME**
- **NEVER SHOOT FIREWORKS IN METAL OR GLASS CONTAINERS**

REMINDER: Long sleeves or sleevelets are required in all areas of the plant floor. Anyone who enters the plant must have on long sleeves or sleevelets. Anyone who handles metal of any kind must wear sleevelets in addition to long sleeves.
SLEEVELETS - KEEP THEM UP!!!

RIGHT WAY

WRONG WAY

No Skin should show between sleevelets and sleeve.
June Safety Performance at

The month of June was not a good month for plant safety. We ended the month with 12 recordable injuries and one lost work day. The breakdown of injuries is as follows:

- Lacerations - 4
- Fractures - 2
- Sprains and Strains - 4
- Crush Injury - 1
- Hearing Loss - 1

The major causes of these injuries were: 1) Object handled, 2) Caught in or on, 3) Object Bumped or rubbed against. In certain cases employees are safer when at their job than when they are away from the work area and walking through the plant.

There are some things we can do to help prevent some of these injuries. It is important that employees follow standardized work practices, especially as it relates to staging of parts and placement of parts into racks. Work place organization is also important so that employees have proper access to the operator station and parts. Teams should be actively involved in setting up their work areas. Communication between the team and the group leader and support departments is critical. For the month of July we currently have three recordable injuries - two are lacerations and one is a fracture. “Taking Two” before the start of any task, and always wearing Personal Protective Equipment appropriately will also help to avoid these types of injuries.

**THERE IS A CRITICAL NEED FOR BLOOD**

The American Red Cross Blood Drive will be held in room 300 on Tuesday, July 27 from 2:00 a.m. – 8:30 p.m.

Come to donate blood and be entered into our summer sweepstakes to win FREE GAS FOR ONE YEAR! Bring a new donor and double your chances!

You are eligible to donate on July 7, 2002 if your last donation was on or before June 1, 2004. You may donate every 56 days if you are at least 17 years old, weigh at least 110 pounds and are in good health. Please bring your American Red Cross donor card, a driver's license, or two forms of identification.
Plant Safety Review Board - Meeting Update

The Plant Safety Review Board (PSRB) is made up of the shop committee, plant staff and safety department representatives. They meet twice monthly. In addition to divisional safety topics, the PSRB meeting agenda includes issues that require leaderships’ attention. Going forward, information from these meetings will be shared with you in the Tuesday Times newsletter and provided to group and team leaders for weekly team meetings.

This week, the PSRB reminds you to follow these safety procedures that have recently been called to their attention:

➢ The Metal Center cell phone policy prohibits the use of cell phones, walkie talkies, or nextel phones while operating equipment and machinery, driving, or walking through the plant.

➢ Remember to keep all hands and feet inside the parameters of all scooters, fork trucks, and other powered industrial vehicles.

Message from the Manager

If you are injured or become ill or observe a fellow employee who is ill or injured, do you know what you should do? First, before any other action is taken, call for help! Look for the closest phone and call 5840 for security. Each phone in our plant should have a yellow tag with the emergency number for security on it. You can also pull a fire alarm when assistance is required in an emergency. After you have summoned help, wait in the area where you made the call.

We recently welcomed a number of summer hires to our plant. And, we continue to see a number of construction crews and contract support groups on site daily. As veteran employees, taking some responsibility for the safety of these new people is simply the right thing to do. Yes, they have received training in safety procedures. We also know that helping them to help themselves stay safe is part of our duty to be our “brothers keeper”. Safety is everyone’s responsibility. Taking the time to check yourself and the safety habits of your co-workers may just save someone from injury, or worse.
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