1995

The Influence of Organizational Metaphors on Writers' Communication Roles and Stylistic Choices

Suchan, Jim

Suchan, J. The Influence of Organizational Metaphors on Writers' Communication Roles and Stylistic Choices, The Journal of Business Communication, Vol. 32 No. 1, (Jan. 1995), 7-29.

https://hdl.handle.net/10945/40191

This study examines the influence that organizational metaphors have on report writers' framing of their writing tasks and the stylistic, organizational, and document design choices they make. The study, conducted at a medium-size organization, uses participant observation, semi-structured individual and group interviews, and protocol analysis to gather data from 23 staff professionals at three field sites.

The data show that writers see themselves as communication ciphers or conduits and describe their communication activities in mechanistic terms. These metaphors, which complemented the organization's view of itself as a smoothly operating machine, help explain why writers were neither aware of nor concerned about their report readers and why they write difficult-to-read reports.

These results indicate that root organizational metaphors significantly influence writers' perception of their communication role and the rhetorical choices they make. Altering these writers' composing habits would be a major intervention requiring a change in the organization's dominant or root metaphor.

The Influence of Organizational Metaphors on Writers' Communication Roles and Stylistic Choices

Jim Suchan
The Naval Postgraduate School, Monterey, California

Research on writers' stylistic, organizational, and document design choices within organizational settings is still in short supply. In *Writing in Non-Academic Settings*, Odell (1985) stated that written communication researchers have a limited understanding of the organizational context's impact on writing; we know little about the content and stylistic choices writers make and why they make them. Almost a decade later, Stratman and Duffy's (1990) and Smeltzer and Thomas's (1994) research echoes Odell's concern. This lack of adequate knowledge about context-based factors such as organizational, functional area, and departmental language norms; dominant organizational and functional area metaphors; organizational structure, job design, power and authority; and behavioral control systems significantly limits our understanding of how organizational members think about writing and the constraints that limit the organization, document design, and stylistic choices they make. We must better understand these and other complex contextual factors before we can determine what is effective and ineffective organizational writing and design intervention strategies that will improve organizational writing processes and products.

This study examines one important contextual factor, organizational metaphor, and assesses its impact on writers' perception of and approach toward their writing tasks. More specifically, this research analyzes the steering effect that an organization's *root metaphor* has on writers' perception of their report writing role, their awareness of report readers, and their content, document design, and stylistic choices. Finally, the

study's results suggest that changing writers' language habits is a major organizational intervention requiring alteration of the organization's root metaphor and its entailments.

The remainder of the article is divided into the following sections:

- a brief review of some of the more important written communication studies conducted within organizational contexts;
- a theoretical overview of the importance of organizational metaphors when assessing written documents;
- a description of the organizational setting, the communication tasks of the writers and readers being examined, and the research methods used to gather data;
- an explication of the organization's root metaphor;
- an analysis of the root metaphor's influence on writers' perception of their communication role and their rhetorical choices.

A follow-up article will examine the dominant metaphors that *readers* use to "construct" their job tasks and analyze how readers' root metaphors affect their reading and information assessment processes.

Review of Written Communication Research Conducted Within Organizational Settings

Most business and managerial communication research has focused on "inside-the-text" factors such as organization, document design, sentence structure, and word choice. These factors are important because, as research has shown, they affect readers' ability to process documents *efficiently* (Felker, Redish, & Peterson, 1985; Guillemette, 1987; Haviland & Clark, 1974; Kieras, 1981; Redish, Battison, & Gold, 1985; Seigel, 1978; Selzer, 1983; Suchan, 1989). However, these studies do not adequately address the complex array of contextual factors that influence a document's creation, and, just as importantly, affect organizational writers' willingness to alter their composing processes and the organization's language norms.

Since the mid 1980's, a growing number of researchers—Stephen Doheny-Farina, Dixie Goswami, Lee Odell, and Dorothy Winsor to name a few—have begun examining contextual factors that shape how organizational writers think, compose, revise, and edit. Many of these context-based studies have explored the organizational culture's influence on writing processes and products (Barabas, 1990; Cross, 1994). Although organizational behavior researchers do not agree what culture is or how to study it (Martin & Meyerson, 1988), most written communication researchers see culture as an integrating mechanism that provides organizational members with a shared system of meaning through clear and consistent vision, values, and beliefs. Culture often manifests itself through structure and reporting relations; roles organizational members

are expected to play; symbols such as logos, organizational heroes, and celebrations; and patterns of discourse including legends, stories, and dominant metaphors (Barabas, 1990).

Freed and Broadhead (1987) assessed the impact of two consulting firms' organizational cultures on the communication content, strategy, and style of client proposals and found that culture had significant impact on their content and style. The management firm's proposals were informal, tried to build rapport with the clients, and focused on the unique qualities of project team members; in contrast, the auditing firm's proposals were formal, stressed the reputation of the firm, and explained what the firm could do for the client. The content and style of each group's proposals mirrored the firm's perception of itself and its relationship with its clients. Culture created a role for organizational members to play that influenced the way they wrote.

Odell and colleagues also examined the effect organizational culture has on writers' rhetorical choices. In studies of Department of Social Services caseworkers and administrators, Odell and Goswami (1982, 1984) found that all subjects made stylistic choices based on culture and context. In another study, Odell, Goswami, Herrington, and Quick (1983) used discourse-based interviews to understand the content and stylistic preferences of State Department of Labor Employees. They found not only that writers' choices were influenced by their awareness of context and the image they wished to project but also that the writers' organizational experience and status affected their stylistic and content choices; therefore, the longer a writer worked for the organization the more that writer's decisions were influenced by the image the organization wished to project. Finally, Odell (1985) found further evidence of the pervasive effect of organizational culture on writers' choices in his analysis of supervisors and administrative analysts working in state government. These writers' were influenced by their offices' and agency's values and attitudes, the history of prior communications, the structure of the agency, and the multiple contexts in which documents might be assessed.

Hagge and Kostelnick (1989) examined the influence that a particular manifestation of culture—discourse norms—has on accountants' stylistic choices. These accountants did not let specific reader reaction guide their rhetorical choices. Hagge and Kostelnick argue the resultant "boilerplate" was appropriate because it distanced the writer from the unpleasant, yet necessary task, of criticizing the client's financial reporting.

Brown and Herndl's (1986) ethnographic study of corporate writing in 15 organizations also affirms the powerful effect that discourse norms have on writers. Corporate training managers showed their professionals how to avoid superfluous nominalizations and narrative patterns of organization and, with the blessing of top-level management, told them

to do so; however, the professionals resisted changing these language features because their use signaled group affiliation. In short, nominalizations and narratives characterized the language norms of their organizations. Similarly, Rogers (1989) found that sales managers strongly resisted changes in report format and rhetorical mode despite extensive training and pressure from upper-level management to put in practice the new way of report writing. The resistance stemmed from the long-standing tradition of the report format—it represented the way *experienced* sales managers wrote reports—and the new format failed to meet the complex needs of the sales managers' work situation.

Researchers examining the Challenger disaster have increased our understanding of how specific organizational context features shape writing. For example, Moore (1992) and Winsor (1988) have investigated the repercussions that particular aspects of Marshall Space Flight Center culture—communication climate, leadership style, and structure—had on the dissemination of bad news up the chain of command. Report writers at Marshall either minimized bad news (e.g. reducing it to a one-line item in a report), eliminated it entirely, or discovered that others eliminated or minimized it in summary reports. This distortion of information occurred because of the authoritarian, fear-provoking leadership style of William Lucas, the director of Marshall, the rigid, multi-layered structure that reinforced power relations, and the resulting climate of fear and intimidation.

Context also generates roles that writers are expected to embrace. Doheny-Farina (1989) has shown that the institutional role writers often unwittingly play strongly influences the content of their documents and the language available to express that content. Furthermore, this role and the delimited content and stylistic choices that result from it reaffirm discourse community norms which further the organization's image.

Winsor (1993) discovered that writers in an organization's public relations department experienced conflict with engineers over the content and language of product news releases. This conflict stemmed from the roles PR writers and engineers played because of their job tasks, the hierarchical power structure that privileged engineers, differences between engineers' and PR writers' perceptions of accurate content, and perceived differences over ownership of the news release texts.

The research cited examines how context shapes writers' discourse; however, as Doheny-Farina (1986) and Barabas (1990) have found, writing can also shape an organization. In his ethnographic study of a new software company, Doheny-Farina discovered that once a team of vice-presidents wrestled from the president the writing of the company's business plan, the collaborative writing process reshaped structure, refocused goals, and impacted culture. Barabas (1990) recounts how the development of Technicians Reference Manuals to standardize technicians'

analytical methods so others could be more easily cross-trained not only made cross-training easier but also spurred reorganization of the laboratories and was instrumental in improving quality control standards and procedures.

As we have seen, written communication researchers have begun examining a number of contextual factors such as culture, discourse norms, communication climate, and institutional roles that influence the writing process and the content and style of documents. However, a powerful influence on writers' interpretation of their organizational and social contexts is an organization's macro-level language system. Written communication researchers have yet to explore the effect that this system, specifically an organization's root metaphor and the entailments it spawns, has on writers' perceived communication role and their writing habits.

This next section examines organizations as linguistic or metaphoric systems, defines root metaphor, and illustrates how it steers or guides organizational thought and action.

Organizations as Metaphorical Systems

Many social scientists and philosophers have argued that we inhabit a linguistic universe that creates, shapes, and constrains our perception of experience and our actions (Geertz, 1973; Gadamer, 1975; Rorty, 1979; Ricouer, 1981). For example, Wittgenstein believed that we construct and understand the undifferentiated mass of experience that we name "the world" or "reality" through a system of symbols, that is through language (Wittgenstein, 1972). Similarly, Cassirer (1944) saw people as symbolic rather than rational animals who attempt to order their experience by constructing more or less consistent linguistic frameworks. Lakoff and Johnson (1980) argue that a particular element of language—metaphor—structures and hence enables us to make sense of our experience so we can relate to things and people. Finally, Derrida (1982) claims that metaphor is *everywhere*, that we are *in* it, and that metaphor is the process which creates concepts and hence shapes behavior.

Organizational researchers have explored how language creates and changes organizational structure, strategy, problem formulation, and the very act of managing (Pfeffer, 1981; Weick, 1979; Daft & Weick, 1984). What is common to these diverse research explorations is the finding that organizations, like individuals, make sense of their internal and external environments by creating linguistic constructs in the form of symbolic fields and frames that shape collective reality for organizational members (Bazerman, 1990; Benson, 1983; Bolman & Deal 1991; Morgan, 1980, 1986; Pfeffer, 1981; Pondy, 1982). Organizational rites, rituals, ceremonies, stories, and in particular metaphors, are the clearest manifestation of these fields or frames which serve as a macro-level con-

textual factor for managerial activity, particularly communication. The patterns these frames form define and constrain the symbolic discourse of organizations (Smircich, 1983) and provide an overarching context for communication (Huff, 1983; Harrison, 1987), particularly written communication. In essence, these patterns, or what Weick (1979) calls "causal maps," enable organizational members to make *collective* sense of the stream of experiences that flow (at varying rates) past them and communicate those interpretations using various media.

Metaphors, in particular root metaphors, serve as one of the more powerful contextual determinants that affect the communication choice activities of organizational members. Researchers have defined root metaphors as broad-based, linguistic-organizing frameworks that give members of a social group a coherent way of codifying, sorting, and hence giving structure and meaning to experience (Pepper, 1942; Sarbin, 1986; Srivastva &Barrett, 1988.). From these root metaphors, other, more detailed illustrative metaphors—entailments of the root metaphor—evolve that further shape and refine our interpretation of experience.

Because the root metaphor and its entailments so pervasively construct and shape experience, these linguistic devices can help guide or steer both thinking and action along a particular, delimited course that is congruent with the root metaphor (Turner, 1974). In other words, they can function as perceptual and behavioral control systems. For example, the "domino" root metaphor that reflected our thinking in the 1960's and 1970's about communism in Southeast Asia created other language categories—countries "toppling" each other at a "rapidly increasing" rate unless someone intervenes to stop the "fall"—that steered policy decisions and actions (Barrett & Cooperrider, 1990). To "steer" thinking and action in a different direction, Schon (1979) and Srivastva and Barrett (1988) argue that the root metaphor must be altered through the strategic introduction of generative or growth-inducing metaphors. Generative metaphors—new, underlying language that is linked to yet different from the prevailing root metaphor—require individuals to reframe and thus "re-see" their thinking and action in new ways.

Although Pepper (1942) sees root metaphors as being global, the concept has been successfully applied to organizations. Gareth Morgan (1986) uses the root metaphors of the machine, organism, brain, and psychic prison to explicate how organizations order experience for their members. Similarly, Bolman and Deal (1991) use the root metaphor of "reframing" as a shifting perspective to make sense of managerial activities. The following examples more explicitly show how root metaphors and their entailments steer organizational thinking and action.

The Department of Defense has adopted the organic metaphor of "total quality systems management." This relatively new root metaphor has spawned entailments such as "benchmarking," "internal and external

customers," "process actions," "empowerment," "members" (instead of workers or subordinates) "systems thinking," "learning organization," and so on. The total quality system metaphor and its entailments encourage organizational members to reinterpret employee relationships, to re-see organizational structures, to alter their perception of the source of errors, and to reexamine the nature of communication, particularly the importance of listening and feedback. In departments that have embraced the quality system philosophy, decision making has been decentralized to empower associates, autonomous work teams tackle difficult organizational problems, associates learn to play a series of feedback roles (coach, mentor, educator, as well as evaluator) depending on associates' needs, and in general communication becomes audience centered because the receiver of the communication is now seen as the next customer (internal customer) in a process.

Walt Disney Enterprises has self-consciously embraced the "other" land root metaphor—Disney Land, Tomorrow Land, Adventure Land, etc.—where their "guests" can be in the "Happiest Place on Earth." From this other-worldly root metaphor other terms (entailments of the metaphor) have been derived that further capture this "out of this world, happiest place on earth" experience. Employees are called "cast members" who wear "costumes" received from "wardrobe." The "guests" visit "attractions" in various lands where there are "security hosts" who ensure nothing will spoil their happiness. "Rain checks" are not given because, metaphorically speaking, it never rains on guests in Disneyland.

The metaphoric construct of Disneyland cues and guides behavior so that it is congruent with the metaphor. The "park" is kept immaculate and its lawns and flowerbeds are manicured. Cast members are always smiling, use only friendly and courteous language and phrases, and are well groomed and neatly dressed. Cast members only briefly communicate with guests so that they can focus on the attraction they are about to experience (Smith & Eisenberg, 1987; Van Maanen, 1991)

Organizations embody root metaphors and their entailments in a number of ways. An organization such as Walt Disney Enterprises is very self-conscious of its "other worldly, happiest place on earth" metaphor. Indeed, the metaphor *is* the competitive edge Disney has long enjoyed. Consequently, Disney clearly and incessantly communicates this metaphor to its potential "guests" in its television advertising, promotional brochures, and radio spots. In addition, the organization works hard to indoctrinate new workers in "Disneyspeak" to ensure that every word and action is aligned with the root metaphor so that the "spell" Disney Enterprises casts will not be broken. For example, at the University of Disneyland new hires are schooled in Disney language and its correct use. The training is so successful that Smith and Eisenberg (1987) found during 35 one-half hour interviews that not one Disney employee vio-

lated Disney language code by using taboo words like "uniform," "customer," or "amusement park." The Disney root metaphor and its entailments are further emphasized in training manuals, checklists, inspirational films, pep talks, and, in general, organizational talk.

This research on Disney employee language and behavior shows consistency between language and situated practice. In other words, the organization's root metaphor and its entailments steer employees into specific roles which guide (often constrain) behavior so it is consistent with that role. However, in most organizations the key words and expressions that embody root metaphors and their entailments are not as systematically articulated as they are in Walt Disney Enterprises or in other organizations such as Apple, Delta Airlines, or Johnsonville Sausage. These metaphors are sprinkled or distributed in documents, stories, rituals, slogans, and everyday organizational talk. Furthermore, they are used repeatedly to describe organizational life and thus become reified. Because of repeated use and familiarity, these metaphors remain part of the background of organizational life and are largely tacit to organizational members. Often it requires an outsider, for example an organizational development consultant or a perceptive newcomer to the organization, to note these language patterns. After these language patterns are fed back to organizational members, they often can see how these metaphors "steer" organizational thought and action.

To summarize, the theoretical premise of this research is that language frames experience for organizational members. Metaphors, in particular root metaphors and their entailments, help organizations construct a collective view of experience for their members that guides or steers thought and action. Organizational root metaphors have important communication implications. These metaphors and their steering function serve as a powerful contextual determinant that influences writers' communication role and the rhetorical and stylistic choices they make.

The Study's Organizational Setting

This study was conducted at a medium-size organization (approximately 3,200 employees) that daily gathers and disseminates large amounts of information. The study focuses primarily on information gatherers (IGs) and secondarily on report assessors (RAs). Both groups have staff rather than line functions; only a small number of the IGs and RAs have supervisory hence managerial responsibility.

The IGs work in various offices throughout the United States. Their principal job is to interview people and to communicate information elicited from the interviews via written reports to RAs located in several offices in a large East Coast city. The purpose of each IG report is the same (e.g. informational), and report content areas are limited by the organization's charter. Consequently, RAs know each report's purpose and the

broad-based topic areas (employment, financial history, etc.) the reports may cover. In short, the IG Field Report is a well-established communication genre in the organization.

The RAs assess the reports and, based solely on that information, draw conclusions and make recommendations about the people interviewed. Their decisions are important since they significantly impact people's careers.

Organizational policy demands that the IGs' and RAs' job roles remain separate—IGs gather information and RAs evaluate it. These separate roles are reinforced by the organization's structure. The IGs and RAs work in separate functions (virtually separate organizations), both of which are hierarchically organized, highly differentiated, and centrally controlled. All important decisions are made at the strategic apex of the organization, and as Figure I shows, there are many organizational layers separating the apex from operating level workers such as the IGs and RAs.

Although a Report Coordination Office exists to organize the IGs' and the RAs' activities, the IGs and the RAs have no lateral coordinating mech-

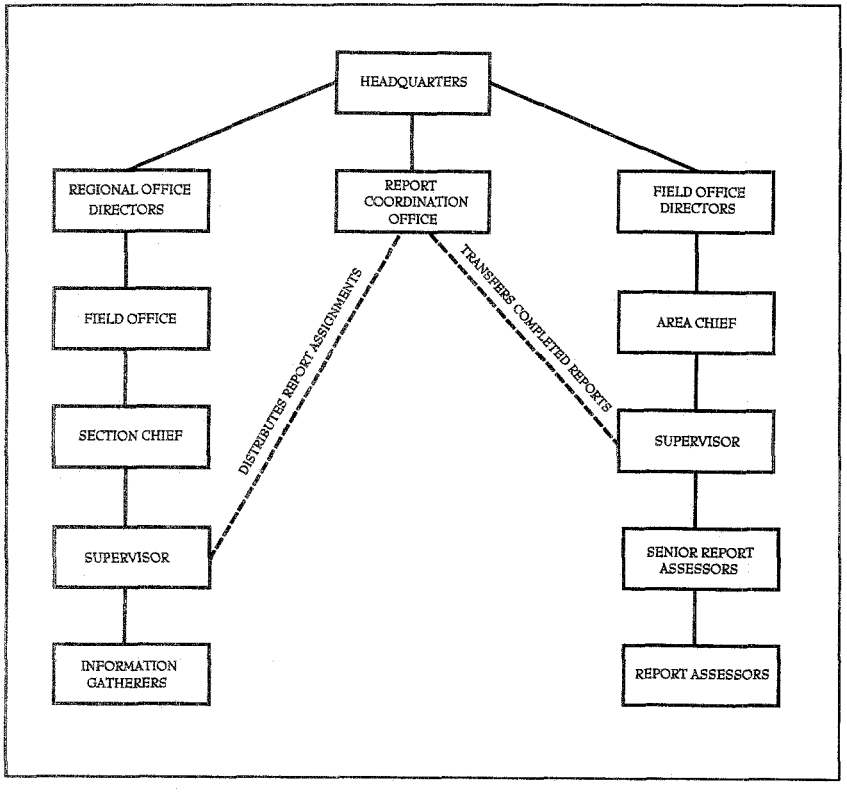

Figure 1. Simplified Organizational Structure of Information Gatherers' and Report Assessors' Workplace

anisms that would enable them to communicate and interact with each other. In essence, a clear-cut, rigidly enforced division of labor exists between the IGs and the RAs.

A typical IG spends approximately 2-3 hours a day writing up results from interviews; the typical RA reads reports 5-6 hours per day. The reports average 7-10 pages; however, at times they can be as long as 30 to 35 pages.

Depending on the size of a field office, an IG's immediate supervisor may be a team leader or a section area chief (SAC). This supervisor reviews the report for content and style before sending the report to the Report Coordination Office which then transmits it to the appropriate RA office.

Data-Gathering Methods

Participant observation, semi-structured interviews, and protocol analysis were used to gather IG data at two field sites: one on the West Coast involving 4 IGs, another on the East Coast involving 7 IGs. To gain the IGs' trust and cooperation, the researcher attended a one-week IG training program conducted at the West Coast site. This training allowed the researcher to understand IG job tasks, to speak "IG language," and to begin understanding the organization's dominant metaphors and language practices.

At this West Coast site, the researcher spent eight days accompanying four IGs on their information-gathering interviews. During this period, four IGs were observed interviewing subjects and gathering information. In addition, these IGs were asked descriptive, open-ended questions about their information-gathering methods, perceptions of their communication role, writing processes, revision strategies, degree of audience awareness, organization's rules governing style and organization, perceptions of relations with superiors, and so on. All responses were taped. Finally, talk-aloud protocols of four IGs were conducted while they wrote reports.

In addition, approximately 120 reports were assessed to determine their typical stylistic, document design, and organizational characteristics. These reports, obtained from the Report Coordination office, were provided as a representative sample of IG report writing.

At the East Coast site, a group of seven IGs was asked the same semi-structured questions as the West Coast IGs. These responses were also taped.

Dominant Root Metaphor: The Organization as a Machine or Mechanism

This section explicates the organization's root metaphor of "machine" or "mechanism" by examining how it is embedded in the organization's guiding principles, its training materials, IG's "talk" about the organization, its structure, and its control system.

The root metaphor of "machine" or "mechanism" is clearly articulated in one of the organization's guiding principles.

> We strive to be efficient in all our operations. To be efficient, we must lay aside an ordinary, everyday go-as-you please and do-what-you-like attitude and work as a team. This team must be like a machine, not of inert metal, but one of living men [sic], an integrated human machine in which everyone does his part for the greater good of the organization.

These principles are communicated throughout the organization via newcomer briefings, documents, postings, and informal conversation. Theoretically, every IG has read, heard, and thus understands the principles.

The IGs' training manual, prepared internally, also embodies the organization as a machine or mechanism root metaphor. The IGs' reports are described as "the exclusive mechanism of communication" between IGs and RAs, as "an apparatus" that enables RAs to make efficient, accurate decisions, and as the "chief tool" of communication. The manual dictates that reports "be precise, clear, and complete so that there will be no variation in interpretation." If "one small link in the chain of facts is omitted, the whole mechanism (the report and the assessment process) will collapse."

The manual states that all reports must exhibit six characteristics—accuracy, completeness, pertinency, clarity, impartiality, and conciseness—and then provides a short one- or two-paragraph description of how to achieve each characteristic. The manual implies that the reports will be "rejected" if a report does not exhibit all these characteristics.

Ironically, the 186-page manual devotes only three pages to report writing style and provides no guidance on organization and document design. Also, the manual does not mention RAs and their report-reading needs, writing process, revision, or editing. Virtually the entire manual is devoted to topics the reports should address, procedures for transmitting reports, and interviewing techniques. Given the importance of IG reports, the lack of guidance about the form (style, structure, and document design) of IG reports implies belief that report content is easily transmitted or transferred from writer to reader. The manual reflects what Axley (1984) calls the "communication success without effort" assumption because it portrays report writing as a simple, straightforward process of "putting" ideas into words and conveying them to the RAs.

Organizational talk also reflects the "machine" and "mechanism" root metaphors. Some IGs call the organization the "factory" where they come to "put in time." The IGs often refer to themselves and others not by name but by territory. Also, the organization promotes sameness in dress and appearance; an IG does not want to appear conspicuous. When IGs were asked to describe their function or role in the organization, they stated that "[I'm] just a worker who gets out the product;" "a vacuum cleaner who sucks up facts, finds out the truth about people;"

"I don't know . . . I just get the job done;" and " [I'm] a piece . . . a lost piece . . . in a perpetual motion machine that seems to go on and on."

The root metaphor and its entailments can also influence an organization's structure and its control systems which in turn can impact communication processes and organizational talk. Morgan (1986) and Bolman and Deal (1991) argue that an organization that engages in mechanistic thinking will organize itself and design control systems that are in line with that way of thinking. Furthermore, the concern about efficiency, measurement, evaluation, order, and chain-of command will trigger discourse that both complements and reinforces the machine or mechanism root metaphor.

As indicated in the "Organizational Setting" section, the IGs and RAs work in what Mintzberg would call a classic machine bureaucracy (Mintzberg, 1979): work is highly differentiated and functionally organized, and formal decision-making power is centralized at the apex of the hierarchy (see Figure I). The organization is structured to ensure that information flows quickly through proper channels to maximize organizational efficiency. To insure efficiency, workers' job responsibilities are specialized, precisely defined, and fixed: IGs gather and disseminate information; RAs read and assess that information. Furthermore, top management establishes productivity standards (number of cases to be completed per month) and determines how productivity will be measured.

Given this structure and workers' precisely defined job duties, it is not surprising that the organization places great premium on "turning cases" (a "turned case" is a completed report, including all the necessary interviews) and that it employs an intricate control system to monitor productivity. Each month the organization carefully tracks the number of cases IGs have "turned" and the time it took to complete each one. IGs receive monthly computer printouts that list the number of cases they have completed, the number that are outstanding, the average time to complete a case, and comparisons with IGs working similar "territories." Efficiency in turning cases is the primary "measure" of quality. Due to reduced personnel caused by budget cuts, IGs' case loads have increased and their monitoring has become more diligent.

This control system creates in IGs great fear that "they're not getting the numbers." This fear engenders a mechanistic way of thinking about themselves and their jobs which in turn generates mechanistic language. One IG quipped, "I feel sometimes I'm on the line [assembly line] where I have to get my quota for the day. . . . can't afford to have a bad day these days." Another stated, "I've got to efficiently lay out each day before I start working and make sure I don't get distracted. If I don't do that I'm going to get an unsat eval [unsatisfactory evaluation] because I'll have a large case backlog." Finally, one IG stated "what they want is a robot who doesn't break down."

To receive feedback about their reports, IGs rely on their supervisors. These supervisors have significant power; they control job assignments, write performance evaluations, help determine merit increases and bonuses, and give feedback on potential promotions. Their primary purpose is in the language of their job description "to standardize report production" so that a "consistent product" is provided. The mechanistic language of the job description appears to cue supervisor language and behavior. IGs reported that their supervisors "wanted things to run like clockwork" and that they provided report checklists so that feedback could be routinized.

As we have seen, "machine" and "mechanism" metaphors are embedded in the organization's guiding principles, occur in its training manuals, characterize IG talk, and are reflected in its structure and reporting relationships. The next section examines how this root metaphor and its entailments have steered IGs' thinking about their communication role; their drafting, revising, and editing processes; and their awareness of their readers.

Machine Metaphor's Influence on Perception of Communication Role

The IGs described themselves as information "deliverers," "transferrers," "translators," "copiers," "recorders," or "conveyers" during the interviews. These metaphors create a clear-cut role for IGs—that of information conduit or cipher. This role renders the IGs as transparent or invisible when writing, neither augmenting nor interpreting information they elicited from their subjects. Furthermore, this cipher role indicates that IGs and the organization believe that language is clear, univocal, and precise; that meaning is fixed; and that it can be moved intact from one person to another.

The following comments, taken from IG responses to the question "What expectations do you have of yourself when writing your reports? In other words, what role are you expected to play when writing?" capture the metaphors that frame IG's perception of themselves.

- I want to transfer exactly what I've heard into my report. It's like they (RAs) have to be there in the room when they're reading. Kind of like looking over my shoulder . . . making sure I'm delivering what I'm supposed to.
- I write what I hear. I have to keep myself out of it (the report), not get in the way of recording what I hear. Get it right, exactly right . . . you know you really only have one good shot at it . . . it's hard to go back (to reinterview a subject) because he's like . . . polluted.
- I'm kind of like a newspaper reporter . . . I merely deliver the news . . . not judge it . . . just deliver it . . . accurately . . . I hope.

- My job is to write down clearly what I hear. I can't distort anything; I have to convey exactly what the subject tells me.
- This isn't creative writing. I'm not writing a short story here. I'm more like a scribe in the classical sense. You know, someone who copies what's given to him.
- Look, it's really simple: I ask the right questions, listen carefully and take good notes, then write down what I've got. No interpretation here . . . just what I got.
- Have you ever watched Dragnet? You might be old enough. I convey the facts. . . . Nothing more, nothing, I hope, less. . . . just the facts.
- Writing this stuff up isn't a big deal. I just translate what I hear.

That IGs see themselves as information "translators," "deliverers," "transferrers," "copiers," "recorders," or "conveyers" suggests they view their on-the-job report writing as a relatively mechanical, routine activity. Furthermore, phrases such as "it's really very simple," "this isn't creative writing," and "merely deliver the news" show that IGs view report writing not as a challenging activity requiring significant skill but as a relatively simple process of recording and conveying information they have gathered.

Data from participant observation support this inference. All IGs claimed their real skill was framing questions effectively and cleverly pursuing a line of questioning that caused subjects to reveal information they would normally keep secret, not report drafting and revision nor reader assessment. Although IGs were very skillful, indeed often artful, when questioning subjects, IGs were not consciously generating information to meet RA needs (IGs' lack of reader awareness is discussed later). The IGS were engaged (often engrossed) in the verbal genre of "interrogation"—many IGs come from law enforcement backgrounds. While "interrogating" the IGs focused exclusively on "stripping" the subject of information; interestingly, several IGs (all male) used seduction and undressing metaphors to describe this process. Interrogation became an end in itself, a way of exerting power over subjects.

Communicating the information they obtained was viewed as simple, mechanical, and ultimately anti-climactic. One IG summarized his feelings as follows: "It's how I set up (through clever questions) my subjects that counts . . . that's the real skill . . . that's where experience counts. Anyone can write-up what someone says." Many IGs felt keen pride in their ability to "read" a subject's body language, facial expressions, eye contact, voice intonation, and other paralinguistic features and then choose, order, and rephrase their questions to take advantage of this information. In a sense, the IGs' questions rather than their reports were their "text," and their subjects rather than the RAs were their "readers." Writing the reports seemed secondary, the mere recording and transmission

of information they gathered as a result of artful questioning, careful listening, and perceptive assessment of non-verbal behavior.

The metaphors that emerged from the IG talk-aloud protocols are similar to those IGs used to describe their written communication expectations. These metaphors further reinforce the IG role of cipher or information conduit. Listed below are excerpts from two different IG protocols that were taken approximately one-half hour after the subject interviews. The actual text is in quotation marks.

Protocol I

O.K., let's see what my notes got about employment history. . . . gaps in employment. . . Uh (pause). . . .(transcribes text) "The following information by the SUBJECT was provided in order to explain his gaps in employment." O.K. Right. Good. Let's see. . . . he wanted to travel and enjoy himself, had money, from who. . . . parents. . . . summer work. . . . savings? Damn where is that (flips through notes) . . . what did he say? (transcribes text) "During the period of May 85 to March 86, the SUBJECT traveled to Florida, Arizona, and Mexico in order to visit friends, relatives, and to sightsee." Let's see (rereads sentence). . . . sounds good. . . . yeah, . . . right . . . matches. . . Good. . . . covered . . . But where the (expletive) did he get the money. I got to get that in there. O.K. (transcribes text) "Money had been provided by his parents, from his savings, and the part-time job he had while attending school." (Rereads the section aloud). O.K. that's it, that covers it (transcribes text) "It was indicated by the SUBJECT that he viewed this travel as part of his education and that it would pay dividends. . . ." (stops) Did he really say dividends? (looks at notes, crosses out "dividends"). Christ . . . no way. . . . doesn't talk like that. "Benefits. . . . that's better, (crosses out "dividends" and writes in "benefits") (transcribes text) "when his formal education was completed and he was trying to obtain a full-time position." (pauses, looks at notes) That covers it. Okay, What else have I got about work history.

Protocol II

Hmmm . . . Let's see what's here about these financial problems (flips through notes underlining passages with a yellow marker). "The SUBJECT has a history of financial difficulty." Damn. . . . Can't say that . . . making a judgment here. . . . summarizing. . . . Okay, let's back up, what did he really say? "The SUBJECT stated that his loss of overtime pay caused him to skip 3 car payments that totaled $962." Skipped? (crosses out word) That doesn't match. "Miss" (writes in word) . . . that's better . . . that's a match. Alright (looks at notes) "It was stated by the SUBJECT that he had become more disciplined with his finances and because of increased work activity at his plant he had started working more overtime which enabled him to pay off his delinquent car payments within 6 months." (pauses, looks carefully at his notes). Good. . . . that sums it up . . . that's what Montgomery (subject's name) said. O.K. let's take a look at past due payments on his Visa and Sears charges. What did he (subject) talk about first? What did I ask him about. . . . Sears? Visa? (looks through notes then transcribes text). "The SUBJECT also fell behind in his Sears credit payments, resulting in him missing four payments totaling $412 because he claimed he ran into unexpected medical bills that made these payments impossible to make." All right . . . that's it. . . looks good . . . we're on a roll. Now where's that stuff on Visa.

The primary concern that emerged from the protocols was the IGs' overriding need to transcribe accurately information their subjects provided. Metaphors of "covering," "matching," "recording," "capturing," and "grabbing of information" demonstrate the IGs' concern for being a complete and accurate information conduit. In addition, these metaphors imply that meaning is a commodity that can be handled and then packaged into appropriate language.

The protocols also reveal that the IGs sought to duplicate the actual language subjects used; changes in phrasing and word choice were driven by what subjects supposedly said. As the protocols show, IGs frequently repeated phrases such as "that's it" and "that's what he said" when seeking to state exactly what their subjects said. Finally, the IGs' extensive reliance on notes and, most importantly, their belief that their notes accurately capture not only the language but also the tone of the subjects' responses further affirm IGs' implicit belief that the language in their reports mirrors their subjects' responses to their questions. In short, the IGs believe their reports "re-present" their interviews with their subjects. Furthermore, their comments suggest that meaning is transparent, that it is embedded in language, and, as a result, their reports are linguistically neutral.

Lack of Awareness About Report Readability

Because the IGs perceive themselves as conduits or information ciphers, they pay little attention to the readability or comprehensibility of the information they present in their reports. Instead, they present information the way *they believe* they hear it; consequently, time lines in reports are often jumbled and similar topics (work history or financial difficulties, for example) appear in different report segments. Ironically, IG reports do not read like conversational narratives but like bureaucratic documents. The IGs have appropriated the dominant stylistic and document design norms of their organization: extremely long paragraphs (often over a page long), passive verbs, indefinite sentence openings, convoluted sentences, and so on. Many RAs commented that IG reports looked and sounded like "the stuff we get from headquarters." One RA summed up well their overall reaction to the reports: "I've never heard anyone talk the way they write . . . they (IGs) just want to sound pretty!" Although IGs claim they work hard to convey exactly what they hear, they are unaware of the perceived disconnect between the way their subjects speak and the sentence structure and language they use to communicate their subjects' conversation.

The pervasiveness of the information transcriber metaphors and the communication role it creates contribute to IGs having a very passive relationship with the information they've gathered and the text they "transcribe." Specifically, IGs rarely make organizational, content, or stylis-

tic revisions; and they do not use document design strategies such as headings, lists, bold print, underlining, and white space to improve readability.

The protocols revealed that the IGs spent slightly less than 18% of their writing time editing information (micro-level changes in word choice and sentence structure) and only 2% revising, that is making macro-level changes in content, organization, style, or document design. Virtually all of the editing (86%) was done while IGs were writing their initial and often only report drafts. At best, the IGs are as the two protocols reveal "cut and scratch" revisors, changing a word or a phrase now and again to match language with what they "heard" from the Subject.

The IGs reported that they viewed improving document design, providing internal previews of points to come, and revising sentences—indeed virtually any revision or editing strategy to improve readability—as "information tampering," "not maintaining the integrating of information," "information distortion," "going beyond the scope of the job," and "altering the truth." IGs perceive revision as interpreting the subject's information rather than accurately conveying that information. As a result, they are suspicious of altering a report because revision undermines their information conduit/cipher communication role and their perception of themselves as information "transcribers" and "conveyers." Also, interpretation violates the highly differentiated job roles created by the organization's structure: IGs gather and report information; RAs assess that information.

Limited Reader Awareness

Because IGs concentrate so heavily on getting information from subjects and maintaining its integrity, they rarely focus on the RAs, the readers of the reports, when writing. Not once during any protocol did an IG mention the needs of the RAs or even obliquely consider a reader-related issue. Even during the semi-structured interviews, comments about concern for the report reader were rare. When asked, "When writing a report, what concerns do you have, what are you trying to achieve?" only one IG indicated he took into account RA needs. This IG had developed this report-assessor based mindset because he was a former RA himself. The other IGs' concerns were writer and subject-based. As previous data have shown, IGs' primary goal was to translate their notes into a report and to capture accurately what they thought their subject said about an issue by matching report language with the subject's actual words.

The IGs' responses to the follow-up question, "When do you consider the reader of the report when you are writing up your results," was revealing. Nine of the 11 IGs seemed puzzled by the question; the notion of reader awareness suggested an area they had not considered. Eight of the 11 IGs indicated they sometimes thought about their supervisors' responses

to the report. However, the interview data indicate that supervisor feedback did not refocus IGs on RA information processing and assessment concerns. All IGs interviewed stated their supervisors' primary yardstick for report quality was information coverage and the *objective* description of that information. Feedback about the way IGs wrote reports was limited to comments about grammar, punctuation, and word usage.

Another factor that helps explain IGs' lack of reader awareness is the organization's mechanistic structure and control system. As was previously stated, there exists no formal or informal communication links between IGs and RAs, resulting in virtually no IG/RA interaction and therefore no IG dialogue about RAs. The semi-structured interviews document the impact this structure has on reader awareness. Ten of the 11 IGs interviewed had little idea of how RAs read reports, how many reports they had to read, the pressures they confronted when reading them, the environment they worked in, and the information processing problems they encountered.

When IGs write, RAs are not part of their language about writing process and purpose. For IGs, the RA is an abstract idea or an ill-defined construct that exists at the edges of their awareness; he or she is *not* seen as a report reader who uses information IGs provide in specific and unique ways. At best, IGs' awareness of RAs is tacit, the result of a basic understanding of the organization's mission, structure, and their own job design.

From a practical perspective, the organization's structure makes it difficult for IGs to determine their readers' needs (RAs) and, in general, to communicate with them. In fact, IGs could interpret the structure to mean that they should not be concerned with reader awareness and analysis. The organization's mechanistic control system, which defines report quality and acceptable IG performance, also signals that reader awareness is not important.

The organization assesses report quality quantitatively—the number of cases an IG completes per month and the time it takes to complete each case. RAs' perceptions of the cases' completeness, readability, and comprehensibility are not included as report quality measures. The reasons for the organization ignoring the "useability" of IG cases are complex and beyond the scope of this study; however, the root metaphor's focusing of organizational attention on that which is easy to measure (cases completed and the time to complete each one) and the lack of lateral communication links between IGs and RAs partially explain why RAs' perceptions of report quality are not captured by the control system.

Organizational members generally focus on that which the organization measures and rewards. As stated earlier, IGs receive monthly printouts that tally the number of cases they have completed, the number that

are outstanding, the average time to complete a case, and comparisons with IGs working similar "territories"; and their supervisors and upper level management reward them for "putting out the product" and "getting good numbers" in these measurement areas. Consequently, reader (RA) reaction to their reports is not important; indeed, the quality control system provides no incentives for IGs to think about their report readers and meet their needs. Furthermore, the reward and control systems induce IGs to see report information and thus report content as a commodity that must be quickly transferred so that a case can be "turned."

Conclusions

This study has shown that to understand the writing habits of organizational members and the documents they produce, we need to understand the organizational metaphors and their entailments that steer or guide organizational members' writing behavior. The IGs we examined saw themselves when drafting reports as information "deliverers," "transferrers," "copiers," "recorders," "conveyers," or "scribes" which created for them the role of information conduit or cipher. This role is an outgrowth of the root organizational metaphor—the organization as a machine or mechanism. The conduit/cipher role helps explain IGs' lack of concern or awareness of their reader, the limited amount of editing and revision they do, and their unconcern about and unwillingness to employ reader-oriented document design, stylistic, and organizational strategies. Furthermore, the IGs' perceptions about writing and their writing habits were influenced by context factors such as the organization's structure, control system, and job design. These context factors are also affected by the root metaphor of the organization as a machine or mechanism.

This study's results raise important questions about strategies that academics, corporate trainers, and communication consultants use to make organizational writing more effective. Most instructors, trainers, and consultants assume that merely showing writers how to write more efficiently and having them model that behavior will be sufficient to "improve" their writing. However, Brown and Herndl's (1986) and Roger's (1989) research has shown this approach does not work. Its chief limitation is its tacit assumption that writers act alone when writing, that they make individual, rational writing choices which they can easily change if they can be shown a more efficient way to write.

As this study has shown, that assumption is too simplistic. Communication role and organizational writing habits are heavily influenced by the way the organization and its members see, think, and speak about themselves. These perceptions are strongly influenced, perhaps even created, by the root metaphors the organization has adopted and the entailments of those metaphors. The root metaphors help construct for

members communication roles that steer the way they think about writing and the way they write. In addition, the root metaphor influences the organization's structure and control system which in turn affect writing process and rhetorical choice.

In essence, changing organizational writing habits in a mature organization, particularly machine bureaucracies, represents a large-scale intervention. How organizational members write may be largely a symptom of how the organization metaphorically constructs itself. Consequently, to change fundamentally organizational members' writing habits, one has to alter their cognitive schemes for understanding their communication role and, just as importantly, organizational events. To accomplish this cognitive "restructuring," one may have to alter the metaphors the organization and its members use to think about themselves. This alteration will reshape the perceived role writers have and thus reframe their relationship to their readers and to the writing processes and strategies they use to complete their communication tasks.

For too long business and managerial communication researchers have not understood the complex web of organizational factors that influence writers' perceptions of their communication role and the rhetorical choices they make based on that role. We need a better grasp of organizational dynamics before we can fully appreciate how writing works on the job. Understanding the influence of root metaphors and their entailments on organizational writers helps provide us with a more robust view of writing on the job.

NOTES

Jim Suchan (Ph.D., 1980, University of Illinois, Urbana) is an Associate Professor of Management in the Department of Systems Management at the Naval Postgraduate School. He has published research on written communication efficiency and effectiveness in *The Journal of Business Communication, Management Communication Quarterly, Business Horizons,* and a number of other publications. He is currently interested in the influence of organizational metaphors on communication practices, and strategies for changing language customs in organizations.

Specific details about the organization and its members are intentionally vague to preserve confidentiality and because of the proprietary nature of the organization's tasks. Information from the reports that could identify any person being interviewed has been changed.

REFERENCES

Axley, F. (1984). Managerial and organizational communication in terms of the conduit metaphor. *Academy of Management Review, 9,* 428-437.

Barabas, C. (1990). *Technical writing in a corporate culture.* Norwood, NJ: Ablex.

Barrett, F. J., & Cooperrider, D. L. (1990). Generative metaphor intervention: A new approach for working with systems divided by conflict and caught in defensive perception. *The Journal of Applied Behavioral Science, 26,* 219-239.

Bazerman, M. H. (1990). *Judgment in managerial decision making*. New York: John Wiley.

Benson, J. K. (1983). Paradigm and praxis in organizational analysis. In L. L. Cummins & B. Straw (Eds.), *Research in organizational behavior, 5* (pp. 33-56). Greenwich, CT: JAI Press.

Bolman, L. G., & Deal, T. E. (1991). *Reframing organizations: Artistry, choice, and leadership*. San Francisco, CA: Jossey-Bass.

Brown, R. L., & Herndl, C. G. (1986). An ethnographic study of corporate writing: Job status as reflected in written text. In B. Couture (Ed.), *Functional approaches to writing: Research perspectives* (pp. 11-28). Norwood, NJ: Ablex.

Cassirer, E. (1944). *An essay on man*. New Haven, CT: Yale University Press.

Cross, G. A. (1994). Ethnographic research in business and technical writing: Between extremes and margins. *Journal of Business and Technical Communication, 8*, 118-134.

Daft, R. L., & Weick, K. E. (1984). Towards a model of organizations as interpretation systems. *Academy of Management Review, 9*, 284-295.

Derrida, J. (1982). White mythology. *Margins of philosophy*. (Alan Bass, Trans.). Chicago: University of Chicago Press, 207-271.

Doheny-Farina, S. (1989). A case study of one adult writing in academic and non-academic discourse communities. In C. B. Matelene (Ed.), *Worlds of writing* (pp. 17-42). New York: Random House.

Doheny-Farina, S. (1986). Writing in an emerging organization: An ethnographic study. *Written Communication, 3*, 158-185.

Felker, D. B., Redish, J. C., & Peterson, J. (1985). Training authors of informative documents. In T. M. Duffy & R. Waller (Eds.), *Designing useful texts* (pp. 43-61). Orlando, FL: Academic Press.

Freed, R. C., & Broadhead, G. J. (1987). Discourse communities, sacred texts, and institutional norms. *College Composition and Communication, 38*, 154-165.

Gadamer, H. G. (1975). *Truth and method*. New York: The Seabury Press.

Geertz, C. (1973). *The interpretation of cultures*. New York: Basic Books.

Guillemette, R. A. (1987). Predicting readability of data processing written materials. *Data Base, 18* (3), 41-51.

Hagge, J., & Kostelnick, C. (1989). Linguistic politeness in professional prose: Discourse analysis of an auditor's suggestion letters, with implications for business communication pedagogy. *Written Communication, 6*, 312-339.

Harrison, T. (1987). Frameworks for the study of writing in organizational contexts. *Written Communication, 4*, 3-24.

Haviland, S., & Clark, J. (1974). What's new? Acquiring new information as process in comprehension. *Journal of Verbal Learning and Verbal behavior, 13*, 511-522.

Huff, A. S. (1983). A rhetorical examination of strategic change. In L.R. Pondy et al.(Eds.), *Organizational symbolism* (pp. 167-183). Greenwich, CT: JAI.

Kieras, D. E. (1981). Topicalization effects in cued recall of technical prose. *Memory and Cognition, 9*, 541-549.

Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago: University of Chicago Press.

Martin, J., & Meyerson, D. (1988). Organizational culture and the denial, channeling, and acknowledgement of ambiguity. In L. R. Pondy, R. J. Boland Jr., & H. Thomas (Eds.), *Managing ambiguity and change* (pp. 52-81). New York: John Wiley.

Mintzberg, H. (1979). *The structuring of organizations*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Moore, P. (1992). Intimidation and communication: A case study of the "Challenger" accident. *Journal of Business and Technical Communication, 6*, 403-437.

Morgan, G. (1980). Paradigms, metaphors, and puzzle solving in organization theory. *Administrative Science Quarterly, 25*, 605-622.

Morgan, G. (1986). *Images of organization*. Beverly Hills, CA: Sage.

Odell, L., & Goswami, D. (1982). Writing in a non-academic setting. *Research in the Teaching of English, 16*, 201-223.

Odell, L., & Goswami, D. (1984). Writing in a non-academic setting. In R. Beach & L. Bridwell (Eds.), *New directions in composition research* (pp. 233-258). New York: Guilford Press.

Odell, L. (1985). Beyond the text: Relations between writing and social context. In L. Odell & D. Goswami (Eds.), *Writing in nonacademic settings* (pp. 201-223). New York: Guilford Press.

Odell, L., Goswami, D., Herrington, A., & Quick, D. (1983). Studying writing in non-academic settings. In P. V. Anderson, R. J. Brockmann, & C. R. Miller (Eds.), *New essays in scientific and technical communication: Theory, research, and practice* (pp. 17-40). Farmingdale, NY: Baywood Publishing Co.

Pepper, S. (1942). *World hypothesis*. Berkeley, CA: University of California Press.

Pfeffer, J. (1981). Management as symbolic action: The creation and maintenance of organizational paradigms. In L. L. Cummins & B. Straw (Eds.), *Research in Organizational Behavior, 3* (pp. 1-52). Greenwich, CT: JAI Press.

Pondy, L. R. (1982). The role of metaphors and myths in organization and the facilitation of change. In L. R. Pondy et al. (Eds.), *Organizational symbolism* (pp. 157-166). Greenwich, CT: JAI Press.

Redish, J. C., Battison, R. M., & Gold, E. S. (1985). Making information accessible to readers. In L. Odell & D. Goswami (Eds.), *Writing in nonacademic settings* (pp. 129-154). New York: Guilford Press.

Ricouer, P. (1981). *Hermeneutics and the human sciences*. Cambridge: Cambridge University Press.

Rogers, P. S. (1989). Choice-based writing in managerial contexts: The case of the dealer contact report. *The Journal of Business Communication, 26*, 197-216.

Rorty, R. (1979). *Philosophy and the mirror of nature*. Princeton, NJ: Princeton University Press.

Sarbin, T. R. (1986). *Narrative psychology: The storied nature of human contact*. New York: Praeger.

Schon, D. A. (1979). Generative metaphor: A perspective on problem solving in social policy. *Metaphor and thought* (pp. 254-283). Cambridge: Cambridge University Press.

Seigel, A. (1978). *Designing readable documents: State of the art*. New York: Seigel & Dale.

Selzer, J. (1983). What constitutes a readable technical style? In P. V. Anderson, R. J. Brockmann, & C. R. Miller (Eds.), *New essays in scientific and technical communication: Research, theory, practice* (pp. 71-89). Farmingdale, NY: Baywood.

Smeltzer, L., & Thomas, G. F. (1994). Managers as writers: A meta-analysis of research in context. *Journal of Business and Technical Communication, 8*, 186-211.

Smirich, L. (1983). Organizations as shared meanings. In L. R. Pondy et al. (Eds.), *Organizational symbolism* (pp. 55-65). Greenwich, CT: JAI.

Smith, R. C., & Eisenberg, E. M. (1987). Conflict at Disneyland: A root metaphor analysis. *Communication Monographs, 54,* 367-380.

Srivastva, S., & Barrett, F. J. (1988). The transforming nature of metaphors in group development: A study in group theory. *Human Relations, 41,* 31-64.

Stratman, J., & Duffy, T. M. (1990). Conceptualizing research on written management communication: Looking through a glass onion. *Management Communication Quarterly, 3,* 429-451.

Suchan J. (1989). Communication efficiency between high-impact and bureaucratic written communication. *Management Communication Quarterly, 2,* 452-484.

Turner, V. W. (1974). *Dramas, fields, and metaphors.* Ithaca, NY: Cornell University Press.

Van Maanen, J. (1991). The smile factory: Work at Disneyland. In P. J. Frost et al.(Eds.), *Reframing organizational culture* (pp. 58-76). Newbury Park, CA: Sage.

Weik, K. E. (1979). *The social psychology of organizing.* (2nd ed.) Reading, PA: Addison-Wesley.

Winsor, D. (1988). Communication failures contributing to the "Challenger" accident: An Example of Technical Communicators. *IEEE Transactions on Professional Communication, 31.3,* 101-107.

Winsor, D. (1993). Owning corporate texts. *Journal of Business and Technical Communication, 7,* 179-195.

Wittgenstein, L. (1972). *Philosophical investigations.* (2nd ed.) (G. E. M. Anscombe, Trans.). Oxford: Basil Blackwell.