



**Displaying responsiveness or asserting identity in
organizational language: how concept networks
capture rhetorical strategies**

Eleanor T. Lewis*, Kathleen M. Carley, Jana Diesner

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Institute for Software Research
School of Computer Science
Carnegie Mellon University
Pittsburgh, PA 15213

*Eleanor T. Lewis is a Professor at Dartmouth College, Hanover, NH

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Abstract

Organizations constantly produce and consume organizational language, and these texts and documents are a primary way that organizations interact with their environment. In this paper we compare different types of texts to study variation in how organizations use them to interact with the environment. We argue that the authors of a text will primarily use rhetorical strategies that reflect the text's audiences and persuasive goal. When authors are highly constrained by their audiences, they are more likely to incorporate rhetorical strategies that acknowledge and respond to these audiences. When the central goal of a text is to distinguish the organization from others, authors are more likely to incorporate rhetorical strategies that assert the organization's identity. We compare the rhetorical strategies revealed in the networks of concepts in three types of organizational language – privacy policies, mission statements, and annual accounts – from two types of organizations – universities and corporations. Authors of privacy policies are the most constrained by their audiences, and as predicted authors of these texts do use rhetorical strategies that primarily acknowledge and respond to their audiences. Contrary to our predictions, the mission statements and annual accounts from corporations and universities display divergent rhetorical strategies, reflecting their divergent audiences.

1. Introduction

The interaction between organizations and their environment is one of mutual influence (Scott, 1995, 142), and has been a primary focus of organizational research since at least the 1970s. As Dutton and Dukerich (1991) point out, models of this relationship “have typically assigned causal primacy to either the environment or organizational forces” (517). When causal primacy is assigned to the environment, research focuses on how an organization responds to the demands of its environment, and the characteristics of both the environment and the organization that condition the success of these demands (Meyer, Scott, & Deal, 1983). This research has primarily come from organizational sociology, particularly institutional theory (e.g. DiMaggio & Powell, 1983). When causal primacy is assigned to the organization, research focuses on how an organization actively and strategically attempts to manage and alter its environment using specific strategies (Pfeffer & Salancik, 1978). Empirical research on how organizations attempt to do this has come from a wide variety of areas, including research on impression management (Schlenker, 1980) and organizational identity (Whetten & Godfrey, 1998).

Organizational researchers have long recognized that “organizational language” is a primary means that organizations use for interacting with their environment (e.g. Mills, 1940).¹ Organizations not only produce texts and documents all the time (such as reports, job descriptions, applications, form letters, alliance agreements, press releases, etc.), they are also often organizational researcher’s basic data. Research on the two different emphases on “causal primacy” just described has led to different explanations of the role that texts and documents play in the interaction between organizations and the audiences in their environment. Research that assigns primacy to the environment emphasizes how the authors of organizational language demonstrate that they are aware of and responding to the environment (e.g. Salancik & Meindl, 1984). Research that assigns primacy to the organization emphasizes how organizations strategically construct their self-presentation and identity in their texts (e.g. Elsbach, 1994).

This paper compares several types of texts from the same sets of organizations, in contrast to other researchers who have studied individual texts from organizations (Rogers & Swales, 1990) or one type of text (Levitt & Nass, 1989). We examine rhetorical strategies in three types of texts to identify variation in both aspects of how organizations interact with the environment through their texts: to respond to the influence of their audiences and to attempt to

¹ The texts and documents we define as organizational language are produced or reviewed by multiple people within an organization (their authors), with the expectation that they will be read or heard by multiple audiences.

manage the environment. Each type of text has a distinct persuasive goal or central communicative intent, and how organizations use rhetorical strategies in a type of text depends on who its audiences are and what it is trying to persuade those audiences of. Rhetorical strategies are “the available means of persuasion” that authors use to gain their audiences’ acceptance of the text (Putnam & Fairhurst, 2001, 103). We use an automated text analysis program to extract underlying concepts in each type of text, then compare and visualize the “concept networks” (the primary concepts in a text and the ties between them) that capture the texts’ rhetorical strategies.

2. The role of organizational language in the organization – environment relationship

To understand the interaction between organizations and their environments we need to combine insights from research that focuses on both parts of this cycle of mutual influence. Organizational language is a key source of insights into this interaction because audience influences and organizational strategies are literally written into the texts. Research that uses organization language as data has often not closely examined the rhetorical strategies that authors use in their texts. Organizational sociologists who focus on the environment’s influence on organizations have tended to treat what organizations say in their texts and documents as the straightforward response to the influence of their audiences (Ginzel, Kramer, & Sutton, 1992) or as purely symbolic (Oliver, 1991, 166; for exceptions see Putnam & Fairhurst, 2001). In contrast, research that does explicitly examine the rhetoric of organizational language has tended to treat it as a resource for actively and strategically managing audience interpretations of the organization’s actions (Staw, McKechnie, & Puffer, 1983).

We argue that a close examination of organizational language will show that organizations can incorporate the influences of the environment into their text *and* actively attempt to manage their audiences through the text. Organizational language is actually a primary tool that organizations use for both these purposes. The ambiguity of language is a valuable feature for its authors,² allowing it to retain multiple interpretations because meaning is specified only in context and by differing audiences (Selznick, 1949, 59; Feldman & March, 1981). Its ambiguity allows authors to construct texts using rhetorical strategies that incorporate the demands of different audiences (Feldman & March, 1981) while also persuading them to accept the organization’s distinct self-presentation in the text (Eisenberg, 1984, 228). The rhetorical strategies that organizations use in their texts to respond to their audiences and create their self-

² In practice it is also always unclear who the “real” author of a text is (Riessman, 1993, 6). Texts signed by a single author may be produced collaboratively (and vice versa).

presentation vary based on the text's audiences and its persuasive goal.

All organizational language has multiple audiences (Cross, 1992; Ginzel, Kramer, & Sutton, 1992), but typically a single broad persuasive goal. For example, the broad persuasive goal of a sexual harassment policy is to convince its readers that the organization opposes sexual harassment. Each audience, in contrast, has a different "participation status" in the interaction, and can be directly or indirectly addressed (Goffman, 1981, 132). The rhetorical strategies that the authors expect will accomplish the text's persuasive goal are directed at these multiple audiences. A sexual harassment policy tries to persuade the readers it addresses directly (e.g. organization members) that they should not engage in sexually harassing behavior and the readers it addresses indirectly (e.g. the federal government) that the policy incorporates legitimated methods for addressing the issue (Lewis, 2001). Depending on variation in its audiences and persuasive goal, the authors of a text can choose different rhetorical strategies.

Audience constraints and responsiveness in organizational language

The impact that audiences have on texts cannot be taken for granted (Shapiro & Markoff, 1997, 28). As Bell (2001, 143) proposes in his audience design framework: "speakers design their style primarily for and in response to their audiences" and "responsiveness to the audience is an active role of speakers." Ginzel, Kramer, and Sutton (1992) also point to the central role that the demands and expectations of organizational audiences play in how authors use their texts for impression management. Organizational sociologists have long pointed out the benefits that organizations receive from being responsive to the audiences in their environment (such as legitimacy, Meyer & Rowan, 1977). A central argument of institutional theory in particular, is that audiences in an organization's environment can pressure it to incorporate specific elements into its structure (DiMaggio & Powell, 1983).

Organizational language is an obvious resource that organizations can use to demonstrate their responsiveness to the demands of the environment (Meyer & Rowan, 1977, 349).

Organizations display responsiveness in their texts by incorporating elements that reflect the demands and expectations of their audiences directly into the text's content and structure. But organizations are not uniformly responsive to all possible audiences for a text; some are more influential than others and more likely to succeed in constraining how the organization responds to their expectations. Organizations are particularly likely to be susceptible to pressure from audiences who represent institutions (e.g. Rowan, 1982; Tolbert & Zucker, 1983), and therefore texts that directly or indirectly address these audiences are particularly likely to display

responsiveness to their demands.

A particularly influential institutional audience is the “legal environment,” which includes the courts, regulations, and governmental agencies (Edelman, 1990 & 1992). When the legal environment is an audience, the text is often addressing a topic where the organization can be held legally liable by courts or regulatory agencies for what the text says and how it says it. Legal liability increases the consequences for the organization of having a text that does not conform to the expectations of its audiences; the legal environment explicitly values conformity with accepted precedent in “legal language” (Tiersma, 1999). When a text must address the legal environment its authors are likely to be constrained by the expectations of these audiences that the text will conform to its demands (Dobbin et al, 1988 & 1994), particularly if the text expresses a legally binding position for the organization. This leads to Prediction 1:

Prediction 1: Texts that are constrained by their audiences’ demands and expectations will use rhetorical strategies that primarily reflect responsiveness.

Self-presentation and identity in organizational language

Organizations do not just passively respond to the demands of their audiences, they actively use impression management techniques (Goffman, 1959) as part of managing their self-presentation. These techniques are attempts by the organization to influence the perceptions that their audiences have of the organization. Managing their self-presentation involves reciprocal “cycles of negotiation” between the organization and its audiences (Ginzel, Kramer, & Sutton, 1992, 227) as organizations seek their audiences’ acceptance of its self-presentation to gain “endorsement and support” (Elsbach & Sutton, 1992, 700). The literature on impression management techniques is large (e.g. Schlenker, 1980; Tedeschi, 1981), and we focus on one aspect of how organizations use these techniques: to establish a distinct identity (Dutton & Dukerich, 1991).

As Goffman (1981) points out, a speaker or author of any type of “talk” is attempting to create a projected self or specific identity. Analogous to individual identity, organizational identity is a major component of an organization’s self-presentation (Whetten & Godfrey, 1998). It is most often defined as the characteristics of the organization that are central, distinctive, and enduring (Albert & Whetten, 1985).³ As part of the “rhetorical perspective” in the field of

³ Subsequent research on organizational identity has called into question the “distinctive” and “enduring” components of the definition (Gioia, Schultz, & Corley, 2000; Caronna, 2000). Identity can be central to organizations but still situational and contingent (Elsbach & Kramer, 1996; Gioia & Thomas, 1996).

organizational communication (Putnam & Cheney, 1995; Putnam & Fairhurst, 2001) researchers have been paying increasing attention to issues such as organizational identity, and how an organization's voice (Rogers & Swales, 1990) establishes and asserts identity in texts and documents (Albert & Whetten, 1985, 270; also Rindova & Fombrun, 1998, 59).

Maintaining a strong, distinct identity is important to organizations, and they assert this identity through their texts. Organizations can use their texts primarily to distinguish the organization from others. Asserting a claim that they are distinct or unique (Martin et al, 1983) can be what persuades audiences to accept the organization's presentation of its identity (even if the form of the claim is similar to those of others). There are also a variety of rhetorical strategies available for authors to draw on to maintain their identities and resist any pressures from audiences to conform to their expectations (Oliver, 1991). If the organization's identity is threatened, organization members can attempt to distinguish the organization from others on alternative dimensions (Elsbach & Kramer, 1996). Organizations will attempt to manage their audiences' perceptions of the organization through impression management techniques that assert its identity when this will persuade audiences to accept the organization's self-presentation. This leads to Prediction 2:

Prediction 2: Texts whose central persuasive goal is to distinguish the organization from others will use rhetorical strategies that primarily assert identity.

Mixed rhetorical strategies in organizational language

While most types of texts have a single persuasive goal, texts with multiple and conflicting audiences may pursue multiple goals in their texts, allowing them to use a variety of rhetorical strategies to convince their audiences to accept the text. As Ginzler, Kramer, & Sutton (1992, 254) point out, "the presence of multiple audiences exacerbates the complexity of the impression management process and contributes to the potential for interpretive conflict." This potential conflict provides the opportunity for organizations to use multiple rhetorical strategies in their texts. They can respond to multiple audiences about the issues that are relevant to them and adapt to their changing concerns over time (Näsi et al, 1997). They can also assert their identity to distinguish the organization from others because the multiple and potentially conflicting audiences are unable to agree on their expectations for the organization (Oliver, 1991).

Prediction 3: Texts with multiple, conflicting audiences will use multiple rhetorical

strategies that both display responsiveness and assert identity.

3. Sample of texts

In this study, we analyze three types of texts that help organizations manage different aspects of their environment. *Privacy policies* are likely to be constrained and influenced by audiences in the legal environment, *mission statements* have the central persuasive goal of distinguishing the organization's identity from others, and *annual "accounts"*⁴ have multiple, conflicting audiences. The texts were all collected as part of a larger project on organizational language (Lewis, 2003), whose planned statistical contrasts determined the number of each type of text that we analyzed. Having enough power ensured that we can make meaningful comparisons based on our research design. Using Cohen's guidelines (1992) for calculating the power required for those contrasts the first author determined that a random sample of 64 texts from each type of text available (192 texts total) provided adequate power.⁵

The texts were collected from the same two sets of organizations: major U.S. research universities and publicly-traded, for-profit corporations primarily in high technology industries. This allows us to establish whether authors' rhetorical strategies are similar across the two organizational contexts. The sample of universities is the 148 universities classified as "Doctoral/Research Universities – Extensive" in the Carnegie Classification Code (1998), a small segment of the total U.S. university population.⁶ Our data collection procedure was to search the web site of each university for the three types of texts. The sample of corporations is a random sample from three broad industry areas: computer software and services, computer hardware and manufacturing, and tele-electronics. Using SIC codes and the "Dun & Bradstreet's Million Dollar Database" we randomly selected 139 companies in these areas, and searched their web sites for the three types of texts. Out of the total texts collected from these organizations, we randomly selected 32 of each type from the two sets of organizations.

4. Method for extracting rhetorical strategies and concept networks

We use text analysis to study organizational language and identify the rhetorical strategies that authors use in them. Text analysis (or content analysis) is a general term that

⁴ The impression management literature defines accounts as "*explanations of a predicament-creating event designed to minimize the apparent severity of the predicament*" (Schlenker, 1980, 136; emphasis in original).

⁵ Following Cohen's guidelines (1992) we used the following standard specifications to choose a sample size: the number of treatment conditions, a significance level of 0.05, power of 0.80, and effect size of 0.25 (medium).

⁶ These universities award at least 50 doctorates in 15 disciplines, and represent 3.8% of the population of US institutions of higher education. For more information see: <http://www.carnegiefoundation.org/Classification>.

describes “*any methodical measurement applied to text (or other symbolic material) for social science purposes*” (Shapiro & Markoff, 1998, 14; emphasis in the original). This obviously encompasses a wide variety of approaches and methods, from in-depth discourse analysis of a few texts (Johnstone, 1996) to automated corpus analysis of large datasets (Corman et al, 2001). We use both discourse analysis and a type of text analysis called “map analysis” (Carley, 1993) to extract and analyze the concept networks in texts. A concept network consists of the higher-level concepts (specified by the researcher) that are found in the text and the ties between them. Visualizing a concept network displays these ties between concepts, and comparing the concept networks from individual texts can reveal the most frequent ties between concepts within that set of texts. These frequent links reflect the most prevalent rhetorical strategies in that set of texts.

In the first part of this section we describe the procedure we use to extract and analyze concept networks using map analysis. Next, we describe in detail how we operationalize responsiveness and identity as a set of higher-level concepts.

Map analysis and concept networks

The “map” of a text consists of the variables of interest to the researcher (in our analysis *concepts*) and the relationships or ties between them. We refer to the concepts and the ties between them as a concept network. The content and map analytic routines of the AutoMap[®] software program identify higher-level concepts in the words and phrases in a text, and decide whether there is a link between two concepts. Map analysis, like all forms of text analysis, requires a variety of choices about how to analyze a text, and an advantage of AutoMap[®] is that it allows the researcher a great deal of control and flexibility about these choices. The key choices for our analysis are how we pre-process the data, identify ties between concepts, and compare a set of concept networks from individual texts. We describe these in general terms here, provide an illustration, and describe them in technical detail in Appendix 1.

The procedure we use to create concept networks begins with identifying a set of higher-level concepts and specific words and phrases that express those concepts. This list of concepts paired with words and phrases is the program’s *thesaurus*, and the program can *translate* the words and phrases into concepts. Next, the researcher can pre-process the text by removing or replacing some words (such as prepositions or proper nouns). We chose to replace all words that were not translated into higher-level concepts with a placeholder. To identify ties between concepts, we chose to have AutoMap[®] link two higher-level concepts if they appear in the text

within the length of the average sentence for that type of text (the *window size*). AutoMap[®] converts the list of linked concepts in each text into a network. Comparing the concept networks from multiple texts to each other can identify a *central graph* for that set of texts. The central graph contains the ties between concepts that occur in more than a set percentage, such as 50%, of the concept networks from individual texts (Banks & Carley, 1994).

Table 1 summarizes and illustrates the steps in the analysis. The program's input is raw text such as the sample sentence in Step 1. First, the researcher opens the custom thesaurus of higher-level concepts paired with specific words and phrases, listed in Step 2. AutoMap[®] uses the researcher's thesaurus to translate the raw text into the form in Step 2, for example "parents" is translated into "clients." In this example we retained only higher-level concepts and replaced all other words with placeholders. Next, using a window size of four words in this example, the program identifies ties between pairs of concepts within that window. In the example sentence AutoMap[®] would identify the eight pairs of concepts listed in Step 3. The statements form a seven by seven concept network that can be visualized, as in Step 4. The final map of the sample sentence has two components that deal broadly with the company's actions and the client's responsibilities. If networks from multiple texts were compared to each other, ties in more than 50% of the texts (for example) would be part of the central graph and capture common rhetorical strategies in that set of texts. The link between "assist" and "effort" in this example presents the organization as responsive to specific audiences.

[Insert Table 1 here]

Identifying responsiveness and identity concepts

Organizational sociologists often claim that an organization is displaying responsiveness when there is "isomorphism," or similarity, across organizational structures or procedures (Meyer & Rowan, 1977). Isomorphism indicates the organization's conformity to the expectations of the environment (DiMaggio & Powell, 1983). However, isomorphism as an indicator of responsiveness has been operationalized and measured in multiple, situationally dependent ways (Mizruchi & Fein, 1999). Typically, responsiveness has been operationalized as the presence or absence of a single criterion that the researcher argues indicates isomorphism. Instead, we define responsiveness in organizational language as acknowledgements in the text of the demands and expectations for the text from external or internal audiences. These acknowledgements can be incorporated into the text or addressed directly by authors in the text.

Identity in organizations also has had multiple and situationally dependent operationaliza-

tions. Most often, identity is measured by studying individual perceptions (Elsbach & Kramer, 1996) and often the perceptions of the top management team (Scott & Lane, 2000). Identity has also been measured through survey items (Gioia & Thomas, 1996) and by analyzing impression management techniques (Dutton & Dukerich, 1991). Measures of the content of an organization's identity are dependent on the organization and its particular managers and audiences. In contrast, we define identity in organizational language as being more than the aggregation of individual perceptions or the perceptions of the top management team. Identity is the voice of the organization itself, and integral to the organization's self-presentation.

The first stage of capturing responsiveness and identity was the detailed discourse analysis of several texts in each set, guided by Johnstone (2002). Johnstone identifies six analytical heuristics that can guide discourse analysis of a text, "each corresponding to one way in which contexts shape texts and texts shape contexts" (p. 7). In its most general sense, discourse analysis involves "examining aspects of the structure and function of language in use," typically motivated by larger sociological issues (Johnstone, 2002, 3). Discourse analysis is systematic and rigorous, requiring multiple readings of a text to comprehensively examine features such as grammar and syntax, vocabulary, layout, sequence, authorship, and semantic choices, among others. It requires the analyst to make different possible interpretations and explanations of the same passage or textual feature explicit. Discourse analysis of these texts identified rhetorical strategies that subsequently emerged in multiple texts, and we discuss these insights throughout the analysis section.

The second stage of analysis used grounded theory methodology (Glazer & Strauss, 1967; Strauss, 1987) to refine the insights from discourse analysis into the higher-level concepts that capture responsiveness or identity in these texts. Returning to the texts with an initial set of concepts after the discourse analysis phase, individual words and phrases (entries in a thesaurus) were grouped into naturally occurring cluster. As more texts were analyzed, words and phrases in the clusters were either combined or separated into other clusters until the set of higher-level concepts emerged. Through several iterations of testing against randomly selected texts, the thesauri were extended with additional concepts and entries and overlapping and redundant ones were removed. The accuracy and completeness with which the thesauri captured the relevant content of the texts increased with each iteration. For example, the word "vision" might have initially been placed with other words translated into the higher-level concept "traits," but as the thesaurus was tested against other texts "vision" might have been moved to the cluster of entries

translated into the concept “mission.”

Once we had agreed on the 94 higher-level concepts that AutoMap® would identify in the texts, and that the entries accurately captured these concepts, we divided them into 48 identity and 46 responsiveness concepts (listed in Appendix 2). A responsiveness concept acknowledges an aspect of the relationship between the organization and audiences in its environment. Some concepts include other entities in the environment, such as “peers,” “others,” “clients,” or “suppliers.” Other concepts can simply describe the relationship with the environment, such as “constraints,” “serving the public,” or “serving the customer.” They can also be a resource in the environment that the organization draws on, such as an “authority,” “quote,” or “laws.” Finally, responsiveness concepts describe aspects of the broader environment that the organization must deal with, such as its “conditions” or “challenges,” and how the organization does deal with it by “adapting” or being “responsive.” Second and third person pronouns including “you-your” and “they-their” directly or indirectly address audiences in the environment.

An identity concept, in contrast, describes an aspect of the organization itself, its actions, and its character. The concepts represent the content of Albert & Whetten’s (1985) definition of organizational identity as the organization’s central, distinctive, and enduring characteristics. Identity concepts most importantly serve in the text to contribute to a self-presentation that distinguishes the organization from others. Concepts that do this describe the organization’s distinct “history,” “traits,” “traditions,” “mission,” and “values.” Authors can even “counter” the outside world to “preserve” the organization’s “special” and “unique” “role.” Identity concepts also capture the organizations aspirations for itself, such as its “goals” and “focus” on being “leading” and the “best.” Other concepts describe what the organization does – its “projects,” “products,” or “technology” – or elaborate on its internal structure – its “departments,” “divisions,” or “employees.” Finally, identity concepts can contrast the organization (in a “positive” way) with the environment, whether this is its “peers,” the “industry,” or other “comparison” groups. First person pronouns including “we-us-our” emphasize and assert the organization’s central role as the speaker in the text.

5. Results and analysis

The three predictions are about the prevalence of rhetorical strategies that display responsiveness and assert identity. We predict that responsiveness strategies will primarily appear in privacy policies, identity strategies will primarily appear in mission statements, and a

balance of the two types will appear in annual accounts. First, we describe some general features of each type of text based on the discourse analysis phase and existing descriptions of that type of text. Next, we analyze the six central graphs of the university and corporate texts (Figures 1-6). The Figures show the ties between concepts that occur in more than 33% or 50% of the texts in that set (indicated with each Figure) depending on the percentage that allowed us to make the most meaningful interpretations of their rhetorical strategies. In the Figures, responsiveness concepts are blue circles and identity concepts are red squares. All individual words in quotes are higher-level identity and responsiveness concepts found in the Figures.

The rhetorical features of privacy policies

Privacy policies are texts created by organizations in response to both legislation (Kravitz & Pugliese, 2000) and to growing public concern over how organizations handle personal information, particularly information they reveal online (Sheehan & Gleason, 2001). Privacy policies specify the organization's role in protecting the information that users or customers provide to it, and the rules guiding its use of this information in interactions with other organizations. While not legally required of all organizations, more and more of them include a policy on their websites, and warnings abound that not having a published policy (or not following one) can lead to liability and loss of consumer trust (Greisiger, 2002). Beyond the presence of a policy, responsiveness to the constraints of the legal environment and other audiences can be seen both in what texts say and how they say it.

Being responsive to users' demand for policies does not mean that they are written explicitly for users. Authors of privacy policies (and policies in general) address legal issues in their texts and their rhetorical strategies conform to legal precedents and the expectations of the legal environment (Dobbin et al, 1988 & 1994). Privacy policies clearly reflect that their authors are accustomed to working with "legal language." Among other features that are typical of legal language (Tiersma, 1999), policies tend to use sentences with passive constructions that conceal agency, and refer to specific documents (particularly laws) that support the organization's position. In other words, "today's privacy policies are often difficult to find, overloaded with technical jargon and legalese, and just plain hard to understand" (T. Powell, 2002). Features of legal language might not be familiar to the average user, but their authors use it because it is actually *clearer* than non-legal language – to audiences in the legal community (Norlyk, 2000).

Authors of texts such as privacy policies that are composed in response to legal mandates

or guidelines can be responsive by adopting words and phrases that occur in laws and regulations, or by explicitly structuring the text to follow available mandates or guidelines. Audiences in the legal environment are often not directly addressed in the text but are influential partially because they can hold the organization liable for violations of the policy. One constraint on policies is the multiple prescriptive guidelines for privacy policies developed by umbrella organizations (e.g. the Online Privacy Alliance) and by government agencies such as the Federal Trade Commission (FTC). The FTC is part of the legal environment and “has been intensely involved in the Internet privacy debate” (Swindle, 2002). Authors that refer to an authority such as a federal agency are also displaying their responsiveness to influential or legitimate actors.

The rhetorical features of mission statements

The primary persuasive goal of a mission statement is to present the organization’s future goals and persuade its audiences that it is capable of achieving these goals. To accomplish the persuasive goal of the text the organization must assert its identity, ground its goals in this distinct identity, and persuade audiences to accept it. For this reason, mission statements are more likely than other types of texts to give the organization a central role and voice in the text. Mission statements assert the organization’s identity by making claims of uniqueness (Delucchi, 1997) that distinguish it from other similar organizations. For example, one rhetorical strategy that authors of missions use is to describe the organization’s traits and attributes to assert a clear and distinct identity (e.g. small, rigorous, or innovative). Mission statements are “carriers of culture, ethos, and ideology” that are “pithy and up-beat” while asserting abstract and general goals (Swales & Rogers, 1995, 226).

Mission statements tend to be brief and positive; when they state the organization’s goals they also present it as capable of achieving them. While missions tend to be brief, they can also be extended to better create and project organizational identity, permeating the lives of organizational members and facilitating identification with the organization (Swales & Rogers, 1995). Corporate mission statements in particular “stress values, *positive* behavior and guiding principles within the framework of the corporation’s *announced* belief system and ideology” (Swales & Rogers, 1995, 227; emphasis in the original). Many corporations have mission statements, and all universities are currently required by the principal accreditation agencies⁷ to

⁷ There are six major accreditation agencies in the United States and being properly accredited by the appropriate agency is a primary indicator of a university’s legitimacy and can be a requirement for receiving support.

have them and review them regularly. In addition, older universities might have a “charter” from their founder that creates a vision and goals for the university as well as an identity.

The rhetorical strategies in mission statements from both types of organizations not only stake out the organization’s goals but present the organization as uniquely able to achieve its goals because of its identity. We found that the initial sentences in missions (especially corporate ones) are very similar across texts. They begin with one to three declarative present tense sentences that state a future goal in a specific area and the means the organization will use to meet that goal. In their initial sentences corporate mission statements often attempt to present the organization as both cohesive and distinct, and encapsulate the organization’s purpose and goals. Some missions begin with a general statement of the organization’s mission, and then break this mission down into subgoals in more specific areas (typically for universities this is teaching, research, and service). Other texts elaborate on a small number of aspects of the organization’s identity and how these help the organization achieve its goals.

The rhetorical features of annual accounts

In annual “accounts,” top leaders describe and explain the organization’s activities and performance, and its goals and strategies for dealing with the challenges to achieving these goals presented by its environment. Researchers often use annual accounts to study how organizations explain their actions and gaps between organizational actions and audience expectations (Mills, 1940; Scott & Lyman, 1968; Schlenker, 1980).⁸ This reflects the important role that annual accounts play in the organization – environment relationship. A case-study of how a corporate account is written found that the rhetorical strategies in the text reflect extensive discussions between its authors about who the text’s audiences are and how to manage them (Cross, 1990).⁹ Annual accounts attempt to manage multiple and conflicting audiences who *both* expect the organization to be responsive to their demands and present the organization’s actions as consistent with its identity.

⁸ A few of the studies in organizational sociology that use corporate annual accounts as data include Bettman & Weitz, 1983; Staw, McKechnie, & Puffer, 1983; Salancik & Meindl, 1984; Bowman, 1984; and Fiol, 1989.

⁹ In his case study, Cross identified 15 external audiences and seven internal audiences that were important in the process of composing the letter from the director in an annual report (Cross, 1990, 193).

There are no detailed mandates from an agency or other governing body on what organizational leaders must include in an annual account. Their authors have discretion about what they include or exclude from the text and the rhetorical strategies they employ to address their multiple audiences, both directly or indirectly:

“... the specific communicative purposes of the chairman’s statement [include] establishing the relationships between the company and the audience, creating an image that may maintain shareholder confidence, and reinforcing the relationships between the company and investors, shareholders and employees” (Skulstad, 1996, 44).

Annual accounts must both explain past performance – positive or negative – and persuade audiences that the organization is capable of positive performance in the future. The demands of multiple audiences who control needed resources require balancing responsiveness to these audiences with the persuasive goal for the account of establishing that the organization has an identity that will allow it to be successful in the future (Cross, 1990, 190).

Annual accounts attempt to manage the organization’s self-presentation in the text using rhetorical strategies their authors believe will be persuasive to multiple audiences. Authors tend to stress the distinctive features of the organization that set it apart from others and the aspects of the organization’s performance that encourage audiences to continue to support it. University presidents might emphasize both how their current identity reflects the vision of the school’s founders and measures of positive performance such as high student achievement or major grants. Corporate executives might use anecdotes and statistics to illustrate the need for the products and services that make the organization unique. Authors always carefully manage negative information, locating the cause of negative performance beyond the organization’s direct control but presenting the organization as capable of adapting to these causes.

The prevalence of identity and responsiveness in each type of organizational language

Privacy policies: The central graph of university privacy policies in Figure 1 reveals that these texts tend to use more responsiveness concepts than identity concepts (13 out of 19), as predicted. Other than speaking as “us-we-our,” there are relatively few ways that the universities consistently assert themselves in the policies. Instead, authors focus on addressing the reader’s concerns about privacy. The concept “privacy” is central to the concept network and forms a triad with the pronouns “us-we-our” and “you-your.” This also presents the organization as a unified speaker in the text, separate from the reader. The concepts “policy” and “laws” also mark the text as responding to the legal environment, with “laws” linked to “privacy” through the

concept of “constraint.” This common rhetorical strategy is to constrain the organization’s ability to protect users’ privacy by stating that it may be forced by law to reveal personal information. Reflecting the tendency to use technical terms, there are also a variety of concepts in the central graph related to technical and procedural issues, including “information collection,” “information use,” and “technology,” (the first two concepts are connected to “privacy” indirectly).

[Insert Figure 1 here]

Similar to the university privacy policies and also supporting Prediction 1, corporate privacy policies tend to have more responsiveness concepts than identity concepts (14 vs. 7). In Figure 2, the pronouns “you-your” and “us-we-our” are the most central, and a variety of responsiveness concepts (including “privacy”) tie these two types of pronouns together. The numerous concepts tying these two types of pronouns indicate that the authors of these texts focus on the relationship between the author and the reader, and the text is structured in the context of this relationship. The linked concepts “information collection” and “clients” connect these pronouns because corporate policies emphasize what information the company collects from their users. However, the concept of “clients” is not directly connected to that of “information use” because authors specifically want to persuade readers that an individual user’s information will not be used in a way that threatens his or her privacy – unless it is done so by “others.”

[Insert Figure 2 here]

While the majority of the rhetorical strategies in both types of policies are directly related to managing the organization’s relationship with the reader of the text, authors of university texts address at least indirectly the constraints of the legal environment and the authors of corporate texts focus more on displaying responsiveness to the potential concerns of their direct addressee (e.g. users). For example, the “Internet Privacy Policy” of one university says “Some information submission will be encrypted, when required by State law.” In the following sentence, the authors hedge about the university’s rights over the information, constraining the use of the information to what is specified in the policy and by law. In contrast, nearly all corporate privacy policies begin their texts with some broad reassurance to the reader that the company respects the user’s privacy. One corporation, for example, begins its policy by stating that it is “committed to protecting the privacy and security of the information provided by customers visiting our Web sites.” The authors of this text address users’ privacy concerns, rather than a legal audience. They also encourage users to continue their relationship with the company by focusing on its traits

(“committed”) and personalizing the text with the pronouns “we-us-our.”

B.Mission statements: University mission statements use a balance of identity and responsiveness concepts in Figure 3, contrary to Prediction 2 (10 vs. 12). Universities do present a distinct self-portrait that draws on the organization’s “traditions,” “traits,” and “values.” But balancing this focus on the organization itself, university mission statements are responsive to specific constituencies in their texts. In the central graph, “clients” (e.g. students) and the groups immediately around the organization (their “near location”) are placed at the center of the text. Other constituencies are also mentioned, including the “community,” the “public,” “others,” and even “employees” (an internal group). The persuasive goal of missions includes establishing a positive relationship with the surrounding environment, and authors attempt to do this by stating their goals of “serving [the] customer” and “serving [the] public.” Authors are even sensitive to the values of their constituencies, referring to “diversity” in the majority of mission statements.

[Insert Figure 3 here]

Supporting Prediction 2, corporate mission statements emphasize presenting the organization’s distinct identity more than being responsive (8 vs. 3 concepts). These mission statements have the least elaborated central graph (Figure 4) of any set of texts, perhaps because they tend to be quite brief. Their authors often make the pronouns “us-we-our” central, and then use identity concepts to create a self-portrait that distinguishes the organization from others. For example, the organization pursues its “mission” based on its “traits” and “values.” Other identity concepts in the central graph reflect the persuasive goal of missions to present the organization’s future goals for performance: the organization has a potential to “grow” and to be a “leading” organization in its field. This portrait of the organization’s character and its aspirations includes its “employees,” part of the “us” of the organization that assists the “clients.”

[Insert Figure 4 here]

One commonality between university and corporate mission statements is their use of the concept of “service” to their constituencies, although they differ in their emphasis on this rhetorical strategy. Not surprisingly, two responsiveness concepts in both types of missions are “clients” and “serving the customer.” A central strategy in many texts is to state the value that the organization places on this relationship and the value that it provides to audiences. Authors of university texts tend to elaborate on their relationships with audiences, while the references in

corporate texts remain brief and vague. In one sentence from a university mission statement, its authors ground the organization in a specific context (“South Carolina”), state the importance of its relationship with audiences (the “public” and its students), and also invoke the most common goals of university mission statements (including service). The authors of corporate missions typically forgo these specific references and stake out the organization’s identity: asserting its identity is the rhetorical strategy that persuades audiences it can achieve its goals. A typical, mission from one corporation makes superlative claims about its products (“world’s best”) when stating the company’s goals, and only a brief reference to serving the customers and investors.

C. Annual accounts: The balance between identity and responsiveness concepts in the dense, complex central graph of the university annual accounts in Figure 5 supports Prediction 3. The central graph has slightly more identity concepts (37 vs. 29) that are more central and densely tied to other concepts in the text.¹⁰ The most central concept is “us-we-our,” but there is an important secondary cluster of ties to the pronouns “I-me-my.” This reflects the nature of the typical narrator of an annual account, who speaks for him or herself, and directly addresses the reader as “you-your.” One rhetorical strategy these authors use is to emphasize that the activities (“projects”) of one unit of the organization (a “division” or “department”) are also part of the activities of the whole (“us-we-our”). Reflecting its multiple and conflicting audiences, the organization presents itself as a “leading” actor who is “assisting” and being “responsive” to “others” outside the organization, such as “clients” and the “community,” and is also tied to actors such as the “government,” “investors” and “partners.” The concepts that are only linked to “us-we-our” are either part of creating a portrait of a “special” and “unique” organization, or references to external “constraints” and “conditions” the organization must “adapt” to.

[Insert Figure 5 here]

Contrary to Prediction 3, the central graph of the corporate annual accounts in Figure 6 is dominated by identity concepts. Again, the pronouns “us-we-our” are central to the concept network, establishing the organization as the central voice in the text while including the reader with the organization. Authors do acknowledge the diverse audiences for the account with responsiveness concepts including “investors,” “partners,” “clients” and “serving customers.”

¹⁰ The high number of concepts partially reflects that these are on average the longest of the six sets of texts.

One part of the persuasive goal of accounts' is to convince their readers to continue to support the organization, and one rhetorical strategy that authors use to do this is actively staking out its "strategy" and "goals," and taking credit for any "positive" performance (and "adapt[ing]" to negative conditions). Authors also use accounts to persuade readers that is likely to succeed in the future, so the organization presents itself as "special" and "leading," both traits of the company and its products that distinguish it and indicate its potential to "grow." Authors try to distinguish the organization by using identity concepts such as its "values," "niche," and "unique" "traits" and "history." These concepts are part of the "evaluative and even persuasive discourse closely linked to the image which the company wants to create" (Skulstad, 1996, 52).

[Insert Figure 6 here]

Authors of both sets of accounts use them to persuade audiences to accept a particular presentation of both the organization and its goals for the future, and persuade them that it has the capacity to achieve these goals. For example, the author of one state of the university address states his goals for the text by referring to the three most common goals of a university's mission (teaching, research, and service). Then he narrows "research" to interdisciplinary research (a more distinct identity), an important area where this university can make strategic claims to leadership that are likely to be persuasive to its audiences. When the author of a corporate annual account describes the company's performance, he balances presenting their actual performance with rhetorical strategies that will persuade audiences that it can achieve its goals: "...we were hit by the same dramatic slowdown that developed across the broad range of high technology markets. In spite of this, fiscal 2001 was a year of great accomplishment." First, he authors attribute the poor performance to factors beyond their control, and which were equally negative for its competitors. Then, they offer positive news for the company, reinforcing the company's presentation of itself as successful despite performance that undermines this claim.

6. Discussion

In summary, the concept networks in these six sets of texts provide inconsistent support for the three predictions. The privacy policies from both universities and corporations support Prediction 1 by using rhetorical strategies that emphasize responsiveness to the concerns of their audiences. The corporate mission statements support Prediction 2 by primarily using rhetorical strategies that assert an identity that distinguishes the organization. However, university mission

statements do not support Prediction 2 because they use a balance of rhetorical strategies to both assert the organization's identity and be responsive to a wide variety of audiences. University annual accounts do support Prediction 3, balancing the need to be responsive to multiple constituencies in these texts with persuading them that the organization's identity allows it to successfully pursue its goals. In contrast, the corporate annual accounts primarily use rhetorical strategies that assert the organization's identity because this identity is what allows the organization to successfully persuade audiences that it can be successful.

Understanding the results that do not support the predictions requires reexamining the specific organizational context where each set of texts was composed. The persuasive purpose of a text interacts with the context where it is written, and which constrains the rhetorical strategies that its authors choose. As Skulstad argues, there is a "relationship between communicative purposes and the choices of rhetorical organization and language forms" in a text (1996, 59). A university mission statement and a corporate mission statement are clearly the same type of text, and a state of the university address and a letter from the director in an annual report also have similar persuasive purposes. However, while the persuasive purpose of a text may be the same across organizational contexts, it can be embodied in divergent rhetorical strategies if the texts are addressed to divergent audiences. The analyses of the central graphs indicate that a careful analysis of the audiences for a text can explain the specific rhetorical strategies that its authors employ to accomplish the persuasive purpose of the text.

The use of different rhetorical strategies to manage the organization's relationship with these audiences is clear in the preferred rhetorical strategies of the two sets of texts that did not support the predictions. The audiences that university mission statements address include individuals outside the organization (Delucchi, 2000) and (indirectly) institutional actors such as accreditation agencies, state legislatures (if the university is public), and even foundations considering the university for grants. In contrast, the audiences for corporate mission statements are primarily the company's own employees and to a lesser extent its clients. To accomplish the persuasive purpose of the text, a university mission statement must pursue dual goals. It presents the organization as united behind common goals that distinguish the organization's identity. It also attempts to persuade different audiences that part of the university's goals include serving them – despite their multiple interests and ideas about the organization's purpose.

Like university mission statements, the numerous audiences for corporate annual accounts include those with a direct stake in the company, such as suppliers, investors, and

strategic partners. Authors try to persuade their audiences that the organization is worth continuing support, but authors avoid rhetorical strategies that are responsive to these multiple audiences. The rhetorical strategy they use to do this is to create an identity for the company as strong and successful, actively managing any adversity in its environment. In contrast, the audiences for university accounts (alumni, students, state governments, etc.) have a variety of different and conflicting goals they believe the university should pursue, and universities use a variety of rhetorical strategies to address them. Authors of university accounts use rhetorical strategies that display responsiveness to their audiences' priorities and concerns to persuade them to accept the account, and justify responsiveness as part of the university's distinct identity.

Even in the corporate and university privacy policies, which both emphasize persuading audiences that they are responsive to them, the authors of the two sets of texts are primarily addressing different audiences. The corporate policies directly address a user reading the text, while the university policies also indirectly address the legal environment. For example, the main rhetorical strategy in corporate privacy policies is to discuss the issue of privacy within the context of the relationship between the company and the user. Corporate policies tend not to acknowledge the legal environment. In contrast, authors of university policies incorporate words, phrases, and structures into their texts that reflect the features of legal language. Rhetorical strategies that directly address users and indirectly address the legal environment demonstrate their responsiveness to the constraints of multiple audiences.

7. Conclusion

The larger literature on the organization – environment relationship has not always treated this relationship as dynamic and interactive. But authors do use their texts to actively manage the organization's relationships with its audiences, and audiences directly influence the structure and content of texts. This paper focuses on the microdynamics of the interaction process that organizations engage in with their audiences through organizational language. The predictions were based on an analysis of the constraints audiences place on texts and the persuasive goals of each type of text. We argued that to persuade their audiences to accept the text authors would use rhetorical strategies that display responsiveness or assert identity. We found that even when organizations in different contexts produce the same type of text with the same persuasive goals, if their authors are addressing different audiences they will use different rhetorical strategies to attempt to persuade these audiences to accept the text.

A fuller analysis of the role of organizational language in the organization – environment relationship must consider the multiple audiences an organization is likely to direct its rhetorical strategies at. Our analysis of three types of organizational language identified clear differences in the rhetorical strategies that universities and corporations use in the same types of texts to pursue their persuasive goals. While each text faces multiple audiences, the audiences they attend to vary across the organizations, and authors direct their rhetorical strategies to the audiences they seek to manage. Each set of texts from universities employs responsiveness rhetorical strategies, indicating universities are more attentive to multiple audiences. Universities actively reach out to directly and indirectly addressed audiences to convince them of the universities' desire to respond to their concerns. In contrast, when corporations are not highly constrained by their audiences they tend to assert the organization's identity to their direct addressees, using rhetorical strategies to persuade their audiences to accept the text. A corporate text focuses on its direct addressees (e.g. users) and on persuading its audiences that the organization can successfully pursue its goals.

Research in institutional theory has suggested that organizations in the public and nonprofit sectors are more likely to be susceptible to the audiences in their environment, particularly the institutional actors there (Edelman, 1990 & 1992; Dobbin et al, 1988 & 1994; Scott, 1995; Schneiberg & Clemens, forthcoming). This research would explain the greater responsiveness in university texts as evidence of the greater susceptibility of these organizations to their environment, particularly institutional actors. Organizations in or close to these sectors, such as universities, are likely to have influential institutional actors as direct or indirect audiences that they will be responsive to regardless of the type of text. In contrast, organizations that are further from these sectors, such as the corporations studied here, would be less susceptible to and constrained by their audiences. While still considering multiple audiences, the authors of these texts can focus their rhetorical strategies on persuading direct addressees who control needed resources (i.e. business partners and investors) that the organization is capable of accomplishing its goals and deserves continued support.

As Goffman (1981) points out, multiple audiences always influence the text's authors, whether they are directly or indirectly addressed in the text. For example, the indirect addressees of organizational language often include institutional actors. Authors assume that these indirect addressees are evaluating their texts, and they adapt their rhetorical strategies to respond to them. Direct mail solicitations, for instance, must address the legal environment indirectly by

complying with legal constraints such as not misleading the reader or making false claims to defraud them. Publisher's Clearinghouse, in other words, might want to tell millions of people that they are a winner, but the text's indirect audiences (institutional actors) constrain the content of the text. A careful analysis of the audiences for a text – both direct and indirect – can explain divergent rhetorical strategies based on how the audiences constrain organizations and what authors believe will be persuasive to those audiences.

This article makes several methodological contributions to research on organizational language. First, as already noted, it avoids the tendency seen in other research to treat texts as simply data rather than strategic tools organizations use to respond to and attempt to manage their environment. Second, our research design improves on other studies that examine the rhetorical strategies in texts. These studies have tended to focus on specific texts from one or a few organizations with detailed analyses of how and why the text uses particular elements (e.g. Cross, 1990). Even in research where a set of texts is the explicit focus of rhetorical analysis (e.g. Swales & Rogers, 1995), the studies have not compared the rhetorical strategies of different types of texts that come from the same organizations.

This study also demonstrates how text analysis techniques can address questions of interest to organizational sociology. Using what authors say and how they say it in their texts and documents as data always requires balancing the benefits of a detailed analysis of individual texts with the general insights gained from analyzing a large set of texts. The in-depth discourse analysis gives us insight into the rhetorical strategies of authors, and provides validity to the concepts in the final coding scheme. Using the automated text analysis program gives us insight into the prevalence of these strategies across texts and the underlying patterns in the sets of texts as a whole. Obviously, this approach could be used to answer other questions or study other types of texts as well.

There are two broad types of limitations to this study: our operationalizations of identity and responsiveness and the scope of the research project as a whole. First, we analyze identity and responsiveness as distinct dimensions, but texts could be treated as falling on a continuum in how strongly they assert the organization's identity or respond to their audiences. The audiences of some texts may also expect their authors to establish a distinct identity, pressuring them to be distinctive. In these texts being distinctive would actually be responsive to the audiences' expectations for the text. In essence, this distinctiveness is what we argue that the audiences for

corporate texts find persuasive, and is therefore is arguably an indicator of responsiveness. Identifying the specific audiences that authors in different types of organizations consider when they compose their texts would require substantial additional data collection, but would be an excellent area for future research.

In general the findings indicate the need for a more sophisticated conceptualization of both audiences and authors in our analyses of the organization – environment relationship. Organizations each exist in specific contexts that vary across organizations, and authors are attentive to different audiences based on this context. Knowing the authors that are involved in composing texts could also help explain which audiences the text’s rhetorical strategies are directly or indirectly addressed to. We do not have the access and insight into the text composition process in organizations that a case-study would provide. However, we speculate that when the authors of the text have specialized knowledge or training in a particular area, this may lead them to use specific strategies in a text. Authors’ linguistic choices are related to the professional culture (e.g. of lawyers or doctors) that establishes the framework for their choices (Norlyk, 2000). For example, the authors of privacy policies might also be involved in composing other types of policies. These authors could transfer their expertise about the legal environment from one type of text to another, leading them to use specific rhetorical strategies.

Some of these limitations can be addressed in future work, for example by collecting further data about the text composition process and authors’ perceptions of their audiences. Such studies could answer questions such as: what impact does having multiple authors involved in the text-creation process have on the rhetorical strategies that authors incorporate into texts? Other research might examine how distinct features of a particular type of text spread and diffuse through a set of texts in a population. For example, authors of privacy policies have several competing guidelines available to them that emphasize different elements to include in policies, and research could examine which guidelines are adopted by which organizations. Finally, it would also be valuable to link the rhetorical strategies in texts to organizational performance data. If organizational outcomes are associated with some rhetorical strategies and not others this would indicate some strategies are better tailored to the organization’s environment.

One goal of this paper has been to engage in some “rhetorical consciousness raising” and encourage the close examination of organizational language in organizational research (Swales & Rogers, 1995, 238). Organizational texts and documents are easily available data for research, but are typically studied at only a superficial level rather than as a subject of research in their own

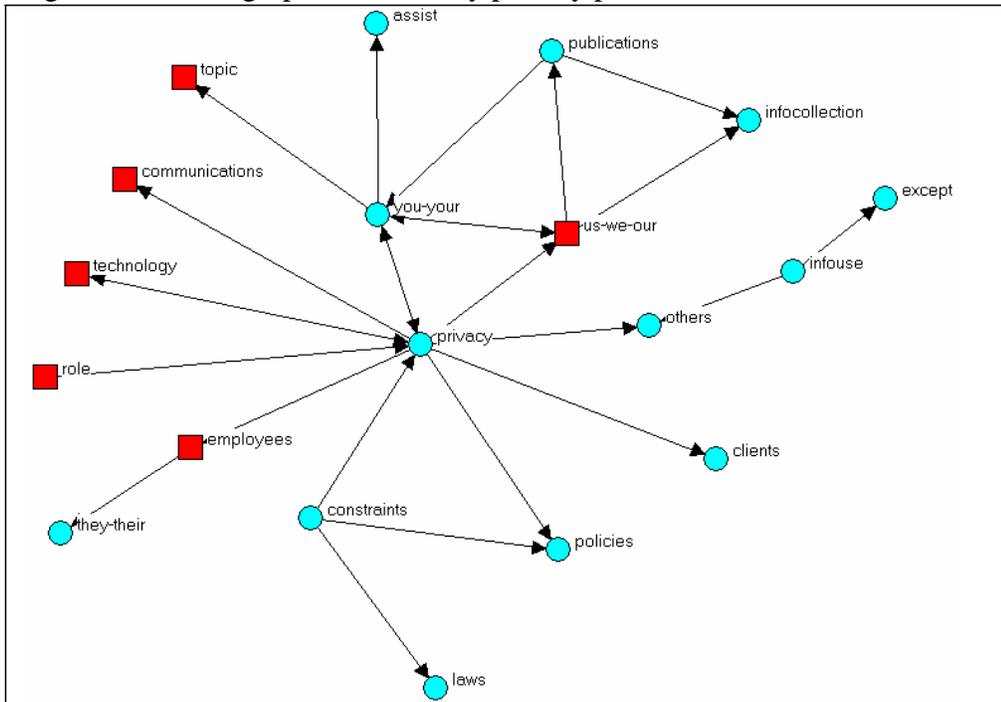
right. A lack of attention to what organizations say in their texts and how they say it can lead researchers to overlook meaningful heterogeneity across texts. The relationship between organizations and their environment is dynamic and interactive, and some audiences are more likely than others to be addressed – directly or indirectly – in organizational language. Studying this language can “help both younger and older people gain a better understanding of the strategies behind the corporate messages and images that are so prevalent in contemporary society” (Swales & Rogers, 1995, 238). We are all consumers of organizational language, and its veracity and the integrity of its authors has never been under greater public scrutiny. By being more sophisticated consumers of texts such as those studied here, we can all gain more insight into how our own expectations and demands shape organizational language and how its authors write them into organizational language.

8. Tables and Figures

Table 1. Illustration of AutoMap[®] steps

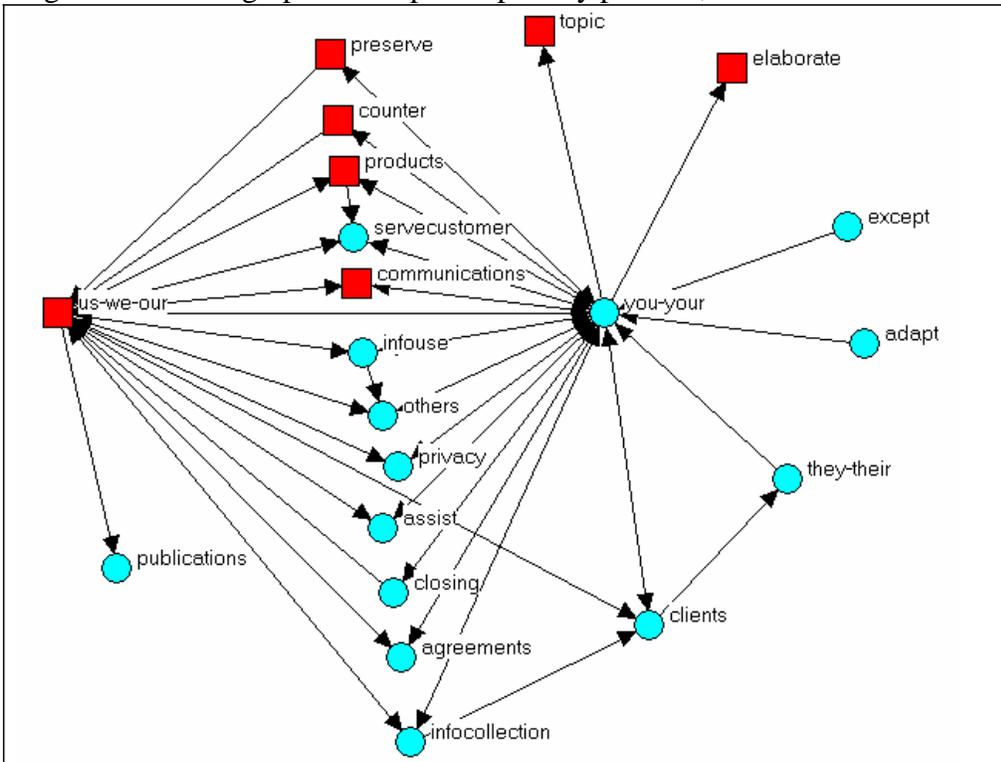
Steps	Example of AutoMap [®] output		
1. Original text	“... makes a special effort to encourage children to consult with their parents before furnishing data.”		
2. Translation	Thesaurus: special/special, effort/effort, encourage/assist, children/others, their/they/their, parents/clients, furnishing data/info_collection Output: “xx xx special effort xx assist others xx xx xx they/their client xx info_collection”		
3. Statements (window size 4)	1) special effort, 2) special assist, 3) effort assist,	4) effort others, 5) assist others, 6) they/their client,	7) they/their info_collection, 8) client info_collection
4. Visualization (sample central graph circled)			

Figure 1. Central graph of university privacy policies, 33% threshold



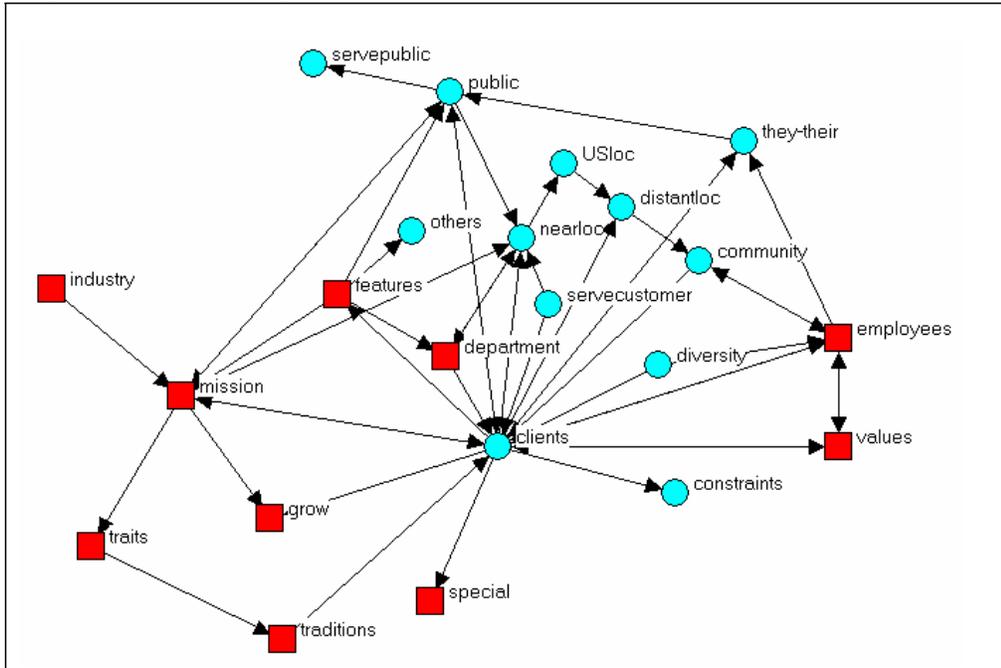
* Identity concepts are red squares; responsiveness concepts are blue circles

Figure 2. Central graphs of corporate privacy policies, 50% threshold



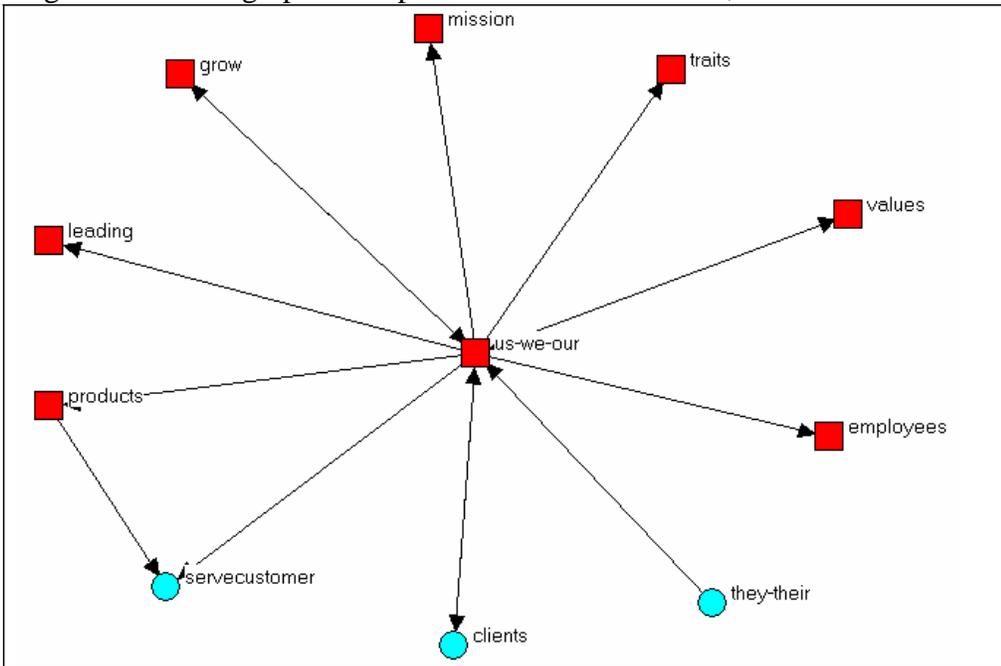
* Identity concepts are red squares; responsiveness concepts are blue circles

Figure 3. Central graph of university mission statements, 33% threshold



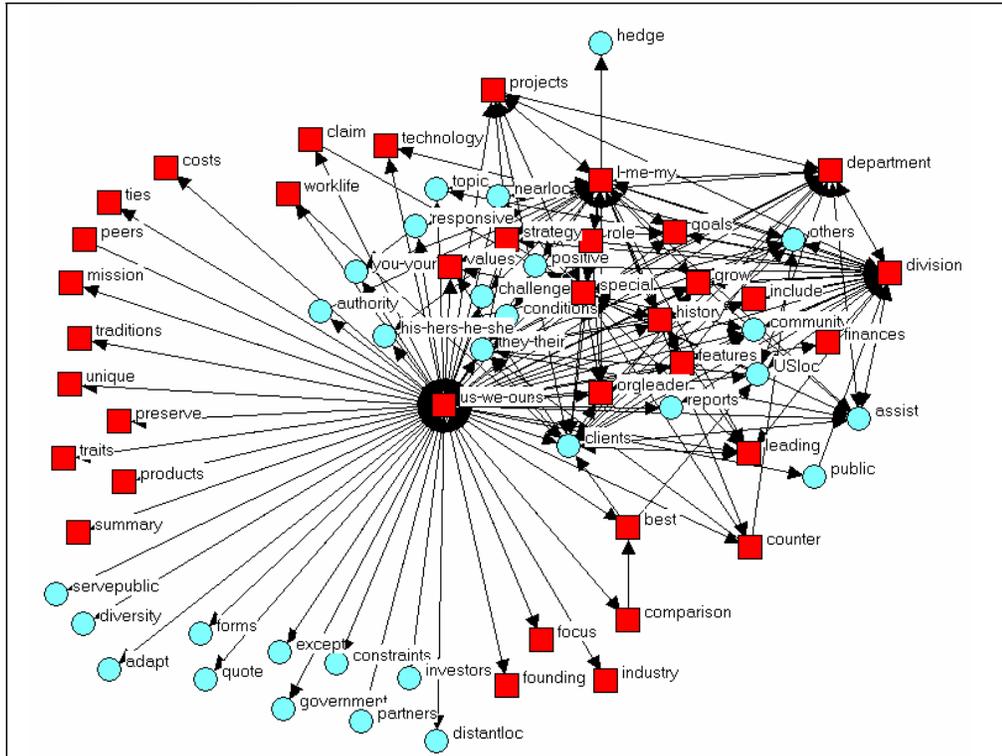
* Identity concepts are red squares; responsiveness concepts are blue circles

Figure 4. Central graph of corporate mission statements, 33% threshold



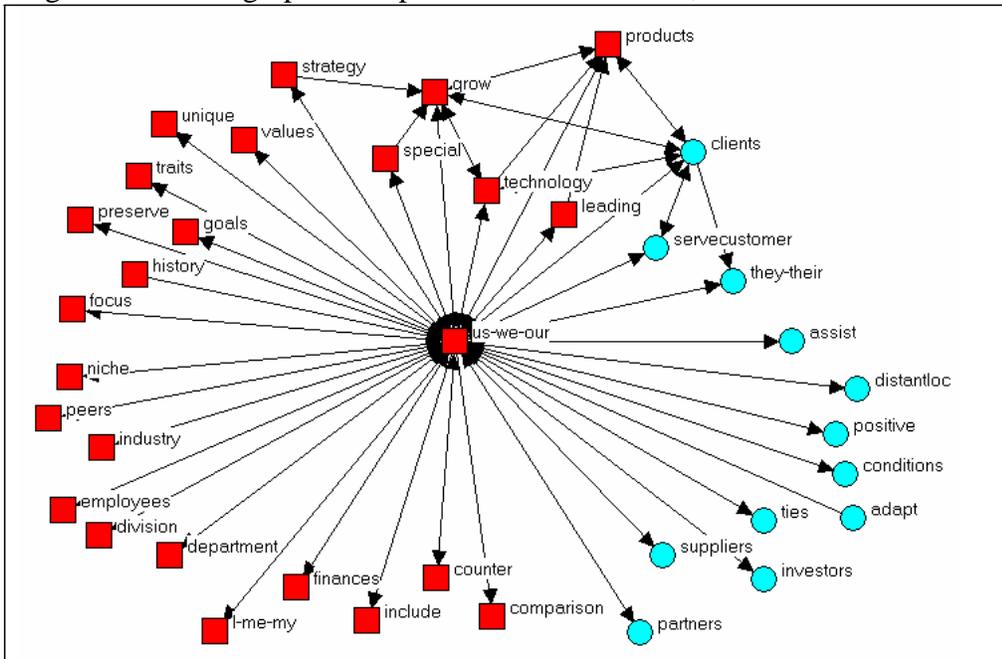
* Identity concepts are red squares; responsiveness concepts are blue circles

Figure 5. Central graph of annual accounts, 50% threshold



* Identity concepts are red squares; responsiveness concepts are blue circles

Figure 6. Central graph of corporate annual accounts, 50% threshold



* Identity concepts are red squares; responsiveness concepts are blue circles

9. Appendices

Appendix 1. Technical description of AutoMap[®] program procedures

This technical appendix describes in more detail the steps involved in creating the central graph figures used in the analysis section. For more information about AutoMap[®] contact Professor Kathleen Carley (ISIS Program) at Carnegie Mellon University. The program and its routines were created by the second and third author.

1.Pre-processing: deletion and translation

The two most general types of choices a researcher must make in the *pre-processing* phase (Carley, 1997a) are whether to eliminate whole categories of words (e.g. Corman et al, 2001) and whether to translate specific words and phrases into more basic concepts (Carley, 1997b).¹¹ Both of these techniques – *deletion* and *translation* – are ways to reduce a text to the words or concepts that capture the aspects of the text that a researcher is interested in; we use both techniques extensively. Pre-processing can substantially decrease the size of the text’s map of concepts and statements. *Deletion* removes words such as articles or proper nouns from a text. Rather than complete deletion, we chose to replace all words that are not higher-level concepts in our coding scheme with a placeholder (higher-level concepts represent 3.4% of the original words in the texts). We made this choice because the distance between higher-level concepts in a text is meaningful when the program is forming statements, but some categories of words typically do not contribute substantially to the rhetorical strategies in the text.

Translation in AutoMap[®] occurs using a *thesaurus*. Multiple words and phrases that share the same general meaning – the entries in the thesaurus – are matched to a smaller number of higher-level concepts. For example, in a thesaurus the words “innovative” and “original” might both be matched to the higher-level concept “creative.” Using a thesaurus that the researcher designs for a specific set of texts, the program searches the text and “translates” all specified words and phrases into higher-level concepts. The first author created one thesaurus for the university texts and another for the corporate texts using words and phrases from the texts themselves. The university thesaurus has close to 1,320 entries and the corporate one has approximately 1,000 entries (they overlap substantially, but not completely). Appendix 2 lists all of the 94 higher-level concepts in the thesauri and the number of entries for each concept.

2.Forming statements

Arguably the most important choice a researcher makes when using map analysis is how to define a tie between concepts. This choice is critical because how a tie is operationalized strongly influences the analysis results. We use a proximity based approach to defining ties called “windowing” (Danowski, 1993).¹² AutoMap[®] uses the size of the window to determine if two concepts within that window will be tied to each other to form a statement. For example, with a window size of three, every pair of words or concepts within three units of each other will be linked in the text’s network. Obviously, the larger the window size the more statements AutoMap[®] will find. The window size for our analyses is the average number of words per sentence in a given set of texts (ranging from 19-29 words). After translating the texts, the program identifies the statements in the text, and this list of pairs of concepts can be turned into a 94 by 94 network for each text using an additional analysis routine in the AutoMap[®] program.

¹¹ Other choices might include whether to ignore or attend to punctuation, whether a program should be case sensitive in its analysis, the relative emphasis on individual words versus phrases, and so on.

¹² Windowing is one way of forming networks based on the content of texts; alternative examples can be found in Corman, et al (2001) or in Bookstein and Raita (2001).

3. Creating central graphs

After moving from the raw output of the program (lists of pairs of concepts) to the concept networks, we compared the concept networks from the individual texts in each set to study the consensus of these networks. This consensus is called the “central graph” (Banks & Carley, 1994) and is the concept network visualized in all the Figures. The central graph of a set of texts contains the links between concepts that appear in a set percentage of the networks from a set of individual texts. For example, if the researcher sets this percentage at 50%, the analysis routine compares the concept networks from a set of individual texts, and identifies all those ties that appear in more than 50% of those concept networks. A central graph, in other words, reveals the relative consensus in a set of texts on whether there is a link between two concepts. For example, if more than half the university mission statements have concept networks that link the higher-level concepts “values” and “niche,” this would be a link in the central graph for that type of text. We created central graphs for each set of texts using several percentages for including a statement in the central graph (25%, 33%, 50%, and in two sets of texts 66%).

Appendix 2. Thesaurus structure for AutoMap[®] analyses

Concept	Number of entries		Concept	Number of entries	
	Univ.	Corp.		Univ.	Corp.
- Identity			- Responsiveness		
best	14	14	adapt	20	21
claim	8	13	agreements	11	9
communications	29	12	assist	7	7
comparison	20	13	authority	27	7
costs	12	4	balance	5	5
counter	21	17	challenge	18	16
department	18	8	clients	25	19
division [company unit]	26	17	closing [of text]	11	8
elaborate	7	7	community	2	2
employees	22	9	comply	8	8
entrepreneur	3	3	conditions [of environ.]	16	14
ethical	8	8	constraints	19	14
example	4	4	contingent	13	12
features	21	8	distant locations	15	9
finances	21	7	diversity	15	2
focus	15	9	except	8	7
founding	18	10	family	4	6
goals	16	15	forms [texts]	12	7
grow	15	13	government	13	7
history	17	9	greeting	10	5
include	8	8	hedge	17	13
industry	10	3	information collection	20	20
leading	12	18	information use	22	22
metaphors	20	13	investors	16	12
mission	19	8	laws	20	3
niche	5	11	legal usage	39	39

organization leader	14	10	near locations	18	5
peers	10	3	negative	13	6
preserve	18	17	others	31	22
products	6	9	partner	9	12
projects	17	5	policies	19	4
pronoun 1st plural	5	5	positive	14	14
pronoun 1st sing	5	5	privacy	5	5
role	12	12	pronoun 2nd	5	5
shrink	5	7	pronoun 3rd plural	8	8
similes	15	9	pronoun 3rd sing	5	5
special	18	15	public	19	10
strategy	14	14	publications	43	17
structure [of text]	10	10	quote	8	8
summary	11	11	reports	20	8
team	2	4	responsive	15	13
technology	15	16	service customer	7	9
topic	15	15	service public	13	5
traditions	18	15	supplier	5	8
traits	16	22	ties	11	11
unique	12	10	US locations	9	9
values	15	13			
work life	10	16			

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