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Rhetorical Analysis of Public Policy Rhetoric: Child Nutrition Reauthorization
Act of 2004 and 2010

By
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A Thesis Submitted in Partial Fulfillment of the Requirements for the Master of
Arts In English: Technical Communication Option

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Abstract

In this research, I employed content analysis using the constant comparative method to examine and comment on the rhetoric of public policy and its audiences of specialists and generalists in the context of participative government. I examined the specific case of the Child Nutrition Reauthorization Act (CNR) by comparing technical report texts from 2004 and 2010 to reveal and contrast their specialist and generalist features. Unique attributes of the rhetoric of public policy are discussed, particularly authorship and recursion.

I organized the research findings into physical features, affective features, and cognitive features according to Carliner's framework of information design (2000). According to my findings, the CNR report from 2010 has significantly more generalist-friendly features. Generalist-friendly features at the physical level are as follows: the location of very technical information in appendices, an extensive resources section, and the heavy use of colored charts and figures. Generalist-friendly features at the affective level are: the use of emotional language in definition/naming and the use of metaphor. Generalist-friendly features at the cognitive level are: the use of metaphor and limited use of jargon. Ideology and cultural artifacts in the documents are discussed, but were determined to more likely reflect audience values and/or the political environment from which public policy rhetoric arose than specialist or generalist attributes.

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I. Introduction

In this research, I examine public policy rhetoric pertaining to the Child Nutrition Reauthorization (CNR). This chapter describes background information about the CNR, a summary of the study, a purpose statement, and the research questions.

While working on my MA degree in technical communication at Minnesota State University, Mankato, I became increasingly interested in electoral politics and public policy development. I live just outside of Washington DC, and I hope to continue researching and writing about public policy after I complete my MA degree. I have a particularly strong personal interest in food and nutrition policy, and my interest led me to discover a wealth of technical documentation about nutrition policy provided by the United States Department of Agriculture (USDA) for advocates, legislators, journalists and other interested parties. I found the documentation about the CNR act particularly interesting because the documents related to current and crucial issues in nutrition policy development—specifically, balancing cost and need for nutritious school lunches, changing the trend toward childhood obesity and overweight in low-income families, and easing hunger in children living in households at or just above the Federal poverty level.

Background

The USDA performs research about nutrition and nutrition education, then it makes the research available to the American public and advocacy groups on its website in the *Research* section. The USDA also oversees national food and nutrition programs such as the National School Lunch Program (NSLP) and

others. The USDA administers the NSLP under the guidance and funding of the CNR.

The CNR is periodic legislation enacted every five years to support the NSLP, and it provides funding for the provision of nutritious meals for school children and low-income children in the US. It is enacted in support of perpetually growing knowledge and scholarship about how nutritious meals support positive growth in children (Gunderson, 1971).

The positive correlation between nutrition and cognitive development in children has long been understood. This fact was recognized in Europe as early as 1790. As well, before the existence of scientific studies about the link between nutrition and cognitive development, educators and parents recognized the anecdotal evidence supporting it. School lunch programs originated in Europe and were exported to the US in 1853. But, it was not until the establishment of NSLP in 1946 that schools trusted the commitment of the government, which made school compulsory, to also assist in making the school environment as conducive to learning as possible, starting with the assurance that each child was sufficiently fed during the school day (Gunderson, 1971).

Because of the positive results demonstrated by the NSLP, the Child Nutrition Act of 1966 followed mandating an expansion of these efforts. In its Declaration of Purpose in Section 2 of the Act, the Congress stated,

In recognition of the demonstrated relationship between food and

good nutrition and the capacity of children to develop and learn, based on the years of cumulative successful experience under the National School Lunch Program with its significant contributions in the field of applied nutrition research, it is hereby declared to be the policy of Congress that these efforts shall be extended, expanded, and strengthened under the authority of the Secretary of Agriculture as a measure to safeguard the health and well-being of the Nation's children, and to encourage the domestic consumption of agricultural and other foods..." (Gunderson, 1971, p. 1).

The Congress reauthorizes the Child Nutrition Act every 5 years in a process called the Child Nutrition Reauthorization. In this process, amendments to the act are made to reflect the dynamic needs of school children and low-income families nationwide. Each reauthorization process produces a new Act. The new Act reflects research, analysis, and debate designed to find the perfect balance between need and cost, ways to change the trend of childhood obesity and overweight in low-income families, and ways to ease hunger in children living in low-income households (School Nutrition Association, 2010).

Each reauthorization process offers a new opportunity to employ rhetoric in a useful way to discover the truth of the context surrounding this balance of need and cost. In each 5-year interval, there is a very short window in which rhetoric can be employed to advocate social change and set standards for access to good food for school lunch and other programs. The 5-year reauthorization schedule of the CNR legislation offers a unique opportunity to compare many features of the communication contributing to public policy development, which are reflected in amendments to the act.

Of note, the CNR legislation has enjoyed bipartisan support in the Congress

(School Administrator, 1995) for the past 40 years. It was only during the research and writing of this thesis that the CNR suddenly became a partisan issue (Barr, 2010; Black, 2010; Cunningham & Black, 2010; Fisher, 2010; Siegal, 2010; Trueman, 2010; Whidden, 2010). Prior to this, it remained non-controversial, making it seem like a valuable topic for study because it would be less likely than other legislation to display outcomes resulting from political party polarization. Because these partisan complications began after the technical documents in this study were written, the partisan complications have not interfered with the results of the study.

My interest in this legislation

I began following this legislation because I am personally interested in it. As a concerned citizen, I am passionate about good quality nutrition in government programs for children and seniors citizens. I think it's important to provide good food for needy and vulnerable populations; and the food provided shouldn't just prevent hunger, it should promote the growth and maintenance of healthy bodies and minds. It is an ethical mandate that the children of our country grow up strong and prepared for leadership. As well, it is an ethical mandate to care, with good nutrition, for the seniors whose leadership should be remembered with appreciation.

In addition to my personal interest in this topic, I have a scholarly interest as well. While reading about this topic because of my personal interest, I noticed the large amount of varied and widely available technical communication on the USDA website about the CNR. After reading most of these documents, I noticed a

curious way the technical documents remained similar to one another prior to 2004, but underwent a dramatic change between 2004 and 2010. The changes in the technical communication captured my interest because of the way rhetoric and texts operate as a community (Ornatowski & Bekins, 2004), reflect a community (Black E. , 1970; Bruner, 2006), and reflect social action (Miller, 1984). So, it seems logical that *changes* in texts must reflect community and social change.

Since the 2004 CNR, the rise of social networking profoundly changed internet communication in a myriad of ways, including increasing the public's awareness of, and access to, information. In the case of the CNR, the public's interest in the legislation has grown alongside awareness of and access to information. This may be because in American culture, it is impossible to ignore increasing rates of childhood obesity and the effect of processed foods on our health, and the link between poverty and obesity rates among low-income children is well documented (Food Research and Action Center, 2010).

Alternatively, increasing public interest could be because the plight of low-income children and the CNR legislation has caught the attention of the First Lady of the United States, Michelle Obama, and celebrity chef, Jamie Oliver. Their influence has elevated awareness of this legislation and possibly shaped its fate. Indeed, Jane Black, longtime food journalist and writer at the Washington Post said, "I think public interest in this bill was driven in large part by Michelle Obama. As a writer at a newspaper who has followed the issue for years, it was

always a hard sell. But with Michelle and photo ops at the White House garden, it was hard for people to ignore. And she represented this issue well, pairing policy speeches with healthy food picnics on the White House lawn“ (personal communication, 2010). Because of celebrity attention on websites, television, blogs, Twitter, and other new media, the attention paid to the 2010 CNR is vastly different from that of 2004, and the technical communication surrounding it has changed to accommodate more public consumption as well.

In 2004, the CNR was technical legislation advocated by a few and researched mostly by the USDA and the Food Research and Action Center (FRAC). Since the 2004 CNR, however, food and nutrition legislation has gained popular interest. Technical communication audiences consuming information about food and nutrition legislation have changed from scientific to general. The change from specialist to generalist can be seen in the change in the documents produced and maintained in the rhetorical community. My case study of the CNR using content analysis allowed an opportunity to comment on the activity of the CNR and public policy development in general.

Summary of the study

In chapter one of this study, I provide background information and summarize the research. I also discuss my interest in the CNR legislation. Because authorship and bias are of continuous interest in technical communication, I feel it is important to reveal that I consider myself an advocate for healthy food in the NSLP, and I closely follow issues of food safety and food policy.

In chapter two, I discuss the literature important to the study. First, I discuss literature pertaining to the development of communication artifacts for specialist and generalist audiences. Then, I discuss literature pertaining to the rhetoric of public policy development, which reveals the following attributes:

- Public policy development occurs in rhetorical communities, which define the boundaries of public policy texts (Ornatowski & Bekins, 2004) through shared language and purpose.
- public policy development exhibits a unique temporal nature (Asen, 2010; Rude, 2004), and recursive behavior of public policy development demonstrates active rhetorical information reuse (Swarts, 2009) and continual recycling and updating of ideas
- public policy texts are notably unique in their ambiguous authorship (Asen, 2010).

In the last section of the literature review, I discuss similar studies, which guided my research.

In chapter three, I discuss my research methods. The research method in this study is a qualitative content analysis at the textual level (Fairclough, 2003; Krippendorff, 2004; MacNealy, 1999; Stemler, 2001) using the Constant Comparative Method (Glaser, 1965) to understand specialist and generalist attributes of technical reports contributing to the CNR legislation. I also analyze features of the overall document such as its organization and its use of visual rhetoric to aid my understanding of specialist and generalist attributes of technical reports.

Qualitative content analysis is a powerful tool of scholarship used to divide a text into discernable, countable categories, so conclusions can be drawn; the Constant Comparative Method allows for emergent categories, allowing the information to shape the discoveries about public policy rhetoric. I chose two documents for my study—one contributed to the making of the 2004 CNR, and the other contributed to the making of the 2010 CNR. For comparison, I selected documents of the same genre supporting the same rhetorical action. The comparison documents are technical reports from the USDA because, among all the organizations I considered, the USDA reports were the most standard from year to year.

I used the Constant Comparative method, which is an emergent qualitative analysis technique. I coded the data first by counting and categorizing same or conceptually-same data (for example, “abstracting” and “abstraction” were coded as the contextually-same because they are not the same word, but they represent the same concept. I noted their differences and counted them as the same concept). After coding, I looked at the data as a whole to categorize and organize it. I kept notes about the categorization and continued to categorize until no more categories emerged. From the content analysis, I was able to discover surprising differences, which were not discoverable from simply reading and comparing the documents. Taking the documents apart word-by-word and concept-by-concept using content analysis was necessary to discover specialist and generalist attributes in the CNR public policy rhetoric.

In chapter four, I discuss my findings. As more generalist audiences became involved in the CNR and food/nutrition policy in general, the demand for generalist technical information increased beyond simple implementation of government Plain Language guidelines. I used aspects of Carliner's (2000) three-part information design framework to organize my research and findings. Carliner suggests information design attributes are organized into three categories: affective, physical, and cognitive. Affective design attributes are particularly persuasive because their goal is motivating readers to perform. Physical design attributes help readers find information. Cognitive design attributes help readers understand and use information. Using Carliner's three-part framework helped me organize the specialist and generalist information to better comment on the differences.

In chapter five, I discuss the recursive nature of public policy rhetoric, the U.S. Open Government (Open Gov) initiative, the current state of the CNR legislation, and my research conclusions. Public policy development is a discourse-heavy endeavor that attempts to reflect in legislation the ideas, attitudes, and beliefs of interested individuals and groups. American public policy is thought of as participative, but actual public participation in policy development has varied since the country's foundation (Morone, 1998). The *hybrid forum*, a network that is at the same time loose and hierarchical, proposed by Callon, Lascoumes, & Barthe (2010), may prove an effective framework for public participation in public policy development. Open Government, a new initiative of U.S. President

Barack Obama, is such a hybrid forum. Open Gov, aims to “ ... [break] down barriers between government and the public and [invite] greater public participation in agency decision-making” (Noveck, 2010). Open Gov has been adopted by government agencies such as the Commerce Department, the Department of Health and Human Services, the United States Department of Agriculture (USDA), and others.

Purpose statement

The purpose of the research is to understand how rhetorical communities of texts intended for specialists and generalists contribute to knowledge making in public policy development.

Although it is outside of the scope of my research to discover how the public’s awareness of and access to generalist information contributes to the *quality* of public policy, it will nonetheless be worthwhile to use the CNR case study to describe the transformation of its texts from the domain of the scientist and specialist to the public generalist domain.

Research questions

The research questions that define this analysis are:

1. What strategies do authors use to revise technical information to make it more appropriate for general audiences?
 - a. Affective level
 - i. Definition
 - ii. Emotional language
 - iii. Metaphor
 - b. Physical level
 - i. Table of contents
 - ii. Appendices
 - iii. Resources section
 - iv. Use of graphics and/or pictures
 - v. Use of color

- c. Cognitive level
 - i. Metaphor
 - ii. Ideology
 - iii. Cultural artifacts
 - iv. Jargon
2. What trends and patterns in specialist to generalist changes can be found in the documents?

Limitations

Two limitations of this study are sampling and coder reliability.

With regard to sampling, the amount of documentation leading itself to final decisions in public policy development is neither countable nor discernable. It is not possible to track and document all rhetoric absorbed by policy makers because they are exposed to such a wide variety through the policy making process, their own relationships, mass media, and other avenues. I have chosen two texts to analyze in this study. The texts contribute to the making of the CNR, but they are not representative of the entire discourse.

With regard to coder reliability, I coded the data myself. I double-checked the word/concept counts of many data items after I finished the coding to increase reliability.

II. Literature Review

For this research, I reviewed the literature pertaining to the development of technical communication for specialist and generalist audiences, and the literature pertaining to the rhetoric of public policy development.

Writing for specialists and generalists

Authoring organizations use various strategies to revise technical information and make it more appropriate for generalist audiences.

Carliner (2000) proposed authors design information, such as creating technical information for particular audiences, as part of a three-level information design framework. Authors may address content at the affective level, motivating readers to perform; they may address organization at the physical level, helping readers find information; and they may address content again at the cognitive level, helping readers understand and use information.

At the affective level of information design, authors may consider the use of rhetoric in definition and emotional language, and in the use of metaphor.

Hahn (2003) explores the power of definition in political communication to show definition as part of the affective level of information design with its ability to control a political narrative. Hahn specifically describes naming as a subset of definition, and cites the work of Kenneth Burke (1967) in his description of the human need to name and categorize things. Hahn describes a nineteenth-century

debate that has been resolved — slavery — whether one should be allowed to own slaves. According to Hahn, the debate over slavery was definitional. One side defined slavery as a moral issue — that it is immoral to own slaves. The other side defined it as an economic issue — slaves were needed to work the land. If the issue was defined as economical, people with high moral standards could justify owning slaves. The slavery example clarifies the action of definition as a rhetorical technique in a community. Definition seems innocuous, but it is a powerful source of persuasion. It is especially evident in current political communication where it is used as a public relations component of messaging. You may recognize definition in such phrases from recent political issue of taxes where one side defines the issue as the “Obama Tax Increases” and the other side calls it the “Bush Tax Cuts.” Another example is “cap and tax” vs. “cap and trade,” or the “Repealing the Job-killing Healthcare Law Act.” The definition you choose and use says a lot about your ideological stance on government.

Emotional language is a part of the affective level of information design in its ability to motivate the reader to perform a task. Affective language concerns writers because readers draw conclusions about why a document was written and whose interests it was meant to serve from the language used in the document. This is especially true in cases of risk management documents or documents pertaining to the making of public policy (Schriver, 1997). Affective language is important for other reasons as well. Word choice is important at the affective level where “words that seem innocuous to the communicator [can] carry strong meanings for the audience” (p. 560). Burke (1966) detected this situation as well

and declared that words are not just the names of things; words are titles for rhetorical situations.

Metaphor is a part of the affective level of information design and a part of the cognitive level of information design. At the affective level of information design is the ability of metaphor to manage the way people think about things. There is some evidence that systems of metaphors are not just ways of talking but also ways of thinking about abstract concepts (Gentner & Bowdle, 2002; Lakoff, 2008).

There are many theories of how metaphors are understood by the human brain. Metaphor comprehension has long been viewed as property-matching, which is the analogy theory of metaphor. In the analogy theory, the interpretation of the metaphor is the set of properties shared by the two terms, and the new information conveyed and understood. Metaphor invites inferences from the base (vehicle) to the target (the topic) where the target takes on properties of the base by association. Another theory of metaphor comprehension is the theory of class inclusion where the topic is said to belong to the same category as another topic. The new topic takes on the attributes of the comparison topic. Lakoff (2008) describes the action of metaphor from a cognitive science perspective where a metaphor activates framing mechanisms in the brain. Lakoff's ideas recognize the power of metaphor in relation to the power of language itself, which he describes as a "gateway to the mind. It organizes and provides access to the system of concepts used in thinking" (p. 231). Lakoff's ideas suggesting metaphors can

change the way we think is a substantially more sweeping view of the persuasiveness of metaphor as told by Brown (2003), who notes that a metaphor can be persuasive, and is often meant to be persuasive because scientists must continually sell their ideas and receive credit for them to further their reputation and recognition in their field.

At the physical level of information design, authors may consider ways the physical design of a document lets readers find information of interest easily (Carliner, 2000). The physical level also concerns the general appearance of information and the visual rhetoric also (Schriver, 1997).

The table of contents, appendices, and the resource section are parts of the physical level of information design in their ability to help readers find and clarify information. The structures for a document table of contents and appendices are developed in the information design period of the document development process, and they are the result of an audience analysis indicating a need for them (Carliner, 2000). Tables of contents and appendices are often part of the genre of technical reports (Berkinkotter & Huckin, 1993). Appendices are specialized in the ability to keep separate more esoteric information for the specialist reader. The resources section of a technical report, though an additional part of the front/back matter like the table of contents and appendices, is of particular rhetorical importance. The rhetorical action of citing sources allows an authoring organization to “speak with different voices and acquire more authority” (Swarts, 2009, p. 158). According to Swarts, the rhetorical function of the resources

section is strengthening the authority of a text because of its distribution over a dense network of texts, people, institutions, machines, technologies, and many other kinds of actors. A thoughtful and thorough resource section provides the author an opportunity to establish credibility with the reader.

The use of graphics and/or pictures and the use of color are parts of the physical level of information design in their ability to help readers find information. A common way writers make a document easier for the generalist to use is by facilitating graphic data consumption. Making information available in graphic form whether by providing a graphic vs. text-only user interface (Gschwandtner, Kaiser, Martini & Miksch, 2010) or offering information in multiple modes of text and graphics (Verhoeven, Steehouder, Hendrix, Van Gemert-Pijnen, 2010) gives technical documents a wider audience (Lannon, 2008).

The use of graphs and tables are an appeal to logic (Boettger & Palmer, 2010), which make understanding information easier because some of the analysis is done for the reader (Lannon, 2008). The graphics of a document are created with a fictionalized reader in mind (Schriver, 1997), and different graphic elements appeal to different classes of use. Tables contain raw data and require some analysis by the reader. However, the rhetorical effect of grouping data together, even in its raw form, is a powerful statement to the reader about which data elements are comparable and, therefore, belong together (Kimball & Hawkins, 2008). While specialists and generalists alike may use tables with ease, graphics (i.e. pie charts) and pictures (i.e. maps) are especially appealing to generalists

(Lannon, 2008; Schriver, 1997). The dominance and juxtaposition of graphics and texts also hold rhetorical meaning because relative positions convey importance (Schriver, 1997; Boettger & Palmer, 2010; Kimball & Hawkins, 2008).

Color can be used rhetorically to convey meaning, imply value, or attract attention (Kimball & Hawkins, 2008). Color makes interpretation easier for the reader, appealing to a more general audience (Hutto, 2008).

The cognitive or intellectual level of information design is concerned with whether readers can understand and make use of information (Carliner, 2000). At the cognitive level, authors may use jargon or metaphor to help readers understand information. In addition, public policy rhetoric offers clues in the text, which may reveal the ideology of the intended audience (Black, 1970) and the rhetorical ecology (Edbauer, 2005) from which it arose.

Jargon is part of the cognitive or intellectual level of information design in its ability to succinctly describe technical information. Jargon can mean the specialized language of any trade, organization, profession, or science. Jargon can lend precision to technical writing for a specialist audience. However, jargon can also seem exclusive, evasive, or confusing to a more generalist audience (Hirst, 2003). The Plain Language movement (Reddish, 1985; Redish & Rosen, 1991; Schriver, 1997) sought to eliminate jargon altogether, especially in government documents. However, many scholars see jargon as useful if used carefully. Hirst

sees jargon as neutral—neither good nor bad, and argues for its judicious use. Lannon (2008) promotes a similar idea, but does not exclusively refer to the good/bad continuum. Lannon considers jargon “good” where it is used to communicate to specialists in an economical way; Lannon considers jargon “bad” when it takes the form of useless phrasing or lengthening of words.

Schrivver (1997) describes a situation where jargon was used in public health brochures created for distribution among teenagers. *Don't Lose a Friend to Drugs* was a brochure aimed at middle school students and high school freshmen. Students asked their opinion of the brochures had numerous criticisms from the choice of graphics to the length of the text. However, their most common criticisms had to do with the jargon used in the brochure, which made assumptions about how teenagers really talk and what their lifestyles are like. One student said, “Get a grip! Only ‘goodie goodies’ talk like this!” Another student said, “[the brochure says] to skip parties. Well, parties aren’t the only place drugs are available. How about school, and everyday life?” Another student said, “This looks like it was written by someone who’s in some Washington office building all the time and never gets outside.” The developers of the brochures did not request the input of teenagers, so the brochures lacked the teen voice, which caused teens to take the brochures less seriously. The intended audience of teens openly ridiculed the “teen” jargon in the brochures. As this example shows, jargon is quite specialized, and writers must use it with care.

Metaphor is part of the cognitive or intellectual level of information design in its ability to help readers draw inferences about abstract information, which leads to better understanding of complicated specialist ideas. Metaphor is especially helpful in conveying new or complex information to generalist audiences.

Gentner & Bowdle (2002) describe a metaphor as “a statement that characterizes one thing in terms of another thing, juxtaposing contexts from separate domains of experience. Metaphor can be used to describe abstract or unfamiliar topics, and to express ideas difficult to convey with literal language” (p. 18). A metaphor is similar to a simile, which expresses that something is *like* something else (i.e. time is like a river), but a metaphor goes one step further to say that something is something else (time is a river). Metaphors are often used to describe abstract or unfamiliar topics, like time.

A particular strength of metaphors is they come from phenomena with which all audiences are familiar (Hahn, 2003). Examples in the scientific and technical communication context from Gilles (2008) are the metaphor of “playing God” in discussions of human cloning, and the thinking of Rene Descartes in the seventeenth century suggesting light was held in a medium, which actually directed the scientific thinking to a theory of light as a wave (it is also theorized as a particle).

Another example of the use of analogy — or metaphor — as a way to help readers understand and use information is from Miles & Cottle (2011), who recommended the use of metaphors in technical communication in jury trials

where citizen jurists are required to use technical communication, written and spoken, to decide the fate of a person on trial in criminal court. Miles & Cottle discovered the technical communication provided to jurists was not understandable and confused jurists. Because of the legalese used in the writing, jurists did not comprehend instructions given them by judges, and jurists are often not allowed to take notes when given verbal instructions. Miles & Cottle recommend the court system focus on the process of instruction rather than the language of instruction. And where language was concerned, the researchers recommended using analogies and metaphor to communicate better to citizen jurors (generalists).

Ideology is a part of the cognitive or intellectual level of information design in the way rhetoric reflects provides clues to the ideology of an implied audience. In my opinion, one of the most compelling reasons rhetoric is important is the connection between political rhetoric (and the rhetoric of public policy as a subset of political rhetoric) and ideology, which is subtle, but very real. Black (1970) describes *The Second Persona* of communication as its *implied audience*. He suggests words or groups of words act as “verbal tokens” to the implied audience, and verbal tokens speak to the audience in a special way. Black suggests we consider verbal tokens not merely hypotheses of the relationship between the orator and audience, but something much more. Black describes “tokens of influence” in oratory where an inductive thought process examines rhetoric in a speech and understands from it the audience ideology.

... the association between an idiom and an ideology is much more than a matter of arbitrary convention or inexplicable accident. It suggests that there are strong and multifarious links between a style and an outlook, and that the critic may, with legitimate confidence, move from the manifest evidence of style to the human personality that the evidence projects as a beckoning archetype (p. 119).

According to Black, word choices that become verbal tokens to an implied audience tell something about the ideology of the audience. In this way, word choice is demonstrably a powerful part of public policy rhetoric. If we analyze and understand such tokens, it can tell us for what ideological audience the rhetoric and its tokens were created.

Rhetoric as a cultural artifact is a part of the cognitive level of information design in the way rhetoric reflects the rhetorical ecology (Edbauer, 2005) from which it arose. If we understand the circumstances which gives rise to a particular rhetorical artifact, it increases our understanding of the information and how to put the information to use. Bruner's work on national identity (2005) expands on Black's idea of ideology and uses the idea to build on McGee's scholarship to comment on rhetoric as a reflection of the rhetorical ecology. Bruner notes that Black's idea "was an issue introduced long ago in ancient Greek rhetorical theory, though focused on the *polis* under the rubric of epideictic rhetoric" (p. 311).

Bruner describes the origin of rhetoric as "... a pool of cultural resources (aphorisms, maxims, commonplaces, historical episodes) available to rhetors for the creation of public identities" (p. 311). According to Bruner, "... rhetors manufacture identities for political purposes out of the available pool of cultural

resources”—demonstrating rhetoric is manufactured out of the culture itself and exists as an artifact.

The idea of rhetoric as an artifact of the culture is prevalent Miller’s (1984) work also, where Miller expands culture to include historic period as well:

Studying the typical uses of rhetoric, and the forms that it takes in those uses, tells us less about the art of individual rhetor or the excellence of particular texts than it does about the character of a culture or historic period p. 154).

As well, Rude (2004) describes a rhetorical ecology that evolves with multiple texts over time (a phenomenon we see in public policy rhetoric) as:

... the situation in which multiple documents and other rhetorical acts may work together to change values and policies. When change is complex, the work of rhetoric — invention, reasoning, presentation, and persuasion in the interest of establishing good public policy — requires vision beyond the single document (p.273).

These scholars are suggesting that the study of rhetoric provides an understanding not only of what work must be done by a text, but also of the ideology of the intended audience and the rhetorical ecology from which it arose.

I find the ideas of rhetoric reflecting the ideology of the audience and its existence as a cultural artifact especially notable today as we experience a national debate in American politics about whether violent political rhetoric causes destructive behavior in the body politic (Meares, 2011). In the three-level framework of information design, authors motivate readers to act, to stay organized and find information, and to understand and use information.

The rhetoric of public policy development

In Aristotle's time, laws were influenced and debate proceeded primarily in an oratory fashion where dialectic arguments may have been observed as performances in public spaces such as in the ancient Greek dialog, the *Gorgias* (Plato, n.d.). Today, public policy and laws are influenced and debate about them proceeds in a more information-saturated environment of text, oratory, graphic images, video, and the variety of new media carrying them. New media may be as simple as a newspaper story written by one person and read by a small audience, or it may be as complicated as a multi-nodal social networking environment like Facebook or Twitter.

Traditional and new media can inspire ordinary citizens to try and influence public policy to achieve social change because the media keeps ordinary citizens updated on current events and issues that affect them. Media can also inspire non-governmental institutions to seek to influence public policy, and they do so in a myriad of ways. Citizens and groups are able to influence public policy because the US government is designed to be accessible and open.

The US government was designed to be accessible by citizens, deliberative, and open to a wide variety of opinions and interests, so communicating opinions and interests is crucial to influencing and shaping public policy. Political parties, state and local government associations, private-sector businesses, labor unions, special interest groups/non-governmental organizations, trade associations, public policy research organizations (think tanks), television news and print

media, and individuals can influence public policy. Among other ways of influencing, they can do the following (Bureau of International Information Program, 2008):

- Educate the public and public officials about the positive or negative effects of policy proposals
- Conduct advertising campaigns and public relations initiatives supporting their views
- Arrange for expert opinions and provide facts, data, and opinion polls to support their positions
- Arrange for witnesses to testify before congressional committees
- Encourage voting
- Communicate with elected officials
- Write letters to the media supporting their positions
- Form political action committees to contribute money to the campaigns of candidates who support their positions.

In this way, the U.S. government can be described as participative.

The U.S. government is also participative in its actions as a *delegative democracy* where we delegate people to represent our interests in government by voting for them. In this way, a delegative democracy is representative.

The degree to which US government is participative has changed from more participative to less participative and back again many times in US history.

Morone (1998) traces the history of participative democracy as a series of

political movements occurring in various times in US history where decision-making and policy development were pushed down to the people instead of the government. When describing the history of the successive movements, Morone discusses the lessons learned and changes made. According to Morone, the people have not yet maintained a true participative government because corruption and competing interests continually absorb the movement.

The movements Morone described began in similar ways—the current government would reach an impasse and struggle to create policy and progress. Upon realizing the ineffectiveness of government, communities of like-minded citizens would bind together under a common cause and advocate for government or social change. For example, in the Jackson presidency, Jackson himself imposed term limits in the Congress and resisted replacing federal employees with party loyalists and friends, which was a common practice at the time. The term limits, in particular, were a progressive idea that is still in place in modern US government. According to Morone, the rotation of delegates resembles the progressive idea of seeking expert input to achieve effective public policy.

Callon, Lascoumes, & Barthe (2009), pioneers in Actor Network Theory, offer a modern political idea of participative democracy in the *technical democracy* where experts — scientists and specialists — are called upon to create public policy in partnership with generalists — the average affected American. The result is a dialogical democracy, which may replace the delegative democracy.

In a dialogical democracy, decisions are not made on a yes/no basis. Instead, a decision is an open (and presumably recursive) system. Callon, Lascoumes, & Barthe demonstrate how non-dialogical decision making systems are flawed because they favor finality. In finality, the decision is politically closed after it is made. Finality seems to stem from a dated use of reductionist logic in the natural sciences (and, by extension, in politics). With reductionism, problems are isolated and placed in the controlled environment of the laboratory. Research is done and conclusions are drawn in the black box of the laboratory. In my opinion, this reliance on finality is out-dated, especially in our ever-changing global world.

Callon, Lascoumes, & Barthe define the *hybrid forum* as a place where generalists may become involved in the scientific and political dialog to prevent the black box effect of finality. Callon, Lascoumes, & Barthe recognize that generalists can contribute valuable insight to the production of scientific knowledge, and they are not only included for diplomatic reasons. Callon, Lascoumes, & Barthe consider generalists as “full-fledged researchers in their own right” (p. 81), and generalists do their research “in the wild,” that is, out of the laboratory. Callon, Lascoumes, & Barthe’s model prefers the concept of *research* to the concept of *science*. So, research is inclusive of discoveries made in the wild (in everyday life). Callon, Lascoumes, & Barthe hypothesize hybrid forums make a powerful contribution to enrichment of democratic institutions

In the hybrid forum, generalists contribute to knowledge production at three points: *transformation 1*, *transformation 2*, and *transformation 3*.

- *Transformation 1*: Generalists detect problems. They contribute unique knowledge to problem definition because the focused nature of scientific inquiry is such that researchers often end up “with eyes only for the problems which are born in their laboratories” (Callon, Lascoumes, & Barthe, 2009, p. 95). Problem identification is particularly suited to generalists because the world of problems is not the monopoly of experts, scientists, and/or specialists. Problems are a social construction. I would posit that we surely would not know of complex problems if not for written communication, by which we know what to expect of the world and can access its history (Burke, 1967). It is against this history that we compare our experience and possibly detect anomalies. “Faced with [anomalies], with the unexpected singularity, there is naturally a search for explanations” (Callon, Lascoumes, & Barthe, 2009, p. 77). In the past, generalists tended to blame anomalies on sorcery or witchcraft. But, one of the first things modern generalists do in modern society is categorize and taxonomize problems. It’s a basic human tendency (Miller, 1984). From my experience, I would that humans categorize to attempt some modicum of control over a situation.
- *Transformation 2*: The laboratory or the research collective is the second point of entry. Generalists ask ethical questions. They monitor the scientific work from a human perspective to ensure fair treatment and

constant concern for the human element of the research. Their role is keeping science honest—they are ethics hawks.

- *Transformation 3*: When research information is brought back into the real world, generalists help translate. They stand between science and the public to help the public and politicians understand the research. “The space between ... researchers and politicians is, as everyone knows, populated by a multitude of experts and spokespersons” (p. 229).

After these three transformation stages take place, the business of public policy development may commence, with the guidance of the two groups of experts—specialists and generalists. In this way, citizens, experts, and policymakers have travelled a long road together, often from the very beginning of the problem, and have each engaged in mutual learning over the long term, thus offering a model for how to act progressively under conditions of conflict and uncertainty.

Despite the efficiencies described in Callon, Lascoumes, & Barthe’s model of technical democracy, frustration can develop in public policy development. Morone (1998) describes the frustration as inevitable because the structure of our government does not give it enough power to get any job completed in a completely satisfactory manner.

There are many skeptics of the public’s ability to understand the complex issues concerning public policy development. Historically, American writer, reporter, and social critic, Walter Lippman, is often discussed when questions of the

public's ability to process complex policy issues are raised. Lippman believed the average person was far too influenced by prejudices to process information and conduct analyses about policy. From Lippman's perspective, most people had their minds made up about a policy before they tried to absorb analysis about it. Because of this, Lippman theorized experts should lead the government, instead of average citizens (Glynn, Herbst, O'Keefe, Shapiro, & Lindeman, 2004). With the growing complexities of modern life, it might be easy to consider the wisdom of this view. As well, a more modern theorist reflecting a similar view can be found in Parry-Giles' (2010) discussion of the public's strategy for selecting presidential candidates. He suggests the public use a candidate's *character* rather than a candidate's position of matters of public policy to decide who wins their vote. Parry Giles argues this suggestion in a discussion about complex issues and suggests issues are simply too multi-faceted for the average American to parse.

By contrast, John Locke, an English philosopher who had a great interest in the relationship between the people and the state thought otherwise. Locke was far more optimistic about human nature and intelligence. He thought genuine and regular participation in politics by citizens was a right that should be protected by the state. He believed fiercely in the articulation of public opinion for the critique of politics (Glynn et al, 2004).

Although it is difficult to imagine an individual with scientific/expert/specialist knowledge on every subject, it is fathomable for the average citizen to participate in the development of specific public policies as a concerned and informed citizen

generalist. Locke's idea of the people is more compatible with participatory government.

The idea of a community is an important part of understanding the rhetoric of public policy because it defines boundaries of interested parties (Ornitowski & Bekins, 2004; McMillan & Chavis, 1986). In the US, all citizens are allowed by law to attempt to influence public policy. However, US citizens are not equally interested in spending the limited resources of their time and intellectual energy on every policy. Many people choose to attempt to influence only policies in which they have a particular interest. Many people choose not to attempt to influence policies directly, but vote for representative government, which they expect to act directly in their interest the majority of the time (Renn et. al., 1993). And, many people do not even vote (The Pew Research Center, 2010).

The definition of community is a unified body of individuals: a group of people with a common characteristic or interest living together within a larger society (a community of students, retired persons, etc.); a group linked by a common policy; a body of persons or nations having a common history or common social, economic, and political interests; or a body of persons of common, and especially professional, interests scattered through a larger society (the academic community, the community of certified project management consultants) (Stacey, 1969).

The word *community* often invokes romantic notions of people living and working together in harmony and unity. Ornatowski & Bekins caution about the use of this use of the word community as a “‘god-term’ in the sense coined by Kenneth Burke: reified, ubiquitous, always positive, and ultimately unexamined,” (p. 253). In light of their caution, my intention is not to use sacred language (Marietta, 2010) in a discussion of community, but to use community to understand how language and rhetoric is bound to groups and makes meaning within groups.

Another way we might understand rhetoric and communities is through identity. We can theorize the social glue of identity might bind together a community with common policies, interests, and history. As members act together to express common interests, they express the consubstantiality of “common sensations, concepts, images, ideas, [and] attitudes” (Burke, 1969, p. 21). As well, the expression of consubstantiality is found in the symbols they share, and thus, the language or rhetoric they share—a community expresses its consubstantiality in rhetoric. This is not to say that all community members share complete language sets. For example, a retired person may also be taking foreign language classes at the local university. This retired person is also a student, but they do not share an entire language set with both retired persons and students. Rather, the solution set of the retired person/student’s consubstantial community shares is the solution set of its intersecting identities.

Shared language is richer in meaning than a solution set of equal words. Shared language reflects community because language exists in the contexts of communities. Examples of language in the context of community are evident in the way language is taught and learned by people.

For example, when I learned French in high school, we memorized the meanings of nouns, the conjugation of verbs, and the pronunciation of passages. But, learning French was not just the rote repetition of the language nor was it the connecting together of words to make meaning. It was much more than that.

When I learned French, I learned about the French community because the way language is constructed tells about the French as a people. While learning French, students were exposed to French movies, French foods, and other aspects of French culture. Observing and experiencing French language in the context of its culture was essential for learning the language (Chavez, 2002).

I may not remember much French from high school, but I do remember raising children—teaching them to talk, read, and use language as part of a community.

Lise Eliot, in her 2005 book, *What's Going On in There? How the Brain and Mind Develop in the First Five Years of Life*, discusses the learning of language in communities at length. One idea she interrogates is whether children can learn language from television programs or educational DVDs like the *Baby Einstein* series. Her conclusions discuss the inability of babies and children to learn language from TV because of the absence of community and the specific way it acts upon language and makes it understandable by giving it context. Community

makes language relevant. And, in relevance, it answers the question, “what’s in it for me” which makes learning work (McArdle, 2007).

Also by definition, a community does not need to consist of only people—a community could also show ownership or participation of inanimate objects, as in a community of goods or a community of texts. As well, a community of texts composed of language expresses its consubstantiality in the solution set of its shared language.

As such, equally important in the general study of the language of texts and the rhetorical nature of texts is the ability to use texts to understand a community (Ornatowski & Bekins, 2004) and the language of that community because “the intersections between the ways people talk and the kinds of communities people create” (Bruner, 2005) is worthy of contemplation.

Though public policy rhetoric is persuasive and useful, Asen notes its limits.

Rhetoric is a powerful tool, but it cannot be used to manufacture reality:

Rhetoric acts as a powerful but not an unconstrained force in policymaking. Individual participants in policy debates make choices in framing policies, affirming and denying values, representing target populations, inviting or discouraging wider agency, and other areas, but the participation of other advocates, the judgment of audiences, the social force of discourse, and multiple material considerations constrain these choices (Asen, 2010, p. 130).

Public policy rhetoric is recursive and temporal. The “... critical process [of rhetoric] is never completed because there is no undistorted version of historical

events and their meaning, and what is revealed by a critic's discourse is yet another articulation that will (or arguably should) subsequently be subjected to another's critique" (Bruner, 2005, p. 317). Recursive rhetoric leads to a discussion of the temporal nature of public policy rhetoric and the way different aspects of the policy are researched and documents produced at different rates. Indeed, public policy debates can proceed for months and even years. Public policy debates proceed in a recursive manner with documents becoming input for other documents and debates.

Public policy debates for the CNR proceed in a temporal manner with one additional feature—the CNR is public policy that is subject to reauthorization every five years. So, even if policy is produced this year for the CNR, it will be researched, debated, and considered again in another five years. The temporal nature of the CNR caused me to choose to research how texts change over time. According to Rude (2004), "... rhetorical theory is robust enough to accommodate a long-term process of change and not just a single instance (p. 273). As well, Rude also says,

... the rhetorical situation must be understood as long-term, comprehensive, and complex. Understood in this manner, the work of rhetoric is not complete when a speech is delivered or the document is published. Rather, delivery may mean the beginning of a new work and even the motive to produce it (p. 273).

When the rhetoric from one CNR act becomes law, the compromises and discarded ideas from the past CNR act do not cease to exist. Advocates take up

the remnants of the compromises and use them as input into research for the next CNR.

Rude is not the only scholar suggesting temporal research on documents may be meaningful. Asen (2010) suggests we may consider texts contributing to public policy debates as more of a process. Also, Asen suggests different meanings, particularly of *kairos* may be detected when comparing temporally related texts instead of singular speech texts or other relatively discreet texts.

Public policy rhetoric functions as a tool in technical communication in networked communities, as in loose organizations of scientists and citizens rallied around a public policy cause. According to Callon, Lascoumes, & Barthe (2009), a loose network of specialists and generalists in a “technical democracy” use rhetoric in the dialect of the specialist and the generalist to promote social change using public policy rhetoric as a tool. Callon, Lascoumes, & Barthe cite the high-profile story of water contamination in Woburn, MA. The community became concerned because of high incidence of cancers and childhood leukemia. Scientists and the community worked together to convict the companies responsible for contaminating the water (although the results of the lawsuits were ultimately unsatisfying to the community). Callon, Lascoumes, & Barthe use the Woburn example to demonstrate how communities become involved as actors in the problem-solving network. In Canary’s (2010) work, actors create knowledge in public policy networks through contradictions. The same idea can be seen the Woburn, MA example where contradiction occurs when citizens

participate in problem definition—a problem exists in the contradiction where reality differs from expectation. In this loose organization of scientists and citizens rallied around an issue, specialists and generalists use rhetoric as a tool to promote social change in environmental policy by increasing regulation of commercial pollutants and holding polluters accountable for their actions.

Although actor-networks (Callon, Lascoumes, & Barthe, 2009) and situated activity theory (Canary, 2010) can help us understand where rhetoric functions as a tool to do work, these frameworks are depicted as state diagrams, and they do not allow us to diagram change, or temporal events. Diagramming change is outside of the scope of my research: rather, my research examines and describes the evidence of change discovered through a content analysis of rhetoric.

Another case of public policy rhetoric at work is a 2005 study by Graham and Lindeman. In the study, the researchers use narrative theory (Forbes, 1999) to “demonstrate how different rhetorical strategies may reflect different societal values” (p. 422). Graham and Lindeman examine two biological opinion (BO) documents to “demonstrate the dynamic relationships between text, context, audience, and author” (p. 423). The BO documents are technical texts used to inform public policy decisions regarding land use around the Missouri River. Using narrative theory, Graham & Lindeman explain the cultural meaning in the comparison documents. They trace the rhetorical context of the comparison documents and examine the central rhetorical features. Narrative theory allows the researchers to understand the texts as stories, and thus, compare their

contextual features. Narrative theory is thought to be especially effective in environmental communication (Smith, 2003) where a sense of place adds clarity and salience.

Graham and Lindeman study the power inherent in authorship through information control. Authorship has been noted as a tool of control and power in technical communication text development (Slack, Miller, & Doak, 1993; Johnson-Eilola, 1996), but Federal public policy development can be a process reflecting the authorship efforts of hundreds, if not thousands of authors (Asen, 2010).

Graham and Lindeman suggest the social constructionist term *discourse community* cannot account for the audiences for the technical texts in their study (p. 427), and I found this to be true in my research as well. Authors may be too numerous to count, but a rhetorical community (Ornatowski & Bekins, 2004) provides a more reasonable boundary for a public policy text audience.

Though I used content analysis instead of narrative theory in my research of the CNR, Graham & Lindeman's work influenced my ideas with their description of the importance of context and their expanded definition of the audience as more than a discourse community, but a rhetorical community.

The power of rhetoric in public policy has been recognized beyond its ability to create public policy. It has also been studied through content analysis to

understand its power in the implementation of public policy. In 2007, Metos & Nanney studied the language of Utah school wellness policies. Metos & Nanney used content analysis to reveal a difference in implementation of school wellness policies between those policies using the word *recommend* in their wellness policy and those policies using the word *mandate*.

Notably, schools that serve the highest number of low-income students (as identified by free and reduced meals participation) were most likely to mandate wellness policy items. This suggests that Utah school districts serving students who may be most vulnerable to obesity and its related health complications have the strongest wellness policies (Metos & Nanney, p. 371).

According to Asen (2010) meta-analyses studying public policy rhetoric as a mediation tool among subject, object, and community are less common than studies in the context of cases. In the study of public policy, there is a reluctance to incorporate metaperspectives into analyses because they may depict the process as a series of techniques, which reflects only the *techne* involved in the use of rhetoric as a tool and not the artistic skill needed to construct meaningful and persuasive arguments out of words. Asen claims, “Plainly put, published rhetorical analyses do not include ‘methods’ sections, and critics often resist the notion that one’s work can be adequately addressed in such an explicit and directive manner,” and “critical method is too personally expressive to be systematized” (p. 3). Asen does not wish to abandon the case study, but suggests it could be augmented somehow to add to the scholarship in the field.

In addition, Asen (2010) is critical of the rhetorical analysis technique of comparing discrete texts, or single texts. He recommends the study of temporal texts, which was also recommended by Rude (2004).

While I do see rhetoric as an art, art has techniques as well as inspiration. An artist is inspired by talent, but can do nothing without the skill to wield a brush or press the keys of a piano. It's possible that my case study using the rigor of method (content analysis) to study temporal texts can be the augmentation Asen suggests.

Conclusion

The art and skill of rhetoric is seen in its ability to motivate and assist specialists and generalists to perform, locate, understand, and use information in technical reports. The art and skill of rhetoric is also seen in its use as a tool in public policy development. However, rhetoric is more than simply art, skill, or tool. It is a process by which we understand and work in communities.

III. Method

In this chapter, I review content analysis as the research method I used to examine the language of the CNR documents. For the analysis, I collected texts contributing to the CNR of 2004 and the CNR of 2010, which were similar in content and of the same genre. The texts are recognizably technical reports because of their use of technical jargon, the way they are organized, and their use of visual rhetoric such as tables and graphs. In the content analysis, the unit of analysis, or *data item*, is the word (or word concept). This chapter documents how I chose and analyzed the texts.

Qualitative research is a way to understand the social processes and meaning individuals or groups ascribe to an action or problem. Qualitative research uses an inductive process to comment upon and theorize about data to discover and understand its meaning (Creswell, 2009; MacNealy, 1999). “These are questions for which natural science does not have answers, and for which research methods employed by them are generally not sensitive enough to discern” (Krippendorff, 2004, p. 78). I analyzed technical reports contributing to the 2004 CNR and 2010 CNR on a document-wide level and a word-by-word level using content analysis.

I chose content analysis as a way of extracting meaningful data from the technical reports contributing to the 2004 CNR and the 2010 CNR. Content analysis uses an empirical method to examine texts in order to discern what they enable and prevent, and what work is performed by the information they convey. It involves

tallying the number of specific communication phenomena in a given text and then categorizing the tallies into a taxonomy from which inferences can be made (Thayer, Evans, McBride, Queen, & Spyridakis, 2007).

For example, Stemler and Bebell (1998) conducted a content analysis of school mission statements to make some inferences about what schools hold as their primary reasons for existence. One of the major research questions was whether the criteria being used to measure program effectiveness (e.g., academic test scores) were aligned with the overall program objectives or reason for existence (Stemler, 2001, p. 1).

Data Collection

The research design specified an examination of comparable technical texts. A major challenge in my research was finding comparable reports influencing the CNR public policy development. In comparing texts, it is important to choose similar texts, so a meaningful analysis can be drawn. The rhetorical action and cultural constructive ideas of *genre* provided a reliable structure and criteria for choosing comparable texts. If texts are of the same genre, it was reasonable to believe their sameness would allow me to discover their differences; texts from the same genre existentially hold some variables constant, which highlights the variations. Stable, classifiable, rhetorically sound genre emphasizes social and historical aspects of rhetoric that other perspectives do not (Miller, 1984), so choosing texts of the same genre makes more sense than choosing texts that are the same only in subject matter.

The rhetorical action aspect of genre supports comparability in the connection between genre and recurrent situation where “genre represents typified rhetorical action” (p. 151); it “reflects the rhetorical experience of the people who create and

interpret the discourse” (p. 152). Holding rhetorical action constant via genre allowed me to understand differences in texts not related to their purpose or the institutions responsible for their creation. So, choosing texts from the same genre helped me analyze the social action of public policy development because genre “seeks to explicate the knowledge that practice creates” (p. 155). A powerful attribute of genre is its recognition that rhetorical situations recur, and what recurs is a material configuration of objects, events, and people. It is a social construction that is the result of meaning because human action is based on meaning, not material causes or environments. It is created, shared through communication, and expressed through language.

The cultural construction aspect of genre supports comparability because of the way genres as social artifacts are “cultural constructions that reflexively help construct their culture” (Miller, 1994, p. 72). So, genre helps in understanding a rhetorical community with structuration; genre is both resource and product. It describes a culture that is recursive where results feed back into the equation.

Also relevant to choosing documents is the decision to choose documents that are more technical in order to focus on scientific policy decisions. Even when the subject of public policy is social, rather than scientific, the discourse about it most closely resembles technical communication because *technical communication* is *communication* that accommodates technology to the user (Dobrin, 2004). U.S. public policy discourse is made of communication—spoken, written, heard, or seen in symbolic form (graphics). And, it is consumed in order to perform a task

– to make laws that govern U.S. citizens. Laws and government are technology according to sociologist Read Bain (1937) who said,

Technology includes all tools, machines, utensils, weapons, instruments, housing, clothing, communicating and transporting devices, and the skills by which we produce and use them. Social institutions and their so-called non-material concomitants such as values, morals, manners, wishes, hopes, fears and attitudes are directly and indirectly dependent upon technology and are mediated by it. (p. 860).

So, public policy discourse is technical communication.

Audiences vary widely in culture, sophistication of language, learning style, prejudice, amount of prior knowledge, and attitude (McArdle, 2007). Choosing to compare temporal (Asen, 2010; Rude, 2004) technical reports in the same genre provided an opportunity to focus the research on rhetoric.

Choosing appropriate documents for analysis

I chose the following reports for my research:

Direct Certification in the National School Lunch Program: State Implementation Progress School Year 2009–2010: Report to Congress
<http://www.fns.usda.gov/oane/MENU/Published/CNP/FILES/DirectCert2010.pdf>

Case Study of National School Lunch Program Verification Outcomes in Large Metropolitan School Districts (2004)
<http://www.fns.usda.gov/oane/MENU/Published/CNP/FILES/NSLPCaseStudy.pdf>

For the study, I considered comparable technical reports from many organizations. The main governmental agency producing reports informing the CNR legislation is the United States Department of Agriculture (USDA). Non-governmental agencies, which perform similar research functions as well as

supporting the USDA and lobbying on behalf of school nutrition, are the Food Research Action Center (FRAC) and the School Nutrition Association (SNA). The FRAC and the SNA produce research reports and advocacy materials to support the CNR.

I also considered including reports from the many new organizations, which were either established recently in part to support the CNR of 2010, or they decided to support the CNR of 2010 as it gained notoriety as a popular discussion point. Examples of those organizations are Food Safety News, Jamie Oliver Food Revolution, and Healthy Schools Campaign. In those organizations, an interesting element is their recent interest in this issue and their use of new media such as blogs, Twitter™, Facebook™, and YouTube. However, because they are new organizations, documents are not available for comparison from 2004 to 2010.

I ultimately chose the USDA as the report authoring organization for my research. The USDA follows an extensive quality of information policy including an extensive peer review process, which you can read about in a lengthy detailed section on their website, and a defined publishing schedule for online reports. In addition, the USDA has its own version of the Open Gov plan, in order to “integrate openness, transparency, participation and collaboration into the Department's every day operations” (USDA, 2010). Because of Open Gov, I can be sure all the reports pertaining to the CNR are available on its website.

I accessed and downloaded an electronic copy of two different reports pertaining to the CNR from the *Research* section of the Food and Nutrition page of the USDA website. To select comparable reports, I chose reports in the same genre—that of technical report. To select temporally comparable reports, I chose reports about the same topic from different years, which represent different reauthorization periods for the reports. I chose reports from 2004 and 2010 because they pertained to the impending legislation.

To find reports pertaining to the CNR, I accessed the Food Assistance section of the page, and clicked on the *School Meals* link. I chose the menu item *Research and Reports*. The USDA featured 34 reports on various topics (dietary guidance, verification, and eligibility) for various programs (CNR, Women, Infants, and Children etc.) from 2005 to the present in the *Child Nutrition Studies* section of its website. Forty-seven older reports are available in a Report Archive page (reports date as far back as 1990). From these reports, I chose two reports, one from 2004 and one from 2010, which studied access to school lunch programs in the US.

Table 1 shows the document-wide data I collected about each document.

Table 1

	Type of information
Length	Length of the document in pages
Organization	The main sections in the document, such as table of contents, number of tables and figures, appendices, resources section, and so on
Type of report	Will likely be technical report, but I will comment on major differences if there are

Voice	any. The tone or style of the document. Possible voices are authoritative, persuasive, narrative, conversational, academic, humorous, and so on.
Social activity supported	The social activity the document supports. Possible social activities are decision-making, garnering support for a position, informing, entertaining, and so on.

I collected content analysis data from the documents according to the following rules:

- I considered every word, but I did not code every word. I discarded conjunctions, filler words such as “however,” weak verbs, and other words I determined did not add meaning.
- I coded all pronouns with their actual name. For example, if the word “they” was used, I coded the word with the actual name—children, social workers, teachers, etc.
- I grouped similar words and counted them together, but I noted the differences (direct_certification_rate, directly_certify, direct_certification_system, directly certifying, and so on.).
- If the meaning of the words was a metaphor, I noted the entire metaphor fragment in the *Metaphor* category.
- I marked possible *Jargon* words for follow-up after the analysis was complete.
- I counted words only once. If the words made up a metaphor, I did not include them in the general word count.
- After counting the words, I rechecked the data was for errors by recount. I recounted five percent of the data. For example, if there were 300 unique

words in a document, I randomly chose and recounted 15 word/concepts (data items) to ensure I had the tally correct.

- When documenting words with multiple meanings, I noted the meaning in parentheses after the word.
- I commented on the items in the appendices, especially the visual communication elements, but I did not include them in the word-by-word content analysis.
- I did not analyze the acknowledgements page or EEO statement because these items are not important to the research.
- I coded the *Executive Summary* section in a dataset separate from the body of the report.

Data Analysis

To analyze data from the content analysis, I followed Glaser's (1965) constant comparative method using open and axial coding. Similarly to Thompson's (2007) reading of syllabi, I first read the documents in their entirety to understand a general sense of the data. I noted the length, authoring organization, genre, voice, and social activity supported for each document.

After the initial read, I noticed differences between the Executive Summary sections of the reports and the main bodies of the reports. I decided to analyze these parts of the documents separately because I knew from reading the USDA audience analysis (2010) that executive summaries are meant for a particular audience. Audience is a concern of technical communicators, and I believed this separation would provide a better understanding of the data.

After separating the documents, I reread them word-by-word for open coding. I counted data items using hash marks in an MS Word document. After counting, I imported the data into an Excel spreadsheet for sorting and analysis. During axial coding, I added columns to the spreadsheet for codes. Then, I compared, revised, and reorganized the data into larger themes. Through this process, I was able to categorize the data into two main groups and seven subcategories.

The two main categories that emerged were report structure and content. The report structure category contains words that refer to the report itself such as “this report,” or “section” or “table.” I further sub-categorized the content category into words pertaining to guardian of the student, the school, the government, the National School Lunch Program, the research study, the beneficiary, the benefit, and the household’s income. Some examples of the words from the research study category are “interviews,” “selected,” and “assessed.” Some examples of words from the government category are “State,” “nationwide,” and “Federal.” I reached theoretical saturation when no more categories emerged.

Validity

Upon completion of the content analysis, I randomly selected and recounted five percent of the unique data items to ensure accurate counting. I recounted the words using find/replace in Word and verified the count with my dataset. In the executive summary 2004 dataset, I recounted 10 data items. In the executive summary 2010 dataset, I recounted 10 data items. In the report body 2004

dataset, I recounted 15 data items. In the report body 2010 dataset, I recounted 10 data items.

Ethical Considerations

I made every effort to ensure the data collected is from reliable sources. Non-professional or casual documents were out of the scope of this analysis.

IV Findings

As described in the Methods chapter, I compared and analyzed the technical reports contributing to public policy development for the CNR at two different levels. First, I compared and analyzed the reports at a document-wide level, and then I compared and analyzed the reports at a word-by-word level using content analysis. In the document-wide comparison and analysis, I noted information pertaining to the report in general; I noted the length (in number of pages), organization/structure (table of contents, references section, appendices, and so on), type of report, voice, and social activity supported for each document. In the word-by-word comparison and analysis, I counted and categorized words/concepts in the reports according to emergent themes.

The first section of this chapter details notable similarities and differences in the reports at a document-wide level. The document-wide comparison and analysis of the 2004 CNR document and the 2010 CNR document reveals the physical-level characteristics from Carliner's (2000) three-part framework:

- Physical level
 - Table of contents
 - Appendices
 - Resources section
 - Use of graphics and/or pictures
 - Use of color

The second section of this chapter details notable similarities and differences in the reports from a word-by word level using content analysis. I relied heavily on context when counting the words because I was interested in what words were most commonly used to describe emergent themes in the reports (guardian of the

student, the school, the government, the National School Lunch Program, the research study, the beneficiary, the benefit, and the household's income), whether metaphor was used in the reports (and for what purpose), and whether NSLP program-specific jargon was used in the reports (MacNealy, 1999). The word-by-word comparison and analysis of the 2004 CNR document and 2010 CNR document reveals the affective- and cognitive-level characteristics from Carliner's (2000) three-part framework:

- Affective level
 - Definition
 - Emotional language
 - Metaphor
- Cognitive level
 - Metaphor
 - Ideology
 - Cultural artifacts
 - Jargon

Document-wide findings and analysis

Tables 2 and 3 display information about the document itself. As one may expect, the documents are not exactly the same. They contain varying amounts of narrative and visual communication elements such as graphs and tables. However, the documents are of the same genre and support the same social activity, which makes them comparable.

Table 2

		2004	2010
Length		81 pages	58 pages
Organization	<i>Table of contents</i>	Yes	Yes
	<i>List of tables</i>	Yes	Yes
	<i>List of figures</i>	Yes	Yes

<i>Glossary of acronyms and abbreviations</i>	No	Yes
<i>Executive summary</i>	Yes	Yes
<i>Report body</i>	Yes	Yes
<i>Number of tables</i>	28 Black and white only	12 Color
<i>Number of figures</i>	3 Black and white only	16 Colored, sophisticated bar and pie graphs as well as maps and other understandable shapes
<i>References section</i>	Yes Short references section citing seven previous USDA reports	Yes Lengthy references section citing many previous USDA reports and numerous other scholarly papers and studies
<i>Number of appendices</i>	3	5

From Table 2, you can see that the first notable difference between the 2004 CNR document and the 2010 CNR document is length. The 2004 document is much longer than the 2010 document. Longer length can indicate greater complexity of a writing sample (Ferris, 1994). However, further analysis of reports available on the USDA website revealed technical reports varied considerably from 8 pages to 395 pages long. So, despite the large difference in length, the 2004 CNR report and the 2010 CNR report are within the range of technical report length.

The next notable difference in the document-wide findings in Table 2 is the inclusion of a glossary of acronyms and abbreviations in the 2010 CNR document. A glossary is a user-friendly inclusion, which may appeal to generalist audiences. Miles and Cottle (2011) found a similar demand for a glossary of terms in their research of the instructional documents for citizen jurists. They found “...the pattern instructions [alone] do not provide sufficient explanation of legal terms and concepts “ (p. 107). Further analysis of the USDA website revealed 50% ($n = 10$) of the reports dated after the implementation of Open Gov had a glossary of terms (some even had two glossaries — one of terms, and one of acronyms). However, only 17 % ($n = 6$) of the reports dated the year prior to the implementation of the Open Gov initiative had a glossary of terms.

The next notable difference in the document-wide findings in table 2 is the number of graphical elements, such as tables and figures, used in the reports. The 2004 CNR document used 28 tables and 3 figures. The 2010 CNR document used 12 tables and 16 figures. According to Lannon (2010), expert audiences prefer numerical tables and diagrams so they can draw their own conclusions. Figures, on the other hand, do some of the analysis work for the reader. Figures allow readers to easily draw conclusions from the data. As well, Amare and Manning (2007) say, “decorative presentation of the text is distinctly less intimidating than the raw base text. This is an important consideration: if not put at ease, readers may not even begin to read” (p. 59) According to Amare and Manning, figures are not just decorative add-ons. We might attempt to conclude that this profound difference in visual communication results from enhancements in charting

capabilities from 2004 to 2010 (the latest version of MS Word came out in 2009). However, color charting was available in 2004, and the authors chose not to use it in their charts. Figures 1 and 2 are examples of typical figures from the 2004 report. Figures 3 and 4 are examples of typical figures from the 2010 report.

Figure 1

One of three figures in the 2004 CNR document

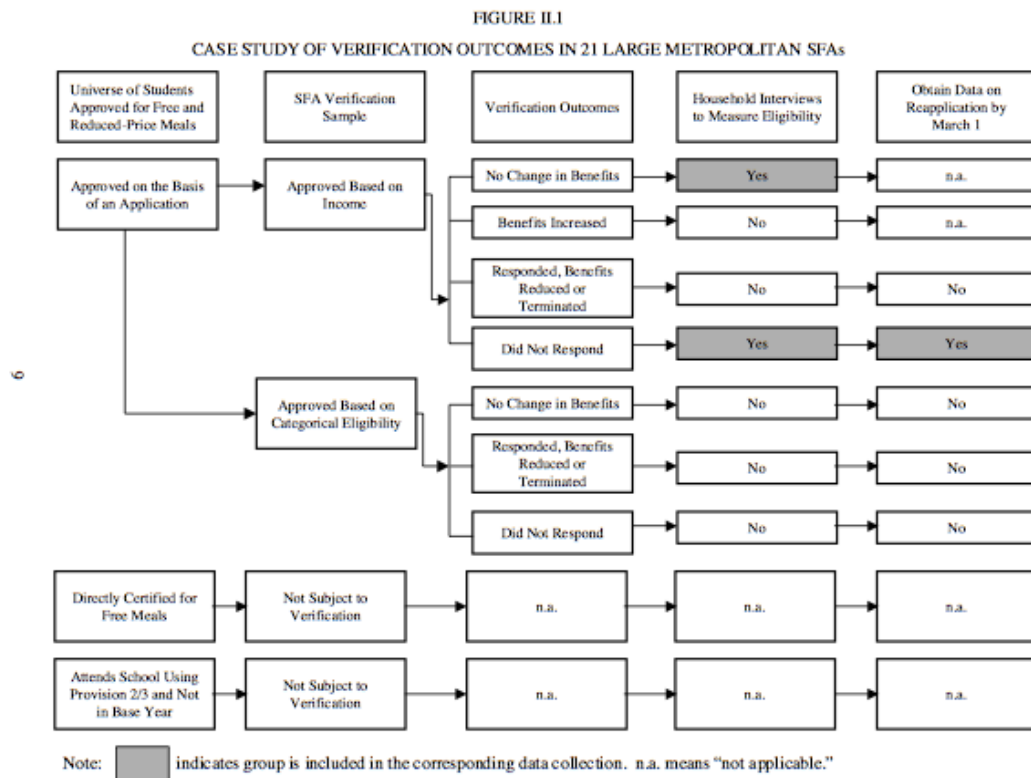


Figure 2

Another one of three figures in the 2004 CNR document

FIGURE C.1

ELIGIBILITY STATUS AT TWO POINTS IN TIME OF CASES WITH NO CHANGE DUE TO VERIFICATION
(Includes Cases Approved for Benefits in December 2002)

Actual Eligibility Status as of March 15, 2003	Actual Eligibility Status as of December 15, 2002		
	Yes	No	Total
Yes	Group 1	Group 2	Group 1+2
No	Group 3	Group 4	Group 3+4
Total	Group 1+3	Group 2+4	Group 1+2+3+4

- Group 1 was approved by the SFA in December and eligible according to the survey in both December and March.
- Group 2 was approved in December and not eligible at that time but had a change in circumstances that made the household eligible in March.
- Group 3 was approved in December and eligible in December but had a change in circumstances that made the households ineligible in March.

C.2

Figure 3

A typical figure in the 2010 CNR document (one of sixteen total figures)

Figure 3
Students in LEAs that Directly Certified SNAP Participants, by LEA Size
(Pies are Proportional in Size to the Number of Students Enrolled)
SY 2009–2010

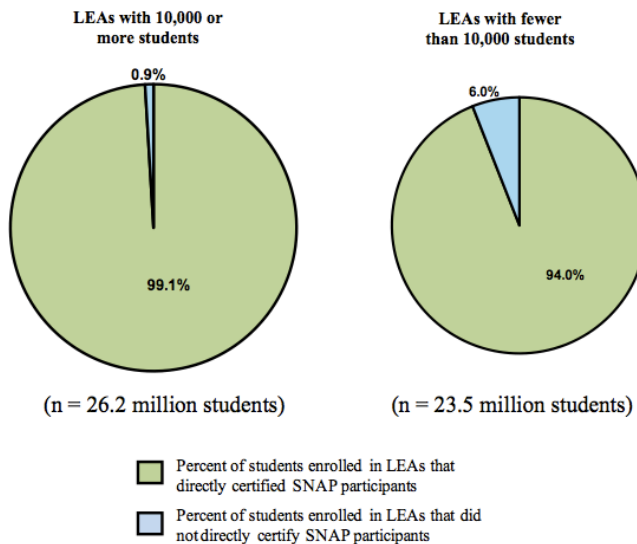
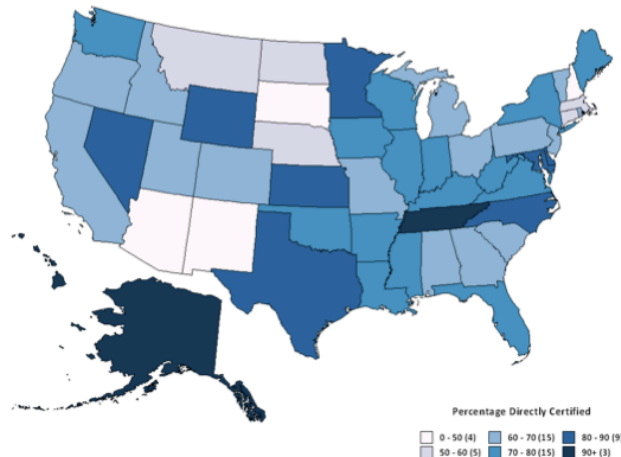


Figure 4

Another typical figure in the 2010 CNR document (one of sixteen total figures)

Figure A-2⁴⁵
Percent of SNAP-Participant Children Directly Certified for Free School Meals
SY 2009–2010



The figures in the 2010 CNR report are in color, and the figures in the 2004 CNR report are not. Color can make visual information more interesting and focus the reader's attention. It can help clarify a concept or dramatize results. It can also guide users through the material, making it more accessible (Lannon, 2010). The use of maps and pie charts in the 2010 document are also compellingly generalist-friendly. According to Kostelnick (1996),

The use of color; the integration of graphic elements like icons, gray scales, bars, and lines — all of these speak with a certain voice — serious, friendly, casual, overbearing, excited, humorous, self-effacing, and so on (p. 26).

So, color and graphics give a document a specific voice. Kostelnick also mentions that professional, color graphics can enhance the credibility of a document, while still maintaining a friendly voice. As well, similar colors can visually group items together using gestalt principles. This is evident in the 2010 CNR document

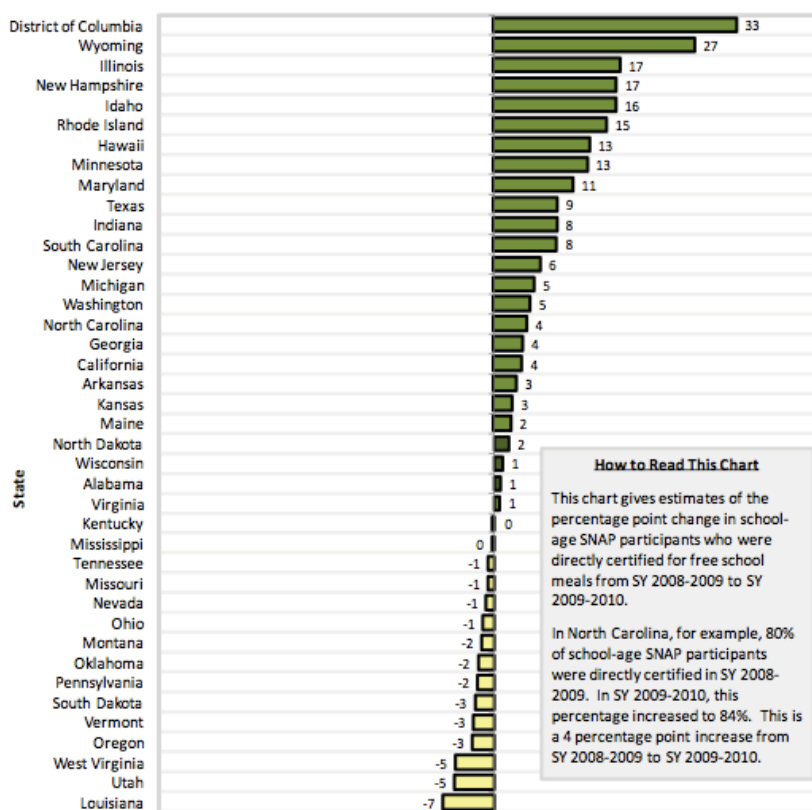
where all the maps in the 2010 document are of similar shades of blue, which suggest a coherence and visual parallelism giving the reader the clue that they belong together and carry one message.

Another typical inclusion in the 2010 report is a helpful “How to Read This Chart” instruction box in the middle of some of the more complex graphics (see Figure 5). Instructions of this type make the document seem user-friendly and easy to understand. The 2004 report has no such graphics.

Figure 5

How to read this chart

Figure 7
Percentage Point Change in the Share of SNAP-Participant Children Directly Certified for Free School Meals SY 2008–2009 to SY 2009–2010³¹



Both the 2004 and the 2010 reports have coherent supra-textual conventions such as standard margins, typefaces, and structures, but the addition of color graphics with instructional text (such as “How to Read This Chart”) in the 2010 document adds a powerful usability element missing from the 2004 document.

The next document-wide difference shown in Table 2 is the references section. The 2010 CNR report cites many reports from prior studies by the USDA and other organizations. The 2004 CNR report cites very few. The references section proves to the reader the credibility of the document. It represents the dynamic and recursive process of public policy development, and it invokes the powerful rhetoric of information reuse (Swarts, 2009).

The dynamic and recursive process of public policy development is evident in a rich and varied resources sections because public policy development reflects the authorship of hundreds, perhaps thousands of writers, communicators, and thinkers contributing and adjusting ideas over time (Asen, 2010; Rude 2004). The large references section of the 2010 CNR document adds the feeling of the continuous recursive ideas, which come from a wide variety of sources, not just the USDA. The document reflects the ideas of previous debates, and it will likely be input into another debate in the future (Asen, 2010; Bruner, 2006). The 2004 document, by contrast, lists only seven sources, all of which are USDA documents. A reader who is not familiar with the USDA, a generalist, can use the large resources section as reassurance that the report is built on a history of

recursive public policy development. As well, the generalist and specialist can use the resources to help them in their own independent research.

A writer gains credibility in information reuse by citing reliable resources for the material. Swarts (2009) offers an example of the ways an editor might cite a reliable resource for recommended edits,

... by connecting his own words and advice to a rule from the company style guide, the editor was enlisting the support of those who wrote the style guide, those who approve style guides and their rules, and those who use the style guide in other documents (p. 27).

Swarts calls this type of reuse “rhetorical reuse,” and it plays an important role in how information is trusted because “Reuse is about more than managing content; it is also about managing relationships “ (p. 33). Readers trust well-researched and well-cited material, especially if they are generalists, who are unfamiliar with the field of study or organization.

The next notable difference in document-wide analysis shown in Table 2 was the number of appendices. The 2004 CNR document has 3 appendices, and the 2010 CNR document has 5 appendices. As a technical communicator myself, I often appeal to a generalist reader by locating any very technical or esoteric information in an appendix. I reference the information in the body of my report, but I put actual statistics and figures in an appendix, so a more specialist reader can find them. That way, both types of readers have access to all the information, but they can choose whether to consume the technical details. The 2010 CNR document has done the same thing by locating additional tables, statistics, and

information about the report itself (data limitations, corrections, and other information) in an appendix. The 2004 CNR document, by contrast, located most of its technical information in the report itself.

Table 3

Additional document-wide findings

	2004	2010
Report type	Technical report	Technical report
Voice	Authoritative	Authoritative Persuasive
Social activity supported	Program improvement	Program improvement

The last notable difference in document-wide analysis is shown in Table 3. Both the 2004 CNR document and the 2010 CNR document were written in the authoritative voice of the technical report. However, with its generalist-friendly features, the 2010 CNR document convinces the reader of its understandability and usability. Features such as easily digested graphics persuade the reader that the information is easy to understand while features such as a detailed references section persuade the reader that the document and its research are credible. I will discuss features of the persuasive voice additionally in the word-by-word section next, where the 2010 CNR report uses rhetorical devices such as metaphor and emotional language to engage the generalist reader.

Word-by-word findings and analysis

This section details word-by-word findings, which were the result of the content analysis. Tables 4 and 5 display the five most frequently used words in the categories of guardian of the student, school lunch, and beneficiary. In my

research, I found that the executive summary differed enough from the body of the report to warrant a separate analysis. So, table 4 contains information about the executive summary section of each report. Table 5 displays information about the body of each report.

Table 4

Word-by-word findings: Executive summary

Category	2004	2010
Guardian of student	<ul style="list-style-type: none"> • nonresponding household • household • verified household • household circumstances • household size 	<ul style="list-style-type: none"> • household
School lunch	<ul style="list-style-type: none"> • NSLP • benefit • lunch 	<ul style="list-style-type: none"> • meal • NSLP • served • benefit
Beneficiary	<ul style="list-style-type: none"> • students receiving benefits who are not entitled to them • students 	<ul style="list-style-type: none"> • children • school-aged SNAP participants • students

Table 5

Word-by-word findings: Report body

Category	2004	2010
Report structure (words and phrases referring to the report itself)	<p>This report refers to itself much more often than the 2010 report with several lengthy discussions about methodology</p> <ul style="list-style-type: none"> • percentage • this case study • case • data • information 	<ul style="list-style-type: none"> • percentage • data • this report • estimated • number

Guardian of student	<ul style="list-style-type: none"> • household • nonresponding household • families • household circumstances • households within \$100 of eligibility 	<ul style="list-style-type: none"> • TANF & FDPIR households • SNAP households • household • household additional members • families
School lunch	<ul style="list-style-type: none"> • benefit • meal • NSLP • school lunch • lunch 	<ul style="list-style-type: none"> • meal • school meal • NSLP • served
Beneficiary	<ul style="list-style-type: none"> • student • child • foster child • population • name 	<ul style="list-style-type: none"> • school-aged SNAP participant • children • student • child • student name

The first notable difference in the 2004 and 2010 CNR documents shown in tables 4 and 5 are at the affective level of document design. These differences are in definition and the use of emotional language. The power of language engages and influences the reader in something as seemingly simple as definition and emotional language (Hahn, 2003; Burke, 1969), which profoundly affects how we understand discourse. Definition is elemental and fundamental. There is no more important thing you can do to a word in terms of the way it operates as a social construction. Definition is used in subtle but powerful ways in the CNR documents.

As you can see in Table 5, there is a difference between the body of the 2004 CNR report and the body of the 2010 CNR report in the words or phrases used to refer to the report itself. The 2004 CNR report “talks about itself” for lengthy stretches.

There is considerable effort made in the report to explain the research methodology and make multiple technical disclaimers regarding data interpretations, which I will refer to later in the findings about jargon. The 2004 CNR report includes a *Methods* section, which is common in a research report, and it lends a serious tone to the writing (Kostelnick, 1996). The serious tone is less noticeable in the 2010 CNR document.

The 2004 CNR report refers to the guardian of the child 249 times in 81 pages (3.07 times per page) using a variety of different words such as household, parent, and family (see Tables 4 and 5) whereas the 2010 CNR report refers to guardian of the child 87 times in 58 pages (1.50 times per page). This finding is consistent with the focus of each report. Although the reports are of the same genre, program, and program mechanism (verification of children eligible for free lunch), the 2004 CNR report focuses on determining whether children who are ineligible for the free lunch benefit are receiving it and, since the guardian of the student is the one who fills out the paperwork for the benefit, the focus on the guardian is not surprising. However, the 2010 CNR report focuses on automatically certifying children for the program benefits and bypassing the parent or guardian altogether. So, finding that the parent or guardian is not referenced as often in the 2010 CNR report is consistent with its focus.

As you can see in Tables 4 and 5, the 2004 document most often used the words “student” and “benefit” to describe the same things in the 2010 document defined as “child” and “meal.” Typical sentences in the 2004 CNR document are, “Among

certified students nationally, 14 percent were directly certified in school year 2001-2002,” (p. 26) and “Fourteen percent were eligible for a higher benefit than they had been reapproved for” (p. 16). A typical sentence in the 2010 document is, “Children from households with incomes at or below 130 percent of the Federal poverty level are eligible for free school meals,” (p. 11) and “In exchange for Federal assistance, schools must serve meals that meet USDA nutrition and food safety standards” (p. 11). The rhetorical connotations of these words are quite different. A student could mean anyone of any age, whereas a child is a different entity entirely. As well, a benefit could easily be 50 percent off shoes for the rest of your life or free car washes for a week, whereas a meal has a more robust meaning of an act or the time of eating a portion of food to satisfy appetite. This is not to say that the 2004 CNR report never used the words “child” or “meal.” However, the 2004 report made much more frequent use of the words “student” and “benefit,” while the 2010 CNR report made more frequent use of the words, “child” and “meal:.

I also noticed the 2010 report discusses direct certification for children in private schools at length. However, private schools are most often referred to as *non-public* schools instead of private schools. This is, perhaps, due to the way most people envision a private school — exclusive and costly. But, in the context of the NSLP, a private school could also be a charter school, or the student could attend the private school as a part of a voucher program. The use of the word “non-public” discourages the reader from making judgments about the use of government funds.

Another notable difference between the 2004 CNR and the 2010 CNR is the use of metaphor and jargon. In Table 6, you can see that the 2004 CNR did not use metaphor at all, while the 2010 CNR used metaphor twice.

Metaphor can be used at the affective level of document design to persuade, or it can be used at the cognitive level of document design to help the reader understand and use information. Table 6 shows the use of metaphor in the documents. Metaphor is not used in the 2004 executive summary or report body, but the body of the 2010 report uses two metaphors. The 2010 document used the phrases “paved the way” and “just a handful.” These metaphors may be considered “folksy.” This type of language is used often in political communication to appeal to the generalist. It is the language of identity (Hahn, 2003, Burke, 1969) and can put a reader at ease.

Table 6

Category	2004	2010
Metaphors used	<ul style="list-style-type: none"> • none 	<ul style="list-style-type: none"> • “just a handful” • “paved the way”

According to Hahn, “Metaphors provide arguments through the principle of terministic perfection. They reveal our individual thought patterns. Collectively, they reveal our societal thought patterns” (p. 125). And “paved the way” is a special class of metaphor called a “path metaphor.” The sentence using the metaphor describes the direct certification process in this way: “This action paved the way for more simplified application and certification procedures for these

children” (USDA, 2010, p. 3). The path metaphor describes a linear path or scale. Other examples of the path metaphor are in expressions such as, “John’s intelligence goes way beyond Bill’s” and “John is way ahead of Bill in intelligence” (Lakoff, 1992, p. 9). The metaphor maps the starting point of the path and a distance travelled. According to Lakoff, the brain conceives of path metaphors as motion or action. The metaphor makes sense because the 2010 document is a story of action being taken to further improve the direct certification process. Whereas the 2004 document is a different story — it is a story of whether the research can discover enough evidence to prove/disprove non-eligible children are getting free lunches. Using a path metaphor gives the brain the signal that the efforts described were both purposeful and successful (Burke, 1966; Hahn, 2003; Lakoff, 1992).

To explore the use of metaphor in more detail, I spoke with an engineer and a help desk representative—two technical communicators—about metaphor. Both said they use metaphor to convey technical information. Bramsfeldt, an engineering graduate student, said she has used metaphor for a technical audience, “I use metaphors for an expert audience and only for describing how material (such as metals Aluminum and Copper) is flowing during different conditions. For example: relating the flow of aluminum to the way water flows when someone jumps into a pool; ‘With these weld parameters the aluminum flows like water as something is dropped in’” (personal communication, 2010). And Chapdelaine described using metaphor as a help desk technician to communicate with non-technical audiences, “I’ve used metaphor to help those

very novice users understand how to use Windows. I might say, ‘it’s just like an actual folder on your desk’” (personal communication, 2010). The metaphors described by these two technical communicators are analogous metaphors, which work as containers. They describe something a reader already knows, and say the unknown thing is of the same class, or container. They help a reader apply their current knowledge to something new so they can understand the new concept and act on it (Gentner & Bowdle, 2002). The metaphor “just a handful” is used in this sentence in the 2010 report in this way:

Among the successful States interviewed for this year’s report, there is large variation in the number of matching criteria: one State used *just a handful* of student identifiers; another used 29 data elements (USDA, 2010).

The metaphor “just a handful” is an example of an analogous metaphor. We all know how much can fit in our hand, and we can apply that knowledge to understand how many data elements the report is referencing. An analogous metaphor gives us more information about an unknown thing, so it helps us understand communication and know what to do with it. In that way, an analogous metaphor achieves a cognitive result. As technical communicators seeking to use all the available means of persuasion, metaphor is a useful device. Indeed, Halloran and Bradford in their 1984 essay *Figures of speech in the rhetoric of science and technology* advocate for the careful use of varied forms of communication in technical discourse, saying particularly,

We hope in this essay to suggest that a judicious use of figures—both schemes and tropes—is warranted in scientific and technical writing. We want to undermine the pedagogical tradition that simply rejects the use of figures in writing about science and technology, and to open up a field of research toward a better

understanding of what would constitute 'judicious' use of figures (pg. 180).

So, judicious use of devices such as metaphors can be helpful in technical and scientific writing. As well, the type of metaphor we choose to use might depend on our audience and whether we want to achieve an affective result or a cognitive result (Carliner, 2000).

The next notable difference between the 2004 CNR document and the 2010 CNR document is the use of jargon (see Table 7). The 2010 CNR report made recurring use of the program jargon "unmatched students" in its discussion of students whose records failed the electronic matching system. However, the 2004 report was especially remarkable in its more frequent use of program and research jargon, such as "nonresponders," "data abstracter," "data abstraction," and "focused sample." "Focused sample" is a particularly interesting case because it is defined once very early in the report as a sample group of students specially chosen (instead of randomly chosen) for verification specifically because they exhibit traits that have been known to cause them to fail the verification process. For example, they may belong to households where the income is within one hundred dollars of the limit under which a household may earn and still be eligible for free or reduced-price lunch. The report devotes much time to the discussion of bias and cautions the reader about the use of the information in the report, yet the report continually obscures these cautions by referring innumerable times to the "focused sample."

Table 7

Category	2004	2010
Jargon used	<ul style="list-style-type: none"> • “nonresponders” for households that did not respond to the request for information • “data abstractors” for researchers who examined student records and typed information into a database • “data abstraction” for the process of examining records and typing information into the database • “focused sampling” a way of choosing students for certification when they are more likely to belong to a group receiving benefits who are not eligible for them • the report used many acronyms 	<ul style="list-style-type: none"> • “unmatched students” for students whose records were not matched during an electronic matching process. • the report used many acronyms

Also pertaining to jargon, both the 2004 CNR document and the 2010 CNR document made wide use of acronyms. In both documents, the acronyms were spelled out the first time as is recommended by most style guides. However, you may recall the 2010 CNR document had a glossary in which all the acronyms were defined.

Limited language findings

Table 8 shows the results of calculations I made to determine the extent to which the language of the executive summaries is limited. After collecting the data, I became curious about the limited vocabulary in both reports. Because of this

observation and my knowledge of Plain Language in government, I decided it might be interesting to find out how many unique words were used in each executive summary. I used the text of the executive summary like a dataset. I stripped out all punctuation using find/replace. I delimited with words with commas and imported the data into MS Excel, where each word was a record in the dataset. Then, I used filtering tools to eliminate duplicate records.

To add context to the limited vocabulary investigation, I created a similar dataset from a classic fiction novel (I arbitrarily chose *Moby Dick* by Herman Melville). The results of the analysis show the 2004 executive summary uses the most limited language. Authors adhering to the guidelines of Plain Language use limited vocabulary in technical reports. For example, Berry (1995) notes that the "goal of the plain-language movement is to produce language (particularly written English) which is clear, straightforward expression, using only as many words as are necessary, and which avoids obscurity, inflated vocabulary and convoluted sentence construction" (p. 48). Language variety and ornamental language is more often seen in persuasive speech writing (*Silva Rhetoricae*, n.d.) or, perhaps, fiction writing. Using limited language is a common recommendation in technical communication. It is common to repeat words in a technical text because the topics are generally narrow. As well, as students, we are often taught to use words with one meaning, and to write sentences in simple style. In public policy development, however, all available means of persuasion (Aristotle, 2007) must be employed. In Table 8, you can see that 25.40 % of the words used in the 2004 CNR document were used only once in the document.

That means, the rest of the words were used repeatedly, indicating the language used was more limited than the 2010 CNR document where 32.58 % of the words used were unique. For comparison, a work of fiction uses many more unique words (41.01 %) because fiction topics tend to be wide-ranging.

Table 8

Limited language results

Dataset	Number of unique words	Total number of words	Percent of unique words
2004 Executive Summary	430	1693	25.40
2010 Executive Summary	403	1237	32.58
Comparison Dataset	693	1690	41.01

V. Discussion

In this chapter, I conclude the discussion of generalist and specialist communication with comments on ideology and rhetorical ecology, discuss the recursive nature of public policy rhetoric, as well as comment on authorship and the implications of Open Gov. I conclude with topics for further research and an update of the CNR of 2010.

Generalist and specialist communication

In comparison, the 2010 CNR document is more appealing to generalist readers because of its use of generalist-friendly physical, affective, and cognitive levels of document design.

At the physical level of design, the 2004 and 2010 CNR documents both used the tables of contents effectively. However, the physical aspects of document design were different for all other researched attributes. The 2010 CNR document located highly technical information outside the body of the report in appendices, making the document easier to read. The 2010 CNR document also featured an extensive resources section, and made generous use of graphics and color. The 2004 CNR document, by contrast, did not make extensive use of appendices and located most of the technical information in the report body itself. It also featured mostly text-heavy tables, which require readers to analyze the data for themselves. The 2004 document featured only three figures compared to the 2010 document's sixteen figures. As well, the 2004 figures were text-heavy and

technical compared to the 2010 document, which had generalist-friendly pie graphs, bar graphs, and maps.

At the affective and cognitive levels of design, the 2010 CNR report used definition and emotional language as well as metaphor to make technical concepts clear and compelling. By contrast, the 2004 CNR document did not use metaphor and used more program research jargon than the 2010 CNR document. The 2010 CNR report has more generalist-friendly features than the 2004 CNR report. Generalist features make the report more likely to be read, understood, and the information used by a larger group of people.

Ideology and rhetorical ecology

As I discussed in the second chapter, audience ideology and cultural artifacts can help the reader at the cognitive level of design by aiding understanding, which helps the reader use information. However, after observing ideology and cultural artifacts in this case study, I conclude they are more likely to reflect audience values and/or the political environment from which public policy rhetoric arose than specialist or generalist attributes. For example, we might surmise that the rigid and cold technical terms of “student” and “benefit” referring to a “child” and a “meal” used in the 2004 CNR document could be “tokens” of the conservative ideology of the strict father framework (Lakoff, 2008) prevalent during the Bush administration (2000-2008). But, it is difficult to be certain without more evidence.

However, even if ideology is not largely helpful for building understanding at the cognitive level, the rhetorical ecology of the documents is quite discernable and helpful for understanding and using information in documents — and this is true for specialists and generalists alike. We build our knowledge of a rhetorical ecology from our general awareness of all the environmental factors that lead to the exigence of rhetorical documents (Edbauer, 2005), but we may also read the *Background* (as in the 2004 CNR document) or *History* (as in the 2010 CNR document) sections of the CNR reports to understand the public policy issues from which they arose. For example, in the *Background* section of the 2004 CNR document, we learn that,

[Food and Nutrition Service] wanted more-detailed information to better understand the nature and scope of the [problem of ineligible children receiving free or reduced-price school lunch]. Therefore, the agency contracted with Mathematica Policy Research, Inc. (MPR) to conduct a study of the outcomes of the verification process in selected school districts (p. 4).

And, we learn from the *History* section of the 2010 document that the 2004 CNR legislation was a direct reason for the 2010 CNR report study, a study of the nationwide implementation of direct certification programs, because the 2004 CNR legislation actually mandated the study (USDA, 2010). In technical reports, our knowledge of the rhetorical ecology, which gave rise to the rhetoric, can be partially answered by reading the document itself because most technical reports contain a *Background* or *History* section. These sections are contained in the *Executive Summary* sections of both CNR reports, making them more likely to be read by both specialists and generalists.

The recursive nature of public policy rhetoric

The recursive nature of public policy rhetoric (Asen, 2010) is evident in the content of the 2004 and 2010 CNR documents. Both documents referred to previous reports suggesting the process by which students are approved for the NSLP program should be studied further. The 2004 document refers to an unnamed report, which found,

The USDA has become aware that a significant and increasing number of ineligible children are being certified for free and reduced price school meals as a result of inaccurate information provided by some households. When ineligible children receive free and reduced price benefits, USDA meal reimbursement is misdirected, as are significant amounts of State, Federal, and in some cases, local education funds. Furthermore, questions about the integrity of the certification and verification process undermine public confidence in a program that has long enjoyed the support of the American people (USDA, 2004).

Interestingly enough, the 2004 report did *not* find significant numbers of ineligible children accessing free benefits. It did, however, uncover inefficiencies in how children were being certified, leading to eligible children being dropped from the program. As a result, the 2004 CNR legislation reflected a mandate for more efficient ways to ensure low-income children have access to NSLP benefits.

The 2010 document refers directly back to the 2004 CNR as the purpose for its research and reports,

The 2004 Child Nutrition and Women, Infants, and Children (WIC) Reauthorization Act required all LEAs to establish, by school year (SY) 2008-2009, a system of direct certification of children from households that receive Supplemental Nutrition Assistance Program (SNAP—formerly the Food Stamp Program) benefits. The mandate was phased in over 3 years. The largest LEAs were

required to establish direct certification systems by SY 2006–2007; all were required to directly certify SNAP participants by SY 2008–2009 (USDA, 2010).

The reference to prior public policy rhetoric not only demonstrates the recursive nature of public policy rhetoric, but it is also a notable example of *kairos* where public policy ideas are recycled in the rhetoric until the timing is right for them to emerge. Asen cited the example of social security privatization, which is part of social security policy rhetoric. According to Asen, social security privatization is suggested and debated every several years simply waiting for the appropriate *kairos*.

According to Asen (2010), public policy debates are “... temporally pluralistic” (p. 131) where meanings change over time according to the rhetorical ecology of the time. As well,

... controversies endure over varying periods of time, exhibiting more and less active periods of engagement. Employing a full range of communicative actions, controversies proceed through debate, narrative, visual display, and other modes of expression. As these qualities suggest, the rhetorical texts of a public controversy incorporate discourses circulating in different places and at different times. (p. 131-132).

If we understand temporal pluralistic in the context of government as technology (Bain, 1937), we can see that public policy rhetoric is always changing. Different parts of a policy may develop and be implemented as laws at different rates causing multiple meanings of issues and legislation. For example, by the time the Affordable Care Act of 2010 was signed into law, the public option for

insurance had been dropped. However, the public option remains a component that will be debated and changed separately as its own opportunity. In this case, Miller's ascertainment of *kairos* in the rhetoric of technology applies. Thus, the rhetoric of public policy is less like the rhetoric of science and more like the rhetoric of technology in that its *kairos* is less the opportunity for understanding and more displaying the recursive element of opportunity for opportunity. (Miller, 1994).

Authorship

Comparing public policy documents to better understand the process by which they are created and the community to which they contribute raises questions about authorship. Though authorship is a place of power in much technical communication (Slack, Miller & Doak, 1993), it holds a low level of reverence in public policy development (Asen, 2010). In the study, I compared two lengthy documents where the authors were various. The 2004 document had five authors. Some authors were from the research firm, Mathematica, and some authors were from the USDA. The 2010 document had seven authors. Again, some authors were from the research firm, Mathematica, and some authors were from the USDA. The reports did not specify with which firm each author was affiliated. I needed to Google each author and use inductive reasoning to determine with whom they were employed at the time each report was written. Clearly, authorship is not important to the USDA or Mathematica.

In addition, even if we were able to determine exactly who wrote what in these documents and traced their words to an ideology to understand their power, we

would not necessarily see the power of authorship reflected in the CNR. The final bill represents the input of thousands of actors as rhetors—in writing and in speech. It would be an impossible task to map any part of the actual law back to any individual author.

Implications of the Open Gov initiative

As discussed earlier in the document, the USDA recently adopted Open Gov, a new platform to encourage transparency in government according to an initiative from President Barack Obama, who said, “My Administration is committed to creating an unprecedented level of openness in Government. We will work together to ensure the public trust and establish a system of transparency, public participation, and collaboration. Openness will strengthen our democracy and promote efficiency and effectiveness in Government.” (White House, 2009). The President’s strategy to draw upon the people as a resource for information and invention is unprecedented. The USDA Open Gov program encourages the average American to become involved in their government by researching documentation, submitting ideas, and commenting on innovations being explored by the USDA. With Open Gov, the USDA is encouraging involvement in its *hybrid forum* where *transformation 1*, *transformation 2*, and *transformation 3* are taking place. The 2010 CNR report encourages involvement in the hybrid forum because of the way it appeals to both the generalist and specialist reader.

Because nutrition information and government programs are highly technical areas of study, the hybrid forum may be expected to bring a few new readers to the USDA report archive. However, the news hype and celebrity attention the

CNR received this year likely brought more than were expected. As I mentioned in the first chapter, public interest in the CNR is higher than ever.

Morone and Kilbreth called for more public participation in health policy as early as 2003. Seven years later in 2011, interest in health policy continues to increase with the highly publicized passage of the Affordable Care act of 2010 and the increasing public concern about nutrition and health. Morone and Kilbreth suggest beginning public participation at the local level of politics. They suggest that, “organizing communities around health issues may help build political infrastructure in poor and immigrant neighborhoods (p. 287), and it may also “draft a new public-spirited response to the harsh politics of culture war” (p. 287). Certainly, when the CNR was a common issue discussed on network and cable news stations, the term “culture war” was discussed numerous times (Cunningham & Black, 2010). Jane Black, who has covered nutrition policy as a journalist for years, suggests changes to child nutrition policy are just the beginning of extensive food policy changes because the child nutrition policy is recognizably effective (Black, 2009). The public health approach to health policy suggested by Morone and Kilbreth (2003) is a model where public participation “is likely to recruit a new set of actors — and inject a new set of public health policies — into local politics” (p. 286). If the culture is involved in setting health policy, perhaps it will be less apt to find itself in a culture war. Because of public interest in nutrition policy, the role of public policy rhetoric is more important than ever. Technical reports produced by the USDA and its partners must reach the same audience they always have, and they must remain technical enough to

perform as input to the making of public policy. However, they will likely also experience subtle evolutions based on an understanding that generalists may choose to read them.

Conclusions

This study added a methodical comparison of public policy texts over time (from 2004 & 2010) to the scholarship about public policy rhetoric (Asen, 2010; Rude, 2004). It combines the “art” of rhetorical analysis with the method of content analysis.

For further research

Thayer et al (2007) used content analysis in a technical communication case study of international websites to study whether online communication was becoming more homogenized with the spread of internet use and access. They suggest content analysis is not widely used in technical communication, and present a primer for scholars who may wish to employ it in their own research. Boettger and Palmer (2010) produced a similar primer in which they support the use of quantitative rather than qualitative methods in content analysis to increase academic rigor. Of interest in Boettger and Palmer’s research is the suggestion quantitative content analysis may be used to (a) assess bias in publications produced by government at the federal, state, and local levels, (b) locate intent in the annual reports produced by corporations, (c) identify and deconstruct the rhetorical strategies from successfully funded proposals, and other uses. I find the type of investigative analysis suggested by quantitative content analysis tremendously appealing. Because the labor-intensive process of counting and

categorizing all the words in the technical reports is complete as of this writing, it may be of scholarly interest to apply quantitative analysis methods to the data for exploratory research.

Because the Internet has profoundly changed information access and use, a more expansive content analysis comparison to discover changes in the public involvement in the CNR from 2004 to 2010 may prove interesting indeed. Such an analysis could include technical texts from the other organizations I investigated while searching for suitable technical documents: Food Research Action Center, School Nutrition Association, Jamie Oliver Food Revolution, Healthy Schools Campaign, Food Safety News, and others. Content analysis is a time-consuming endeavor (Krippendorff, 2004; MacNealy, 1999), so it would be helpful to undertake this research in partnership with others.

Many of the organizations I investigated during this project have mechanisms for volunteering and joining the *Healthy School Food* cause as an activist. It has been said that the ease with which people are able to engage in activism encourages low-risk activism but not high-risk activism. For example, it is easy (and low-risk) to sign a petition or email your congressperson online with just a few clicks. However, high-risk activism activities, such as traveling many miles to a protest; joining a picket line; testifying before congress; participating in a Get Out the Vote campaign; or leading volunteers, require the same level of commitment they always have (Gladwell, 2011). Another interesting investigative topic is whether politicians and lawmakers consider low-risk activism measures

less valuable or notable than high-risk endeavors because of the ease with which the public can become involved.

First Lady Michelle Obama may have boosted awareness of the issues surrounding the CNR; the progressive style of the Technical Democracy, Open Gov, and new media may have provided a hybrid forum for its discussion, but it still remains to be seen whether more generalist involvement makes for better government. It would seem awareness and public domain communication was powerful enough in this situation to mobilize the public, but is the legislation really better? Future public opinion research may answer this question.

CNR update as of spring, 2011

In December 2010, the Congress (both the Senate and the House of Representatives) passed the Child Nutrition Reauthorization Act. As mentioned in chapter 1, the CNR regulates and funds, among other things, school meals through the National School Lunch Program. Reauthorizing the CNR is usually a non-controversial process, which has always enjoyed bipartisan support. Ensuring all school children are sufficiently fed throughout their long school day would seem to be a valid and even noble use of Federal funds. This year, however, was a different story.

The CNR was delayed by debates over health care reform in 2009. In 2010, public opinion about Federal spending took a wide turn as a lengthy recession and rising Federal deficit alarmed many Americans. All public spending was viewed with a much more critical eye than usual. After much debate and publicity for a body of

legislation that is rarely even noticed, the CNR passed. It would seem the rhetorical situation of childhood obesity and the way the consumption of low-quality cheap food is tightly coupled with poverty (Food Research Action Center, 2010) is sufficiently recognizable, provable, and frightening that it is stronger than the current hegemony of cutting spending.

For more information about the CNR, you can view the wide variety of discourse available in its rhetorical community. The following sources are notable in their relative newness and their use of new media. Interested people can view a video of First Lady of the United States, Michelle Obama (<http://www.youtube.com/watch?v=t2U9Zy1OAY8>), or you can view talking points about various issues about food and kids at public health lawyer, Michelle Simon's website and blog (<http://www.appetiteforprofit.com/faqs/food-politics/>). Or, you can sign up to advocate for the CNR at the FRAC website (<http://frac.org/legislative-action-center/advocacy-tools/>) or the SNA website (<http://www.schoolnutrition.org/Content.aspx?id=156>). Though these texts were not a part of my study, they are worth mentioning because of their work in the hybrid forum and the way the rhetoric of a discourse community reflects its values.

While it is true that “politics is the art of the possible” (Otto Von Bismark, German aristocrat and statesman in the 1800s), it is also true that “the lawyer's greatest weapon is clarity, and its whetstone is succinctness” (Judge Barrett Prettyman, United States Federal judge in the 1900s).

Public policy debates are about politics, a profession in which the use of persuasive language makes possible adoption of ideas, which might demonstrate victory, compromise, or concession. It is also true that public policy rhetoric makes laws, which must use clear and succinct language in order that they are interpreted properly. In public policy development, rhetoric must be employed strategically because the language of politics is inherently persuasive. However, the language of law is less so. It follows that there is a narrow window in which rhetoric may be employed to affect public policy development. Specialists and generalists may use rhetoric in different ways, and they may expect different things when they work to create policy knowledge from technical texts.

Content analysis comparing documents contributing to the CNR of 2004 and the CNR of 2010 provided an opportunity to understand the power of language. Every rhetoric and technical communication class I have taken here at MSU was taught with a healthy dose of respect for rhetoric's power and its ethical use. We are taught to be skeptical and use critical thinking in our work. I think ethics and professional/technical communication are taught together because language is powerful and has profound influence. Persuasion happens in our personal psychology and our participation in a community, but it is also managed at the micro level of language.

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Appendix A

Coding memos

- There is a huge difference in the appendices of the documents. It's not just the number of resources—the quality of the resources differs substantially.
- I have determined from my research that authorship for public policy documents is not as compelling as it might be for other technical documentation. However, I was still curious about the authors for these documents. Even though the reports are similar, there are no overlapping authors. That seems strange to me. I Googled all the names. For both documents, about half the people are from the USDA and half from Mathematica (a public policy research firm).
- I researched when the latest version of MS Word was released to try and understand whether technology availability has any affect on the quality of the visual elements.
- The language of the report bodies (as opposed to the Executive Summaries) is severely limited in comparison to their length. That is probably because the words mainly describe the various graphs and tables.
- Most of the analysis is in the Executive Summary. The body of the report is mostly just descriptions of tables.
- In encountered some problems with the report body data. Sometimes, I repeated a data element because the words are so numerous. It was easy to rectify after sorting in MS Excel, but notable and something to continue to watch for.

- The 2004 document has a significantly lengthier and more formal *Study Methods* section. In fact, the 2010 document has no *Methods* section at all.
- The 2004 document calls some of the researchers “data abstractors.”
- After coding all the data, it seems that the report body has less meaningful data. I think it’s because it’s less persuasive. I wonder whom they expect to read through report body. I expect most people would read just the summary. Maybe other researchers would read the report body, just to understand the thoroughness or validity of the research. But generalists working in the hybrid forum would likely never read it. Probably not congress people or journalists, either.

Appendix B

2004 executive summary data

second category	first category	data item	# of occurrences
		1 number percentage proportion	21
		1 case_study this report	14
		1 information 11111	6
		1 case 1 cases 111	5
		1 accuracy 111	4
		1 data 111	4
		1 objective 111	4
		1 identify_and_deter_errors 11	3
		1 result 1 results	3
		1 analysis 1	2
		1 collected 1	2
		1 conducted 1	2
		1 methodology 1	2
		1 random-sampling 1	2
		1 sample	2
sch	2	district	11
sch	2	School Food Authorities (SFA) 111	4
sch	2	schools 11	3
sch	2	metropolitan 1	2
s	2	people more likely receiving benefits who are not eligible for them (focused sampling)	8
s	2	students 1	2
r	2	interviews 11111	6
r	2	selected 1	5
r	2	designed 111	4
r	2	initially 111	4
r	2	assess assessed	2
r	2	based 1	2
r	2	changes changed	2
r	2	complied 1	2
r	2	determine 1	2
r	2	included 1	2
r	2	independently 1	2
r	2	likely 1	2
r	2	months 1	2
r	2	required requiring	2

pg	2	verification_process verification_system	27
pg	2	benefit_unchanged	14
pg	2	approved	13
pg	2	benefit_termination	7
pg	2	ineligible eligibility ineligibility	6
pg	2	benefit_increase 11111	6
pg	2	basis 1111	5
pg	2	eligible 111	4
pg	2	free 111	4
pg	2	reapproved 111	4
pg	2	request 111	4
pg	2	verify 111	4
pg	2	applications 1 application	3
pg	2	reduced-price 11	3
pg	2	benefit_determination 1	2
		verification_outcome verification_outcomes	
pg	2	1	2
pg	2	financial_assistance	1
pg	2	participate	1
		National School Lunch Program (NSLP)	
n	2	11111	6
n	2	provide provided provides	6
n	2	benefit_reduction 1111	5
n	2	benefit 11	3
n	2	benefit benefits	2
i	2	income	13
		income_documentation (receipt of food stamps or cash assistance) categorically	
i	2	_eligible	6
h	2	no_response nonresponding nonresponders	19
h	2	household households	16
h	2	verified_applications verified_households	5
h	2	household circumstances 1	2
h	2	household size 1	2
h	2	in-home 1	2
g	2	School Breakfast Program (SBP) 111	5
g	2	nationwide 1	2

2004 report body data

second category	first category	data item	# of occurrences
	1	percentage 242	242
		report case_study elements of the study project	
	1	case_study_costs analysis 150	150

	1 case file case 65	65
	1 data 48	48
	1 information 35	35
	1 Table X 34	34
	1 this_chapter next_chapter section 26	26
	1 average 25	25
	1 estimate 20	20
	1 study_method methodology approach 15	15
	1 number 11	11
	1 accurately accuracy inaccuracies 9	9
	1 calculated 9	9
	1 mean_outcome_across_districts 8	8
	1 tabulation 6	6
	1 appendix 4	4
	1 Figure X 3	3
	1 study_results 2	2
	1 Title 2	2
	1 summarize summary 2	2
sch	2 school_district 202	210
sch	2 SFA 61	61
sch	2 enrolled enrollment 11	11
sch	2 metropolitan 9	9
sch	2 schools 6	6
sch	2 Provision two or three 3	3
sch	2 urban 2	2
s	2 students 86	86
s	2 child children 18	18
s	2 foster_child 5	5
s	2 population 3	3
s	2 name 3	3
s	2 student_demographics (race, ethnicity, English proficiency) 2	2
s	2 address 2	2
	verification_outcomes verification	
	verification_process verification_files	
	verification_data verification_sample verification	
	system verification_period verification_effort	
	verification_request verification_results	
pr	2 verify/verified verified_cases 126	126
pr	2 random_sample 70	70
pr	2 focused_sample purposively selected sample 67	67
pr	2 no_change_in_benefit 57	57
pr	2 benefit_termination 42	42

pr	2	we (the researchers) 37	37
pr	2	benefit_reduction 32	32
pr	2	interview 26	26
		Mathematica Policy Research (MPR)	
		MPR_project_director MPR data abstractor MPR	
pr	2	interviewer 20	20
pr	2	sample sampling 17	17
pr	2	measure 17	17
pr	2	outcomes 10	10
pr	2	data collection 9	9
pr	2	characteristics 8	8
pr	2	benefit_increase 7	7
pr	2	objectives (of the case study) goal 6	6
pr	2	other_study 6	6
pr	2	categories 6	6
pr	2	in-person 5	5
pr	2	failure_to_comply 5	5
pr	2	project officer 4	4
pr	2	representative 4	4
pr	2	abstracted abstracting abstraction 4	4
pr	2	preverification_status 4	4
pr	2	request_for_documentation 4	4
pr	2	examine 3	3
pr	2	proportion 2	2
pr	2	provided 2	2
		case_study_sample is racially and ethnically	
pr	2	diverse 2	2
pr	2	compares 2	2
pr	2	contacted (the researchers) 2	2
pr	2	identified 2	2
pr	2	computer_program 2	2
pr	2	determine (report) 2	2
pg	2	ineligible eligible eligibility_status 128	128
pg	2	approved 80	80
pg	2	free 72	72
pg	2	reduced-price 70	70
pg	2	reapproved 63	63
pg	2	application 44	44
pg	2	groups 38	38
pg	2	certification certified certification_status 35	35
pg	2	reapplying 34	34
		people_living_in_the_household	
pg	2	household_membership household_size 28	28

pg	2	documentation	27
pg	2	categorically_eligible	20
pg	2	food_stamp	19
pg	2	participate participation participating	19
pg	2	TANF welfare_benefits	18
pg	2	nationally nationwide	16
pg	2	direct_certification	15
pg	2	poverty	9
pg	2	error	6
pg	2	full-price	6
pg	2	entitled	3
pg	2	includes include	2
pg	2	underreporting	2
pg	2	concern	2
n	2	benefit	65
n	2	meal meal_benefit	64
n	2	NSLP	21
n	2	school_lunch	3
n	2	lunch	2
i	2	income	129
h	2	household	141
h	2	nonresponding	72
h	2	families	21
h	2	household_circumstances circumstances	9
h	2	households_within_\$100_of_eligibility	3
h	2	adult	3
h	2	parent_or_guardian	2
h	2	applicant	2
h	2	single_parent	2
g	2	FNS	18
g	2	FPL	18
g	2	ERS	8
g	2	FDPIR	5
g	2	USDA	2
g	2	SBP	2
g	2	policymakers	2

Appendix C

2010 executive summary data

second category	first category	data item	# of occurrences
		1 percent percentage	19
		1 report 11 reports 11	6
		1 number 11111	6
		1 year 1	2
		1 totaled total	2
		1 measures measure 1	2
		1 result results	2
sch		2 local education agencies (LEAs)	18
sch		2 school public_schools private_schools schools	10
sch		2 residential child care institutions children's school	5
s		2 children school_age_children	21
s		2 school_age_SNAP_participants	13
s		2 students 11 student 1	5
r		2 information 1	2
r		2 exchange 1	2
r		2 effort efforts	2
r		2 earlier 1	2
r		2 determined 1	2
pr		2 certification_rate 1	2
r		2 better 1	2
r		2 assess assessment	2
		directly_certified direct certification	
		direct_certification_rate directly_certify	
pg		2 direct_certification_system directly certifying	27
		categorically eligible general categoric eligibility	
pg		2 (participation in other programs)	16
pg		2 free	12
pg		2 application applications	9
pg		2 participating 111 participation participant	6
pg		2 requires 1 require required requiring	5
pg		2 increase 11 increased 1	5
pg		2 effectiveness effective 111	5
pg		2 match_processes 111	4
pg		2 estimated 111	4
pg		2 eligible 11 eligibility	4
pg		2 certify certified 111	4
pg		2 all 111	4

pg	2	success 1 successful	3
pg	2	paper-based_letter_system 11	3
pg	2	must 11	3
pg	2	more 11	3
pg	2	million 11	3
pg	2	computer_matching 11	3
pg	2	slightly 1	2
pg	2	respond response	2
pg	2	receive 1	2
pg	2	provides provide	2
pg	2	performance perform	2
pg	2	others	2
pg	2	nutritious nutrition	2
pg	2	most 1	2
pg	2	letters 1	2
pg	2	improved improve	2
pg	2	FNS 1	2
n	2	meals meal school_meals	16
n	2	National School Lunch Program (NSLP) 11111	6
n	2	served serve 1	4
n	2	benefit benefits	2
i	2	income 1	2
h	2	household 111 (alone)	4
g	2	State	27
g	2	USDA 1	2
g	2	reimbursement reimburses	2
g	2	legislative_requirement 1	2
g	2	Federal 1	2
g	2	CNR 2004 1	2
g	2	2008 Farm Bill 1	2

2010 report body data

second category	first category	datat item	# of occurrences
		1 percent percentage	27
		1 data	16
		1 report reports this_report this_section	10
		1 estimated estimates estimate	9
		1 number	8
		1 figures	5
		1 data_elements	4
		1 case_numbers	4
		1 statistics	4

	1	assess assessment	3
	1	chart	3
	1	section (of the report)	3
	1	circle	2
	1	proportional	2
	1	average	2
	1	figures	2
sch	2	local education agencies (LEAs)	78
		school public_schools private_schools schools	
sch	2	residential child care institutions children's school	33
sch	2	private_school and single_school LEAs	19
sch	2	enrolled enrolling enrollment enroll	15
sch	2	school_district	13
sch	2	school_year	5
sch	2	small_or_single-school_district	5
sch	2	education_agency	3
sch	2	SFA	2
s	2	school_age_SNAP_participants	37
s	2	children	25
s	2	students student	23
s	2	child	9
s	2	student name	6
s	2	student date of birth	6
s	2	school_age_children	5
s	2	SSN	4
s	2	children	4
		students_at_Provision_one_or_Provision_two_schools	
s	2	2	2
pr	2	success successful	14
pr	2	review	12
pr	2	improve improvement improved	12
pr	2	area	11
pr	2	effectiveness effective	11
pr	2	measures measure	10
pr	2	interview	9
pr	2	requires required	7
pr	2	information	6
pr	2	participating participation participate	5
pr	2	performance outperform	5
pr	2	identifier	5
pr	2	information_technology	5
pr	2	identify	4
pr	2	best_practices	4

pr	2	most_improved	3	3
pr	2	procedures	3	3
pr	2	staffing and resource constraints	3	3
pr	2	beginning	3	3
pr	2	increase	3	3
pr	2	establish	2	2
pr	2	agreement	2	2
pr	2	designed	2	2
pr	2	discussion	2	2
pr	2	more	2	2
pr	2	comprehensive	2	2
pr	2	below	1	2
pr	2	contractor	2	2
pr	2	compliance	2	2
		directly_certified	direct certification	
		direct_certification_rate	directly_certify	
pg	2	direct_certification_system	directly_certifying	123
g	2	State	117	117
pg	2	free	29	29
pg	2	computer_matching	11	22
pg	2	eligible	eligibility	21
pg	2	matching_at_state_level	19	19
pg	2	paper-based_letter_system	18	18
pg	2	application	17	17
pg	2	matching_at_district_level	16	16
pg	2	student_enrollment_lists	15	15
pg	2	certify	certified certifying	14
pg	2	match	matched matching matches matches	14
pg	2	matching_electronic_system	13	13
pg	2	categorically	eligible	13
pg	2	match_frequency	11	11
pg	2	regional	regions	10
pg	2	mandate	mandatory	10
pg	2	match_exact	9	9
pg	2	special_challenges	8	8
pg	2	matching_process	7	7
pg	2	certification_process	6	6
pg	2	reduced-price	6	6
pg	2	supplemental	student-level lookup system	6
pg	2	match_processes	6	6
pg	2	challenge	b/c of recession	4
pg	2	decentralized_system	4	4
pg	2	phonetic_representation_of_names	4	4

pg	2 match_approximate 4	4
pg	2 allowance_for_transposed_date_fields 3	3
pg	2 customization 3	3
pg	2 verification 111	3
pg	2 match_criteria 3	3
pg	2 matched_results 3	3
pg	2 matching_electronic 3	3
pg	2 poverty_level 3	3
pg	2 matched_un_students 2	2
pg	2 country 2	2
pg	2 benefit_benefits 2	2
pg	2 direct_certification_experts 2	2
pg	2 nutritious_nutrition 2	2
n	2 school_meals_meal_meals 35	35
n	2 National_School_Lunch_Program_(NSLP)_11_(eleven)	11
n	2 served_serve 2	2
i	2 income 7	7
i	2 income_eligible 4	4
h	2 TANF_and_FDPIR_households 28	28
h	2 SNAP_households 25	25
h	2 household_(alone) 12	12
h	2 household_additional_members 5	5
h	2 family_families 5	5
h	2 applicants 11	3
h	2 address 3	3
h	2 zip_code 2	2
h	2 town 2	2
h	2 children's_parents_or_guardians 2	2
g	2 SNAP 9	9
g	2 FNS 9	9
g	2 legislative_requirement 6	6
g	2 CNR_2004 6	6
g	2 NSLA 4	4
g	2 Federal 2	2
g	2 USDA 11	2