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# A rhetorical look at proposal writing and reviewing in transportation engineering

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**A rhetorical look at proposal writing and reviewing in transportation engineering**

by

**Brett William Hansen**

A thesis submitted to the graduate faculty  
in partial fulfillment of the requirements for the degree of  
**MASTER OF ARTS**

Major: Rhetoric, Composition, and Professional Communication

Program of Study Committee:  
Dorothy A. Winsor, Major Professor  
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Iowa State University

Ames, Iowa

2004

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Graduate College  
Iowa State University

This is to certify that the master's thesis of  
  
Brett William Hansen  
  
has met the thesis requirements of Iowa State University

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Major Professor

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For the Major Program

For my wife, Brynn.

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**ABSTRACT**

Little is known about the persuasiveness of NCHRP transportation proposals and the differences between what the writer perceives as persuasive and what the reviewers see as persuasive in proposal selection meetings. The NCHRP proposal process can provide great insight into persuasion and proposal writing from a rhetorical point of view. This qualitative study uses a rhetorical approach using Aristotle's three appeals of ethos, pathos, and logos to examine persuasive elements of transportation research proposals from both the writers' and reviewers' points of view.

To examine persuasion in NCHRP proposals, three NCHRP proposal writers were interviewed and two NCHRP review sessions were observed. The notes and transcriptions were coded according to the Aristotelian appeals. Within these appeals, similar topics discussed by interviewees and the review panels were identified and compared to examine the perceptions of persuasion in the NCHRP proposal.

Although there are many instances where the writers and reviewers agree, there are some gaps between the writers' perceptions of what is persuasive in the proposal and what the NCHRP panels discussed. This study also provides insight into researching proposal writing as a genre.



## INTRODUCTION

For transportation engineers, the audience for research proposals is specialized and explicitly defined. Each year, more than 50 transportation research projects are funded by the National Cooperative Highway Research Program (NCHRP), which is administered by one of the most notable organization in transportation research, the Transportation Research Board (TRB). The TRB selects committees to review transportation research proposals for funding. It states that it solicits research proposals from research organizations that can “demonstrate capability and experience” in finding solutions to the specified problem (Transportation Research Board). The NCHRP finds and ranks problems, then posts its requests for proposals for certain types of transportation research. The solicitation process results in severe competition among organizations. Getting project funding from the NCHRP is extremely important for academic researchers who are looking to get tenure or other researchers who are looking to establish a reputation in the transportation research discourse community. Therefore, getting a research project funded by the NCHRP is a very high priority for many transportation researchers.

From a rhetorician’s point of view, the NCHRP proposal process can provide great insight into persuasion and proposal writing because proposal writers must effectively persuade the NCHRP to fund their project. Yet, little is known about the persuasiveness of transportation proposals and the differences between what the writer deems persuasive and what the reviewers believe is persuasive. Although writers may know the logistics of how the review process works, they may not fully understand what rhetorical strategies are reflected in the

committee discussions or which strategies are effectively persuasive in the proposals themselves.

This project proposes to provide an understanding of the persuasive elements of transportation research proposals from both the writers' and reviewers' points of view.

Several former and current proposal writers expressed their interest in a qualitative study that would identify any disjunction between how writers perceive what is persuasive in a proposal and what review committees actually discuss during their panel meetings. Through this study, I found disjunctions between writers' perceptions and reviewers' discussions of what is really persuasive in proposals. In the following chapter, Chapter 1, I discuss the theoretical framework that I use to analyze persuasion in the proposal writing and reviewing processes for NCHRP proposals.

## CHAPTER 1: ARISTOTLE AND THE RHETORICAL APPEALS

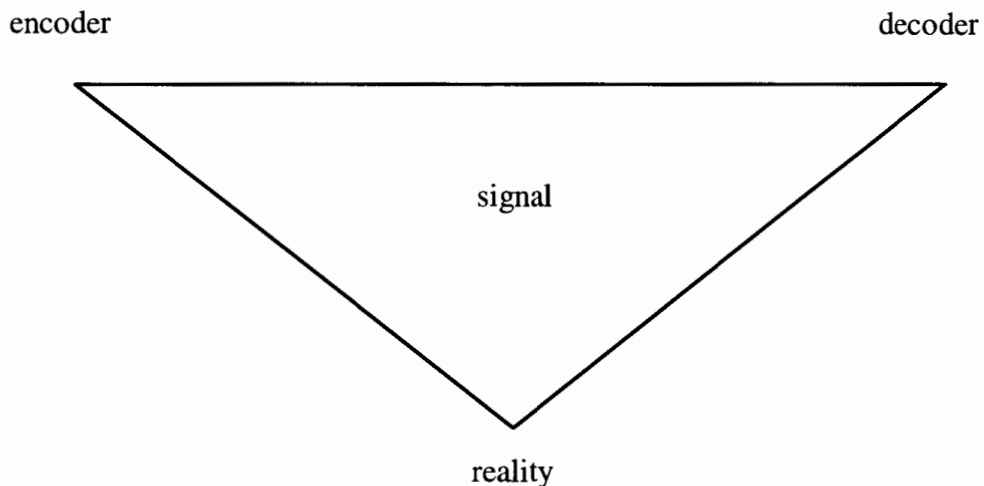
Mary Cross states that “persuasion, the ability to win over an audience and inspire action, is . . . the underlying goal of most corporate correspondence” (Cross 1991, 3). Like corporate writers, transportation engineers must use persuasion when they submit research proposals. Yet many lack any systematic understanding of persuasion, a notion which dates as far back as Aristotle. In *On Rhetoric*, Aristotle examines persuasion in political speeches, legal pleadings, and ceremonial speeches (Kinneavy 1971, 214). He discusses this type of persuasion under three rhetorical appeals: ethos, pathos, and logos. In this thesis, I use these three appeals as a framework to analyze how proposal writers build persuasive arguments and reviewers respond to them.

Aristotle saw rhetoric as a set of principles of spoken persuasion exercised by the individual speaker. He also saw it as a tool used by politically charged forums (Gross and Walzer 2000, 420). Aristotle also defines rhetoric as an ability to see the available means of persuasion (Aristotle 2001, bk. 1 chap 2). Aristotle divides these means into the three appeals: logos, ethos, and pathos.

I will define the three appeals more fully below, but for now, I would note that the appeals are all based on knowledge of specific topics. This knowledge is used to exercise persuasion using the three appeals, a point made by Edward P.J. Corbett. He notes that the word *persuasion* comes from the Greek verb “to believe” (Corbett 1990, 3). He states that Aristotle saw rhetoric functioning both for argumentative and expository purposes. Argumentation and exposition are both “modes of discourse that seek to win acceptance of information or explanation” (4-5). He also states that even after one understands the use of

the appeals, one still must have or find something to say about a topic. To “say” something, believes Corbett, one must draw upon one’s own education, experience, or their readings, and thus upon knowledge (94-95). Therefore, in order to use persuasion effectively using the three appeals, one must draw upon his or her own knowledge, a practice that transportation proposal writers may use when stating topics that they know reviewers will be interested in such as past experience, understanding of the problem, and reputation.

To further discuss persuasion, James Kinneavy, in *A Theory of Discourse* (1971), situates persuasion in direct relation to audience in discourse. He defines discourse as “the full text of an oral or written situation” (4). As a foundation for discourse, he uses the communication triangle (see figure 1).



**Figure 1. The Communication Triangle (Kinneavy 1971, 19)**

Kinneavy situates discourse with pragmatic analysis (as opposed to syntactic or semantic), in other words it is context based rather than meaning or structure based. Because discourse communication resides in pragmatic analysis, its aims fall into four different categories of

context-based communication: reference, persuasion, literature, and expression. Kinneavy states that, of the four categories, only persuasion is directly related to the decoder (or audience) of the communication. Therefore, understanding and conceptualizing audience provides insight into the function of proposals as a persuasive discourse.

Kinneavy states that Aristotle separated persuasion into ethos, pathos, and logos (211). He states that these three appeals are subsets of the aims in persuasive discourse. To better understand how proposals function as a persuasive discourse, I examine each of the Aristotelian appeals and how each relates to proposals below.

### ***Logos***

Aristotle states that “persuasion is effected through the speech itself when we have proved a truth or an apparent truth by means of the persuasive arguments suitable to the case in question” (Aristotle, 2001, bk 1, chap 2 ln. 1356a). The “truth or apparent truth” Aristotle describes is logos. He also states that anyone who uses “proof” or logical argument to persuade is bound to use syllogisms, elements of logical deductive reasoning that consist of major premises, minor premises, and conclusions, or inductions, elements of logical reasoning whose conclusions are dependent upon events or instances. The American Heritage College Dictionary (1993, *s.v.* “syllogism”) gives this example of a syllogism.

**Major premise:** All human beings are mortal

**Minor premise:** I am a human being

**Conclusion:** I am mortal

To apply Aristotle's concept of syllogism to proposal writing, we could say (from a proposal writer's point of view):

**Major Premise:** All winning proposal writers are more reputable than their opponents..

**Minor Premise:** We are more reputable than our opponents

**Conclusion:** We are winning proposal writers.

The above syllogism shows proposal writers attempt to persuade the reviewer that there is a logical reason to choose his or her proposal. However, it is likely that proposal writers would be more subtle, not specifically stating the premises or conclusion. Aristotle calls this more subtle syllogism an enthymeme, a syllogism where a premise or a conclusion is not specifically stated (American Heritage College Dictionary 1993, *s.v.* "enthymeme").

Other critics examine and expand the definition of logos. W. Rhys Roberts defines logos as what "makes the argument of [an orator's] speech demonstrative and worthy of belief" (Aristotle, 2001 book 2, chap. 1, 1377a). Kennedy, in his translation of *On Rhetoric*, defines logos simply as "the true and probable argument" (Aristotle 1991, 37). Lunsford and Glenn describe logos as "appeals to reason of the message itself—with all else reflecting or affecting the universe" (Lunsford and Glenn 1999, 429). The above critics describe logos as proof of the argument as it is embedded within the message. Logos also includes facts and proofs that, from a scientific point of view, lack the bias that comes from subjectivity. Facts and proofs are difficult to dispute and more credible. For example, engineers and other scientific writers often give the impression of objectivity and fact by avoiding personal pronouns in scientific prose.

In proposals, logos can be seen on several different levels including 1) the logical structure of the proposal, 2) the sources or data contained within the argument, or 3) the logic of the argument itself. Freed et al., in *Writing Winning Proposals*, put themselves in the role of the audience and say that proposals should have a logical structure. "You're writing your proposal because we have this gap, and you and your methodology must clearly and logically explain how you propose to bridge that gap" (Freed et al. 1995, 9). Sources of logos contained within the body of the argument may include a realistic budget, accurate sources for a literature review, and achievable tasks.

### ***Ethos***

Aristotle states that ethos is the personal character of the speaker. "Persuasion is achieved by the speaker's personal character when the speech is so spoken as to make us think him credible" (Aristotle 2001, Bk 1, chap 2, ln 1356a). Kennedy, in the footnotes of his translation of *On Rhetoric*, extends the definition into "moral character," which he believes is not used "in the technical sense [which is] the presentation of the character in a discourse." Kennedy believes that Aristotle meant that ethos is reputation based upon the speaker's character and not based on the text itself (Kennedy 1991, 37 footnote). However, Aristotle explicitly states that this kind of persuasion should be achieved by what the speaker says and not by what people think of his character before he begins to speak. In fact, argues Aristotle, the speaker's character may be the most effective means of persuasion he possesses (Aristotle 2001, Bk 1, chap 2, ln 1356a).

Later critics agree that Aristotle's concept of ethos is based on the speech or message itself. Wisse, for example, states that ethos takes on a type of authority in that it builds the

speaker's credibility insomuch as it is brought about only in the speech itself (Wisse 1989).

Walzer et al. agree with Wisse saying that ethos necessarily arises within the speech only and not as a function of the audience's previous knowledge of the speaker's character (Gross and Walzer 2000). In other words, ethos is not created or bound to the author but is embedded in the message. As proposal writers construct the proposal, they place ethos-related information in certain key places in the proposal such as the qualifications section.

Aristotle also states that ethos is related to persuasion in that "the orator . . . must make his own character look right and put his hearers, who are to decide, into the right frame of mind" (Roberts 2001). He states that false statements or bad advice, which can undermine ethos, can be caused by the following:

1. being misinformed
2. lying
3. being "sensible and upright," but not communicating well with the audience

Freed et al. discusses the third cause as it relates to proposals. Again assuming the role of the audience, they state that, "because of your expertise, you know how to bridge that gap" (Freed et al. 1995). Therefore, in proposals, the writer must clearly communicate through the text that his or her organization is credible enough to accomplish the work.

In this thesis, I use ethos to mean credibility, the authority given to a speaker or writer. For example, in *Reading Critically, Writing Well*, Axelrod and Cooper state that, "for an argument to be considered credible by readers, they must find [the argument] authoritative, believable, or trustworthy" (Axelrod and Cooper 1999, 383).



### ***Pathos***

Aristotle describes pathos as being brought into play when the audience is “led to feel emotion” by the communication (Kennedy 1991, 38). In *On Rhetoric*, Aristotle states that

when people are feeling friendly and placable, they think one sort of thing; when they are feeling angry or hostile, they think either something totally different or the same thing with a different intensity. (Kennedy 1991, 120)

Aristotle describes pathos as working in conjunction with building the speaker’s ethos. He states that if the audience being addressed regards the speaker as having done little wrong, then the audience is more apt, or feels more inclined, to agree with him (Aristotle 1991, 120). The feelings of the audience in transportation proposals therefore may be contingent upon the ethos of the writer.

Wisse defines pathos as “the arousing of emotions in the audience” (Wisse 1989, 70).

Walker, in “Pathos and Katharsis in Aristotelian Rhetoric: Some Implications,” believes that pathos has power over logos. He states that emotion (pathos) will determine how the mind perceives and interprets any logical arguments presented to it. (Walker 2000, 81). Therefore, pathos may contribute significantly to how the audience perceives logical arguments in proposals.

Freed et al. apply the concept of pathos to the proposal genre. They state that the logic contained in a proposal is only part of the process of persuading the audience. Again in the role of the client/reader, they state, “I want to *feel comfortable* with you, to trust you, to *sense with confidence* that you understand my situation, my risks, and perhaps most important of

all, my potential rewards. . .” (Freed et al. 1995, 79, my emphasis). Therefore, Freed et al., like Aristotle, state that the audience must experience positive feelings (such as comfort and confidence) toward the writer for the proposal to have persuasive value.

In this chapter I have discussed the three Aristotelian rhetorical appeals of ethos pathos and logos. In Chapter 2, I review the current literature regarding proposals, focusing on proposal writing as a genre and composition theories of writing and audience that are current in rhetoric. In Chapter 3, I discuss my methodology for completing the qualitative study. In Chapter 4, I analyze and discuss the findings of the study. Then, in Chapter 5, I conclude the thesis and make suggestions for further research.

## CHAPTER 2: LITERATURE REVIEW

The previous section discussed Aristotle's appeals and how each was defined by Aristotle and later critics. This section discusses three different aspects of persuasive writing as it relates to proposals. These aspects include proposal writing research and theory, proposal writing generic functions, and the relationship between proposal writing and audience analysis in composition studies.

### *Proposal Writing Research and Theory*

Rhetorical research on proposal writing is nearly non-existent. In fact, much of the information found on writing proposals is found only in textbooks, how-to manuals, and training. In this section, I go through each of these genres of proposal instruction, discussing their relevance to the proposal genre.

Although textbooks seem inappropriate to cite in a master's thesis, I briefly cite *Technical Communication* by Rebecca Burnett because she builds a close relationship between persuasion and proposals. Specifically, she states "to write effective proposals, you need to understand persuasive techniques" (Burnett 1997, 459). She compares the proposal writing process to "a refined debate, with you imagining, anticipating and responding to opposing arguments" (459). She divides effective proposal writing into three categories: 1) the needs of readers, 2) the credibility of the persuader, and 3) the logic of the message (460). These topics coincide directly with pathos, ethos, and logos, respectively. Burnett's latter two categories clearly relate to the appeals (e.g. credibility=ethos, logic=logos); however her first category (needs) is not as evident.

To describe the “needs of the readers,” Burnett states that the proposal writer must help the audience to gain “some sense” of need before it will accept changes. The more drastic the change, the more the writer must establish the need in the text. To justify her claim, Burnett states that “people reject or at least devalue information that conflicts with their current beliefs” (460). Pathos relates to this principle of managing audience beliefs, or filling the “needs” of the audience. Aristotle, discussing pathos, states that if audience members “are eager for, and have good hopes of a thing that will be pleasant if it happens, they think that it certainly will happen and be good for them: whereas if they are indifferent or annoyed, they do not think so” (Aristotle 2001, bk. 2, chap 1, ln1378a).

How-to books state little more than the obvious regarding persuasion and proposals. For example Bowman and Branchaw state “the credibility of the writer...depends in part on the veracity and reliability of the information presented in the proposal.” Nevertheless, they still emphasize the proposal as a persuasive act. They state “successful proposals incorporate appropriate persuasive techniques, with the nature and amount of persuasive material being based on the relationship between the reader and writer” (Bowman and Branchaw 1992, 3).

Many disciplines are taught proposal writing as a set of skills through training or consulting. In engineering, administrators often hire proposal consultants to review, proofread, and evaluate proposals before submission. Engineers also have proposal guidelines, forms, and templates designed to help them build a proposal framework more quickly and easily. Therefore, many writers learn about persuasion in proposals as a set of rules that must be followed to produce effective proposals.

## ***Genre***

Looking at persuasion in proposals as a structured set of rules suggests that proposals belong in a rhetorical classification, or genre, all their own. As mentioned above, Kinneavy establishes persuasion as an aim of discourse. Berkenkotter and Huckin (1995) state that generic conventions give important signals that identify a specific discourse community (4). Therefore, gaining a better understand of the characteristics of genre can provide insight into proposals as a persuasive discourse. Specifically, classifying proposals as a genre can help establish what writer and reader expectations of a generic text are and how they function in their discourse community.

For this study, the Aristotelian appeals can provide a measure that identifies the persuasive generic characteristics of proposals. However, before this measure is applied, a general understanding of the characteristics of genre theory is needed. In the following section, I will first discuss characteristics of genres in general. Then I will discuss the consequences of proposals' status as a genre. According to Daniel Chandler, genres have the following characteristics: genres are used to organize; genres are contingent upon the society that creates them; defining genres is, at best, difficult; genres are a reflection of repeated social and ideological control; and genres are intertextual (Chandler).

### *Genres are used to organize.*

Genres are used to organize and classify. The bulk of genre study has been primarily used to classify. However, Chandler states that classifications used in early genre study misleadingly denoted a "scientific" process. In place of the misleading classifications of genre, he

proposes that the understanding of genre is explained in the other characteristics he names below.

*Genres are contingent upon the society that creates them.*

Carolyn Miller states that genres acquire meaning from situation and from social context (Miller 1984, 163). Because genres are socially grounded, the “classification and hierarchical taxonomy” of genres is not objective or uniform (Chandler). For example, the text of *Hamlet* may be classified as a play script or as a work of literature to be read. Consequently, there are no specific boundaries for genres besides those set by consensus, which means proposal writers and organizations must understand the socially established boundaries associated with proposal writing to successfully write a persuasive proposal.

*Defining genre is, at best, difficult.*

Defining genres is, as Chandler calls it, a “theoretical minefield” because convention defines genres as containing texts that have a similar set of contents and form yet there are no rigid rules for including or excluding certain texts into or from a specific genre. Unlike the ‘scientific’ organizationally based definition of genre, genres according to Gledhill do not consist of “a fixed number of listable items” (Gledhill 1985, 58). Chandler states that specific genres tend to be easily recognized yet difficult to specifically define. In fact, as the example of *Hamlet* suggests, texts often cross the genre boundaries and take upon themselves multiple genres simultaneously (O’Sullivan et al. 94-100).

In an attempt to solve the problem of defining generic boundaries, some researchers developed a more ambiguous approach. One approach to genre sees some texts as being

more typical members of a genre than others (Chandler). Chandler states that “genres can therefore be seen as ‘fuzzy’ categories which cannot be defined by necessary and sufficient conditions.” Berkenkotter and Huckin also state that genre is not an all or nothing proposition. Texts contained within a genre can be ranged on a continuum (Berkenkotter and Huckin 1995, 17).

For proposal writers and reviewers, the proposal writing genre boundaries may seem similar to other types of genre boundaries such as those found in reports. However, writers may run the risk of including elements that are outside the boundaries. For example, displaying a large amount of figures may be acceptable in report writing, but displaying only a small amount of figures is acceptable in proposal writing. It may be difficult for proposal writers to understand where the generic boundaries lie and where certain texts fall on the continuum.

*Genres are repeated social and ideological control.*

Marxists see genre as “an instrument of social control which reproduces the dominant ideology” because genre “naturalizes” the ideology that is embedded in the text. This naturalization of the ideology shows that, as Livingstone states, genres are not ideologically neutral and that they are used to establish different views of the world. (Chandler). As proposal writers follow the generic guidelines defined by the ideology, which was established or “naturalized” by previous proposal texts, their texts perpetuate the same ideology for future writers. On the other hand, texts that fall outside the generic cycle may not be effectively persuasive because they do not perpetuate the ideology.

*Generic texts are intertextual.*

Wales (1989) states that the genre concept is intertextual, or that texts are defined based on their comparisons with other texts (206-207). This intertextuality of texts shows how generic rules influence each text and that they are reinforced by each text (Thwaites et al. 1994, 104). Generic texts reinforce genre by depending upon conventions found within other generic texts. Proposal writers often find other proposal texts valuable and attempt to replicate their generic conventions.

*Consequences of Proposals' Status as a Genre*

The advantage of organizing texts into a genre is that the readers' expectations of a text are already established if readers know and recognize the genre. This is especially true concerning NCHRP proposals because the readers establish their specific generic expectations of texts through the Information and Instructions for Preparing Proposals (IIPP) and, more specifically, in the Request for Proposals (RFP). The IIPP and RFP documents establish boundaries within the NCHRP proposal and clarify the reviewers', or audience's expectations of the proposal.

*Considering Audience*

Although the RFP and IIPP describe in great detail the guidelines and expectations of the review panel, they may not accurately reflect specific nuances and individual expectations of each reviewer. To understand the expectations that are not stated in the guidelines, the proposal writer must conceptualize his or her audience in some way. To recognize how persuasion functions as influence over one's audience, it is relevant to mention how writers



perceive, create, and/or conceptualize their audience. To focus on writers' perception, of audience, I cite Lisa Ede and Andrea Lunsford, in "Audience Addressed/ Audience Invoked: The Role of Audience in Composition Theory and Pedagogy" (1984). They describe two different theories about how writers conceptualize their audience in a compositional context. This section describes the two different theories of audience addressed and audience evoked and discusses how they are important to the proposal writing genre.

The first theoretical approach that Ede and Lunsford discuss, called audience addressed, proposes that the writer should create and write to a realistic cognitive replica of the audience. The writer bases this replica on all the facts he or she can gather about the audience (Ede and Lunsford 1984, 244). For example, in Linda Flower's Article, "Cognition, Context, and Theory Building" (1989), she describes a non-traditional student who returns to school after working for several years. The student, pseudo-named Ron, creates a strategy where he takes the first assignment to the teacher for feedback as soon as possible after it is assigned. Although he doesn't receive the best grade on this first assignment, he uses the experience to "get inside the instructor's head" so he can "negotiate" his writing for the teacher in future projects. Flower argues that Ron is cognitively constructing audience from his own context, including experiences outside the academy and figuring out how to tailor his arguments to fit, or address the teacher's expectations and values (293).

In NCHRP proposals, writers take a similar approach to that of "Ron" by scrutinizing the IIPP and the RFP. The IIPP and RFP contain specific guidelines that the reviewers will look for responses to in a proposal. For example, the IIPP specifically states that proposals are selected based on the panel's consideration of the following:

1. The proposer's demonstrated understanding of the problem
2. The merit of the proposed research approach and experiment design
3. The experience, qualifications, and objectivity of the research team in the same or closely related problem area
4. The plan for ensuring application of results
5. The adequacy of the facilities

(NCHRP)

The IIPP states that proposal writers must emphasize and successfully employ the above five topics in the proposal to persuade the review panel. If the five topics are addressed in a way that the audience expects, the proposal will be much more persuasive. The difficulty for writers may be finding out what the audience is looking for specifically for each topic.

Unlike Ron, however, proposal writers cannot use one proposal to "get inside their head" because they only have a single opportunity to present their proposals. However, the second theoretical approach may help proposal writers better understand their audiences' expectations without using a trial-and-error approach.

The second theoretical approach that Ede and Lunsford describe to conceptualize audience is called audience invoked. The approach suggests that the author cannot possibly create an accurate cognitive replica of his or her audience. Therefore, the writer must create the audience as a work of "fiction" (Ong 1975, 9). In other words, writers must cognitively invent a replica of the audience so that the writers can imagine the audience's expectations. Russell Long (1980) believes that the writer's role in inventing or imagining his or her audience is a point of unification between the writer and the audience (223). In NCHRP

proposals, the writer is forced to invent an audience to address because the audience is inaccessible. The IIPP states that

It is emphasized that the NCHRP procedures do not provide for preproposal briefings or for meetings with staff and panels in due course of proposal evaluation or agency selection. The proposal, therefore, constitutes the one-and-only opportunity for the agency to state its case. (NCHRP 1999)

Therefore, the NCHRP proposal writer must, as Long suggests, invent his or her audience based on available information such as the IIPP and the RFP.

Ideally, the writer of the proposal incorporates the synthesis discussed by Ede and Lunsford where the writer considers his or her audience while inventing the audience through emphasizing his or her own linguistic and rhetorically persuasive abilities (Ede and Lunsford 1984, 256). The result is a persuasive document that successfully persuades the audience and wins the project.

### CHAPTER 3: METHODOLOGY

I used several methods of data collection to address my research questions. First, I took notes and recorded interviews from NCHRP proposal writers from a Midwestern transportation research laboratory. Then I observed two NCHRP proposal review panels: one in Washington, D.C. and one in Chicago, Illinois. In analyzing the data, I coded transcripts and notes from the interviews based on the Aristotelian appeals of ethos, pathos, and logos. This section describes and justifies the methodology of my data collection and analysis.

I chose to perform a qualitative study for several reasons. First, since research into persuasion in proposals is largely unexplored, a qualitative study provides great value as a primary, detailed exploration of the genre. It can help orient proposal research and pave the way for broader quantitative research. Second, a qualitative analysis enables me to examine specific details of the proposal writing and reviewing experience and its effect on the individuals involved. Third, many researchers in professional communication have suggested a need for in-depth study within professional and business organizations that will contribute to better communication and writing (Bloch 2000, 75).

I used NCHRP proposal writing and reviewing because of my familiarity with the subject and the access I had to the information. One administrator at the transportation laboratory where I work is a former employee of the NCHRP and has insider knowledge regarding people, procedures, and practices of the NCHRP. The availability of the data and opportunity for data collection presented a unique opportunity for data collection and analysis that would benefit rhetoricians, transportation engineers, and others.

### *NCHRP Proposal Writer Interviews*

During my two years as a graduate student, I have been employed in the publications department at a prominent Midwestern transportation research laboratory which I shall call MidTrans. MidTrans is a transportation research organization for both public and private agencies and companies. It also manages its own education program for college transportation students. It also conducts local, regional, and national transportation services and continuing education programs. MidTrans consists of different organizations dealing with different research projects in transportation. In its mission statement, MidTrans emphasizes its services to the community through education and outreach and its research services to the state's Department of Transportation (DOT).

To collect proposal writer data, I selected proposal writers from MidTrans to interview about their perceptions of effective persuasive strategies in NCHRP proposals. MidTrans is an ideal place to interview proposal writers for the following reasons. First, MidTrans is diverse in the type of transportation research projects it performs, which provides an ideal place to select proposal writers from different transportation fields. Second, as an inside employee at MidTrans, I gained an understanding the procedures transportation proposal writers follow in writing proposals and the organizations to whom they submit the proposals.

I selected interview subjects based on recommendations by MidTrans administration on the basis of their experience writing NCHRP proposals. The administration suggested three individuals, two male and one female. One male subject was dropped due to a misunderstanding regarding his experience with NCHRP proposals. He was released from the study and another male subject was selected. I took notes at the first two interviews and

then asked the third interviewee if I could tape the interview in order to get more accurate quotes and free myself from note taking to concentrate on the interview. All interviews were performed in accordance with Iowa State University's Institutional Review Board human research guidelines. Interviews lasted approximately one hour.

To find out what proposal writers thought regarding each of the three appeals in the context of NCHRP proposals, I formulated the following questions for the interview:

- What are you most conscious of when writing for the Transportation Research Board?
- Are you conscious of being persuasive when you write?
- What part of the proposal is the most persuasive? Why?
- What types of strategies do you use to persuade?
- Do you try to present MidTrans in a positive light? If so, who does that include (e.g. investigators, researchers)?
- How do you present them in a positive light?
- How do you represent yourself?
- Do you try to appeal to the reviewers' feelings about the project? How?
- Are facts important in your proposal? What are the most important facts in your proposal?

These questions were selected to find out which persuasive strategies were used by NCHRP proposal writers. The questions were designed to reflect each Aristotelian appeal, since they are the measurements from which to gauge persuasion. During the course of the interview, all of the interviewees made comments that required follow up questions, which were regarded as supplements to the above questions. These follow up questions varied from interviewee to interviewee, which showed emphases on different Aristotelian appeals.

### *NCHRP Proposal Reviewers*

To understand the process by which research proposals are reviewed, it is important to understand what the NCHRP is and how panel members (those who review the proposals) are selected. The NCHRP is an organization associated with the Transportation Research Board (TRB), a part of the National Academies. The National Academies provide information regarding critical national issues and give advice to the federal government and the public (National Academies). The TRB prides itself on both having an “extensive committee structure” from which transportation authorities may be drawn and having a reputation of objectivity. The NCHRP is an organization that contracts research programs that develop solutions to transportation-related issues (National Cooperative Highway Research Program). Transportation-related problems that arise are assigned to one of eight broad research fields, and then assigned to a panel that is qualified to more specifically evaluate the problem and the proposals to solve the problem.

The panel consists of members who are considered experts in their respective field of traffic engineering and who can provide guidance during the course of the research. Each panel has a project officer who forms the panel based on their knowledge of the subject matter and

networking. The panel selection is then reviewed by a third party to ensure a proper balance of technical knowledge and expertise and balance. Members are selected from “state and federal agencies, the Federal Highway Administration, universities, national associations, institutions with related interests, industry and other agencies” (National Cooperative Highway Research Program, 2). Although the NCHRP prohibits members sending in proposals for which they are panel members, many of these individuals have submitted other, prior proposals to the NCHRP. In other words, the review panel consists largely of proposal writers, which may be significant because the reviewers and the writers come from the same body of people, yet these individuals may focus on different persuasive aspects of the proposal when they are reviewing than they do when they are writing.

After the panel is selected, it develops a “plan for the attainment of [the] research problem” (2). Then, it drafts the request for proposal (RFP), a document that states the objectives and criteria for the research project. After proposals are submitted in response to the RFP, the panel meets to select the best proposal for the project. After a proposal is selected, the panel continues providing guidance to project managers and reviews the interim and final project reports.

To find out what NCHRP proposal reviewers discussed regarding the persuasiveness of the proposals, I attended two NCHRP panel meetings for two separate projects. Each meeting’s purpose was to select the best proposal for the respective projects. I worked closely with NCHRP administration to select panels that would be most appropriate and compatible for observation. Working closely with NCHRP administration, I developed guidelines to



preserve the confidentiality of the reviewers, proposals, proposers, and meeting proceedings.

The guidelines included the following:

- Any information that would identify panel members or other identifying subject matter such as dates, places, project content, or topics will be omitted.
- Names of panel members will be substituted with numbers during observation. Later, in the body of the actual thesis, these numbers will be replaced with pseudonyms for readability.
- Access to observation notes will be open to participating panel members, NCHRP staff, and the NAS Internal Review Board at any time during or after the review discussion. Anything that the above individuals or groups deem as questionable will be omitted or changed to their satisfaction. No other individuals or groups will have access to the notes except for the primary investigator's major professor (to ensure a high quality of data analysis).
- Submission of a copy of the thesis in its final draft will be given to NCHRP staff for review before it is made public.

I assured the panel and TRB administrators that, in gathering data from the NCHRP panel meetings, I was interested only in the communication process itself and that the research was not concerned with any specific transportation content, project, person, or organization.

After the NCHRP administrator approved my observation of the panels, I sent the participants copies of an informed consent document that they signed to solidify their participation and cooperation in the study. The two panels unanimously accepted the guidelines and provided the signed documents at the panel meetings.

The first of the two panels I observed, which I call NCHRP A, consisted of 11 members, seven men and four women. The meeting was scheduled to take two days. However, the panel came to a consensus unusually quickly, which cut the meeting down to one day. Most participants traveled by airplane to the location of the meeting and were scheduled to fly out once the meeting was over the next day.

Each participant was given proposals a month in advance. At the meeting, a packet containing the RFP, meeting schedule, handout of orientation presentation, contact information for panel members, analysis sheets for ranking the proposals, list of submitting agencies, proposal review guide, an NCHRP brochure, and an NCHRP contact information sheet. The purpose of the packet is to help guide the reviewer as he or she reads through and ranks the proposals.

The meeting lasted approximately eight hours with a lunch break. Because of the confidentiality of the meeting, I was not allowed to use a tape recorder. So, I used a laptop computer to type out participants' comments during the discussion.

The second panel, NCHRP B, consisted of nine members, eight men and one woman. All but one of the participants traveled by plane to the location of the meeting. The meeting was scheduled to last one day and many participants had return plane tickets for that evening.

The panel was given the same packet as the first group, with its respective copy of the RFP. The meeting lasted approximately seven hours including a lunch break. As in the first meeting, I typed out the reviewers' comments during the meeting.

Both meetings began with a PowerPoint orientation of what the NCHRP expects from the reviewers. Reviewers were expected to come into the panel meeting with a preliminary ranking of each proposal. Then, rankings were tabulated and posted for each proposal. After rankings were posted, proposals were discussed from lowest ranked to highest ranked. Discussions consisted of individual reviewers justifying their rankings by stating what they liked or did not like about the proposal. The discussion of each proposal ended when a consensus was reached whether or not to accept the proposal and when enough comments were gathered for feedback. After a proposal was chosen as the winner, reviewers suggested a runner-up proposal, in case the contractor and the Academy were unable to sign a contract.

### ***Coding and Analysis***

To provide a framework from which to gather data, I created a set of guidelines to accurately classify each sentence/clause as ethos, pathos or logos. After interviews were written and, in one case, transcribed, and panel meeting notes were written, I coded the texts based on the appeals. This section explains why my method of coding is important to the research question of whether there is a discrepancy between proposal writers and reviewers, how I established my coding through inter-rater reliability, and how I analyzed the data.

These coding guidelines can provide insight into understanding the persuasiveness (or perceived persuasiveness) of proposals. They provide a framework, categorizing boundaries (Glesne 1998, 132-133) from which to compare utterances of logos, pathos, and ethos between proposal writers and proposal reviewers. Using this framework, I can determine if reviewers focus on the same appeals with the same frequency as those focused on by writers since writers provided me with similar data. I was also able to draw some conclusions about

the congruency between writers and proposers with respect to the persuasiveness of proposals.

### ***Coding Logos***

Before I analyzed specific data from the interviews and meetings, I used the coding scheme that reflected the different appeals. I decided that logos in proposal writing can be manifested in three ways, which coincide with the definitions mentioned in the introduction: 1) in the logical structure of the proposal, 2) in the sources or data contained within the argument, or 3) in the enthymemes. I applied these definitions of logos to my coding scheme. Specifically, I coded a sentence/clause as logos if

1. It mentioned data or facts in the body of the proposal as they persuade the reader/reviewer. Data included source material and/or numbers.
2. It discussed using the structure of the proposal itself as a persuasive tool. For example, it was coded as logos if the interviewees or reviewers mentioned that the structure or organization of the proposal was “right” or “wrong.” Mentioning grammar errors or other logistical problems that may have negatively impact the evaluation of the proposal also was coded as logos because these errors are more logical or factual in nature rather than being directly related to author credibility or emotion.

### ***Coding Ethos***

Ethos in proposals, as defined above, is synonymous with credibility. In proposals, writers show credibility through representing themselves and their organization in a positive light.

Likewise, failing to represent themselves effectively may cause writers to lose credibility. I coded sentences as ethos if writers mentioned

1. The importance of representing the organization, team, and/or individuals in a positive way.
2. The qualifications or experience of an organization, team, and/or individual.
3. Strengths and/or weaknesses of the organization, team, and/or individual.

### ***Coding Pathos***

Pathos is the emotion of the reader/audience. In classifying sentences/clauses for pathos, I marked any sentence/clause that specifically mentions the reader/audience's emotions. Such emotions may include excitement, confidence or trust, like, hate or dislike.

To corroborate the reliability of the coding scheme, I asked another individual to code four pages from each text type (interviews and meeting minutes). The individual received a written criteria sheet and a short training session where she and I coded some lines of text together. Then, the individual and I separately coded the eight pages of text.

The results from the initial coding were less than satisfactory: 75 percent agreement for interviews and 81 percent agreement for meeting minutes. We discussed the reasons for the large discrepancies and came to the following conclusions and resolutions:

1. The statement in the criteria that classified logos statements as sentences/clauses as "using the structure of the proposal itself as a persuasive tool" is misleading.

Many of the speakers in both interviews and meetings discuss the “how to” guidelines for writing a proposal. However, few discuss these guidelines in the context of making the proposal persuasive. Therefore, the guideline for classifying statements as logical was changed to include those sentences/clauses that explain the structure of the proposal.

2. The coding criteria for ethos excluded some information about the organization, writer, etc. We found that many speakers referred to organization or team abilities based on what was gleaned from the logical arguments from the proposal text itself, rather than prior experience with that individual organization or team. Therefore, the criteria for coding ethos was changed to include information about prior experience that was deduced from the proposal text itself. For example, “they didn’t show that they understood the problem” was coded as ethos.
3. The coding criteria for pathos were too vague. We found instances where the speaker states “I think” or “I understand” to begin a sentence. It was unclear whether these should be categorized as pathos. We concluded that because these “I” messages are used to describe cognitive functions rather than expressing personal feelings, they are not considered pathos statements. However, messages such as “I like” or “I hate” were included since they reflect the feelings of the speaker.

After the above issues were resolved, we coded several other pages from another interview and the other meeting. The second time the inter-rater reliability showed an 86 percent agreement for meeting minutes and an 84 percent agreement for interviews. The

improvement in the coding shows that the coding revision was successful and that coding the appeals could be reliably coded.

An example of the final results of the coding is shown below in Figures 2 and 3. Figure 2 is an example of an interview text and Figure 3 is an example of a panel meeting text.

B: Are you conscious of being persuasive when you write a proposal?  
 D: Yes. Generally try to be as persuasive as I can in answering that so you get the bid.  
 B: What are you most conscious of when you write a proposal?  
 G: Most conscious of? I would say that I try to be as clear and concise as possible in responding to the questions. Try not to use too many, uh, flowery words if you will, but try to be concise and to the point of what they are asking for.  
 B: By "flowery" what do you mean?  
 G: Depending on what you are responding to, you want to make the Iowa State and MIDTRANS in the best light. So you don't get too descriptive. You say, a, b, c, we can do the following for you we can do this well. You don't try to get too overly descriptive on what you are trying to do.  
 B: OK, you also talked about questions, what type of questions are you answering?  
 G: A lot of times the proposals we respond to ask what are the capabilities of your institution. So we have to tell them what we are and what are the qualifications of individuals and what does Iowa State, MIDTRANS bring to the table. Sometimes they will ask specific questions about if we have done any work in this area before and that type of thing.  
 B: Do you put that in a certain section in a proposal?  
 G: None of the RFPs are very specific. They have a general outline that you are supposed to follow. There will be times when yes you put them in a qualifications section, say put qualifications in section 7 for example. You put in qualifications the people you are working with and the capabilities of the institution and you have specific sections in that. Other agencies and foundations that are less in that area, so you follow an outline format that you are comfortable with in following that, put the problem statement first, then probably the budget, then the qualifications of everybody.

Blue highlight: Logos  
 Green highlight: Ethos

**Figure 2. Example of coding for interviews.**

J: I didn't see that strong experience in either of the two.  
 H: Lets do each individually.  
 J: Prop 9 had one person who worked at DOT. But they had little experience.  
 L: I wouldn't want to work with them. They are very smart. But I don't think they are going to do a more practical application.  
 I: The examples in the proposal doesn't demonstrate an understanding of the problem.  
 K: This team is so small that there is no way they could do a national type of research effort.  
 G: Anything positive?  
 D: [REDACTED]

Blue highlight: Logos  
 Green highlight: Ethos  
 Purple highlight: Pathos

**Figure 3. Example of coding for panel meetings.**

To effectively analyze the classified data, I compiled the respective coded sentences/clauses and placed each into a Microsoft Access database. Then I sorted and compared interview data with meeting data in several ways. First, I compared the percentages of clauses drawing on each appeal across all of the interviewees and meetings. Second, I looked for groups of sentences/clauses that discussed the same topic within each appeal. Analyzing the data by comparing the coded sentences/clauses allowed me to note the congruence and incongruence between what writers perceive as persuasive, and what the reviewers mentioned. In the next section, I discuss the results of the data analysis.



## CHAPTER 4: RESULTS AND DISCUSSION

In this section I show the results of the data analysis and discuss what these findings could mean. I begin by discussing some of the overall findings of the analysis which act as a springboard to a more detailed look at each appeal. Within each appeal, I discuss grouped sentences that mention similar topics. I compare the comments of the writers, who have been given the pseudonyms of Sally, Ben, and Greg, with the comments from two NCHRP meetings, named NCHRP A and NCHRP B.

Before I discuss the general results, I want to emphasize that my conclusions and inferences regarding the data are not absolute. There are many variables in this research, as in other qualitative research, which may affect the data. Such variables include the subject matter of the NCHRP meetings, individual behaviors (of both the interviewees and the NCHRP panel), interviewee transportation specialty, and meeting location, and the content of the coded sentences/clauses themselves. In spite of these variables' influence on the results, I believe that this research provides insight into both the persuasiveness of the proposal writing process and the potential gap between the NCHRP proposal writer and the reviewers.

### *Total Comparison*

As a starting point to a more detailed discussion regarding the potential gap between the proposal writer and the NCHRP reviewer, I compared the percentage of total coded responses by each group or individual for each of the three appeals. Figures 1-3 show how much each group or individual referred to topics that fit one of the three appeals compared to the total number of coded sentences/clauses.

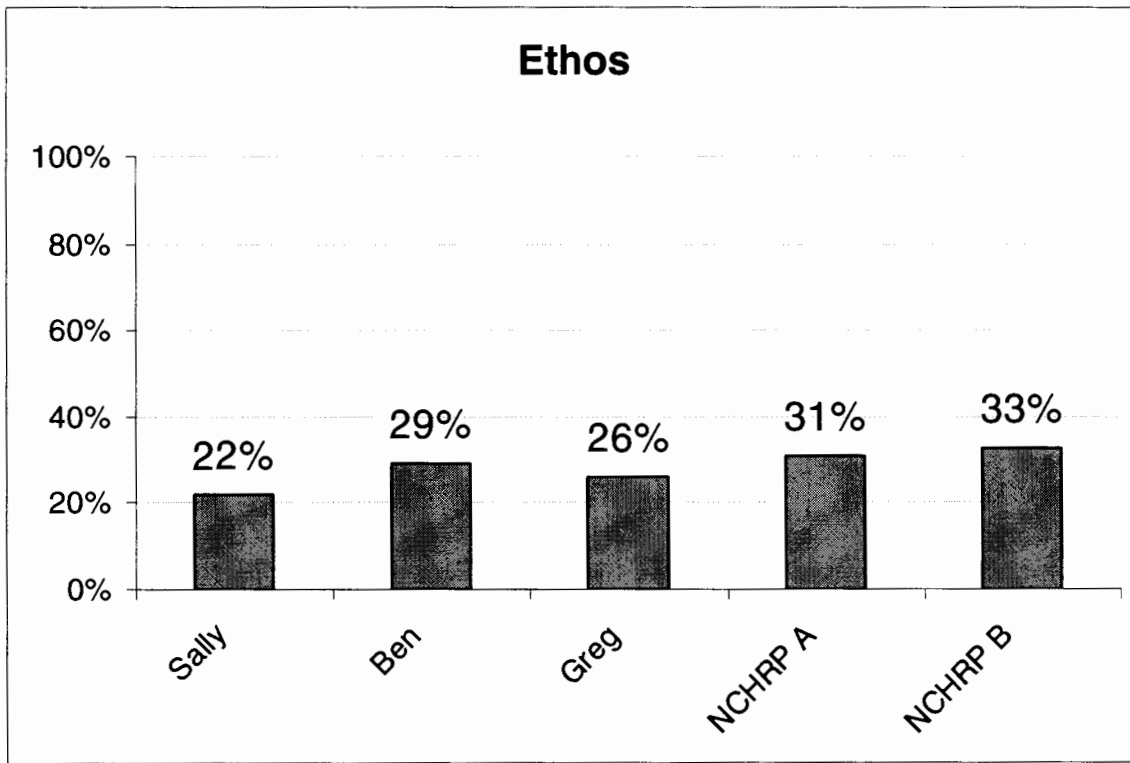
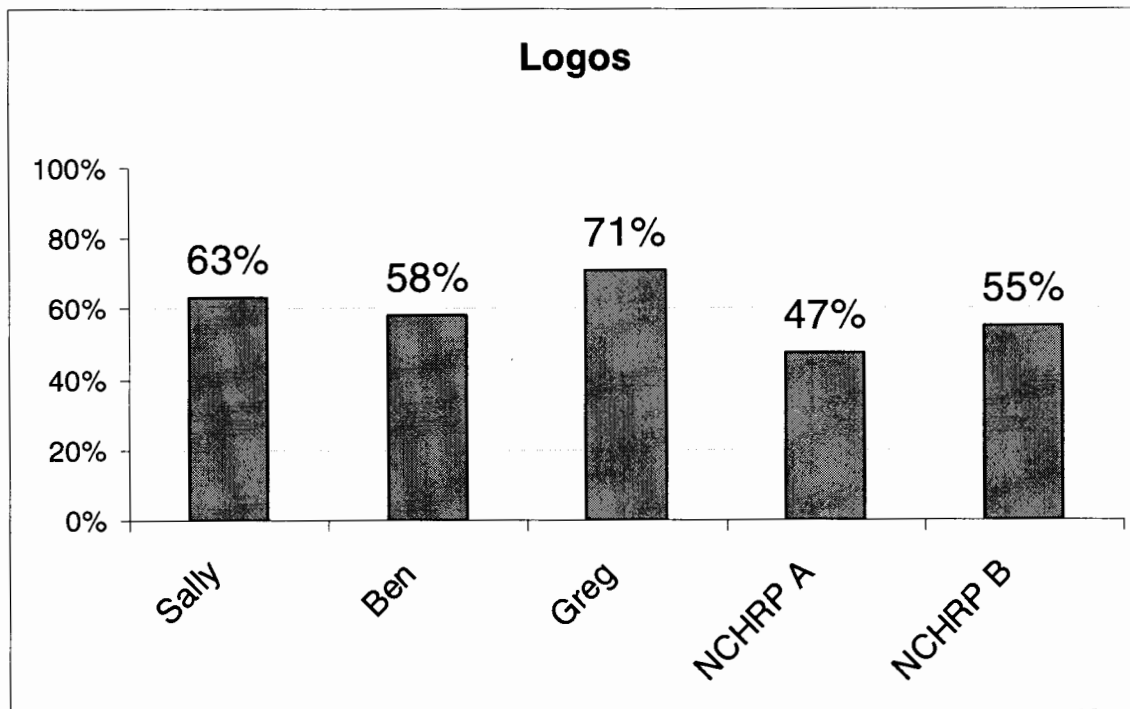
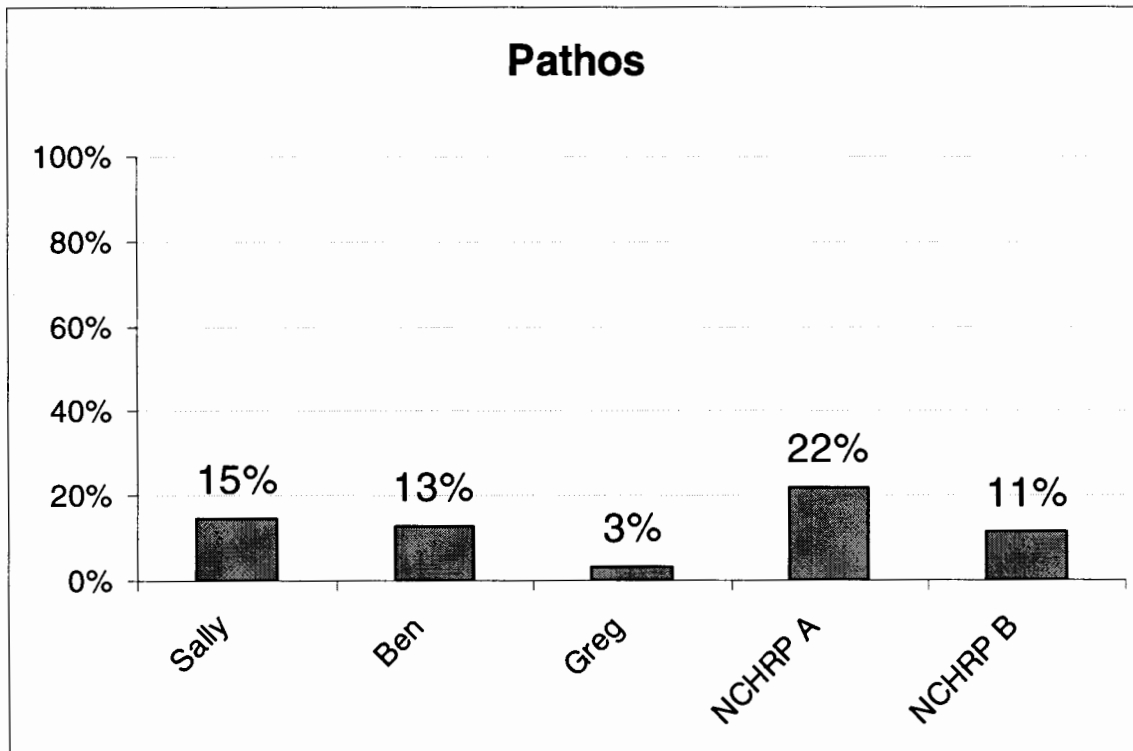


Figure 4. Percentage of total ethos-coded responses by each group.



**Figure 5. Percentage of total logos-coded responses by each group.**



**Figure 6. Percentage of total pathos-coded responses by each group.**

These figures denote a more quantitative approach; however, this side-by-side comparison simply is to provide a starting point for discussion. A true quantitative analysis would need more participants and data for a comparative analysis of the above percentages. However, the figures may provide some preliminary insight into the potential writer-reviewer persuasive gap. I discuss each table below.

Figure 4 shows a fairly consistent trend between writers and reviewers. It is possible that writers and reviewers mutually understand the importance of ethos, and that reviewers conventionally emphasize what reviewers are looking for regarding credibility. However, it is also notable that, at the beginning of each NCHRP meeting, the NCHRP staff members

that present the orientation emphasized ethos more than the other two appeals. For example, one of these members stated in his orientation, "In this discussion we want to know the past experience you have had with the proposers and your knowledge of past performance."

In spite of this admonition by the member to focus on past experience, ethos-related comments were only mentioned at most in about one third of the total sentences/clauses. This result suggests that perhaps the NCHRP staff prompts a more ethos-related discussion than what actually occurs.

Figure 5 shows that the majority of all the coded comments reflect logos. It is also interesting to note that there is a fairly significant discrepancy between the percentage of logos-related comments from the interviewees and the NCHRP meetings. This may suggest that reviewers respond less to logical persuasion than writers perceive.

Figure 6 shows a large discrepancy between the interviewees and between the NCHRP panels. Sally places much more emphasis on emotional persuasion than Greg, who said when I asked him if he appealed to reviewers' feelings, "No, I don't. I look at the questions that are asked and the tasks that are laid out. And I try to address those. So I look at those and answer those as straightforwardly as possible." Greg underemphasizes pathos as a means of persuasion whereas Sally's emphasis is closer in percentage to the amount of pathos-related sentences/clauses used by the NCHRP panels. The NCHRP panels also vary in their use of pathos-related sentences/clauses, which may vary according to the subject matter of the review panel and/or the behaviors of the panels themselves.

Using these figures as a starting point, we can see that there are gaps within the appeals between the interviewees and the review panels. As I examined coded sentences/clauses for each appeal, groups of similar ideas surfaced. For the remainder of this section, I discuss some of the gaps from these groups of similar ideas.

### *Ethos*

Ethos-coded sentences/clauses discuss primarily the experience of any individual or team that participates in the project. The groups of similar ideas reflect some of the similarities and some of the potential gaps between the interviewees' perceptions of what is important about ethos in their proposals and the NCHRP panel's discussions of ethos-related topics. Listed below are these groupings and a comparison between the interviewees and the reviewers.

### *Experience*

One of the largest groups of like ideas in ethos-related sentences/clauses, were those related to the experience and/or reputation of the individual or team. All three interviewees emphasized the importance of presenting one's individual and team experience in a positive and persuasive way. Two interviewees, Sally and Greg, both referred to presenting their experience as "selling themselves" as if they were a business, "so," as Sally states, "that they know we can get it done." The interviewees also emphasized that experience should be relevant to, as Ben states, "exactly what they [the panel] want." Therefore, the interviewees understood the importance of emphasizing the experience, and aligning it with the expectations of the NCHRP panel.

The NCHRP panel's comments on experience reflect the perceptions of the interviewees.

The panel judged experience based on the following:

- If they knew/didn't know what experience the individual/team had
- If that experience was in line with the panel's expectations
- If past experience with the individual/team was positive or negative

The panels also judged ethos based on if the team/individual had too much experience in a single area and not enough in another area. Many of the sentences/clauses from the NCHRP examine the focus of the experience, if it was too specialized or too broad for their current expectations. The NCHRP panel's expectations regarding past experience fits in well with interviewees' perceptions.

### *Building a Team*

Along with past experience, team building is another mentioned topic of ethos, Ben stated that individuals who plan on submitting proposals to the NCHRP usually team up with individuals who are well known by the NCHRP panel. Ben and the other two interviewees emphasized the importance of building a team that will be recognized by members of the panel. Ben believed that the rationale behind building such a team is that NCHRP panels are conservative and are more likely to select a team that they know are successful. Therefore, the interviewees perceive that they will increase their credibility if they form a team that the NCHRP knows well.

The NCHRP panels discussed the concept of team from a slightly different perspective than what the interviewees did. Although the NCHRP emphasized individuals that they knew,

they also emphasized the combination or “mix” of the team. Many sentences/clauses related to team included terms such as “well-rounded,” “good blend,” “well balanced,” and “right composition.” Therefore, besides the importance of gathering a team that the NCHRP knows, individuals should also base teams on the different strengths, based on past experience, of each individual.

### *Getting the NCHRP Panel to Know You*

Making yourself known to the NCHRP panel is also perceived as important to speakers and reviewers. The interviewees discussed tactics that they use to make themselves known to the researchers. Sally told me that she calls the project officer, who is the only one who is allowed to give information to proposal writers, with a question, even if she has to make it up. “I at least get them to recognize my name,” she says. Ben sums up the perceptions of the interviewees saying simply, “If they don’t know you, you’re screwed.” To become known to the NCHRP panel, Ben suggests teaming up with someone that the panel knows well.

The NCHRP panels’ comments on knowing an individual were focused on the reputation of that individual. For example, some comments included “That’s what I’d expect from Alan,” or “Jerry is a first class person” (pseudonyms added). Also, individuals on the panel focused knowledge of a person on their prior personal experience with that person. For example, a member of NCHRP A stated that his former boss was one of the proposers and that the former boss had a specific agenda and focus that she would be bringing to the project that could help with a specific project issue. Therefore the NCHRP panels focus not only if they know the person, as the interviewees suggest, but on the individual character of the person as they have known or had experiences with him or her.

*Including Good Resumes*

Sally and Greg stated that the RFP requires that resumes be attached to the proposal and that the proposer should put the best face on them. A member of NCHRP A mentioned that the resumes do not reflect what the reviewer is looking for. The NCHRP is expecting a resume that includes information that is relevant to the project, a concept that was not mentioned by the interviewees.

*Outliers*

The above three groups of topics included more than 90 percent of all of the sentences/clauses about Ethos. There are outlying issues that were mentioned, though not extensively, by interviewees. These issues are general statements about gaining, or losing, credibility. These issues include the following:

- Proposers must have a proposal that distinguishes them from other proposals
- Credibility, along with methodology (logos), is the most important factor in proposal writing.

The ethos-coded sentences/clauses as they are grouped above did not leave many outlying comments from either the interviews or the NCHRP panels. Some of the above comments show that interviewees may need to expand or refocus some of their perceptions of ethos.

However, I believe that the persuasive appeal of Ethos used for the NCHRP panel generally is well understood by the proposal writers. Logos, however, surprisingly revealed some very different results



***Logos***

Logos is the largest coded appeal, in both the amount of coded sentences/clauses and their diversity. Perhaps logos has the largest percentage of the total coded sentences due to engineers' experience with logical, objective argument. Its size may also be due to the material required by the RFP. In any case, sentences/clauses in the logos appeal provide some interesting insights into the proposal writing process. As in the above section about ethos, the following groups are based on similar ideas from both the interviewees and the NCHRP panels.

***Avoid Bad Grammar***

Sally and Greg commented on this group, stating only that poor grammar would have a negative impact on the panels' reaction to the proposal. They were, for the most part, correct in their perceptions. NCHRP B had a comment that complained about a proposal that appeared not to have checked for misspellings. One member of the NCHRP A panel confessed to a peer that because a section of the proposal was written so poorly, she didn't read any further. However, another NCHRP A member remarked that one proposal gained positive ethos. He said about a proposing team, "they can write and edit and it counts." Therefore, the logical act of avoiding bad grammar not only helps the panel not react negatively; it also can have a positive influence on one's credibility, which suggests that, for the NCHRP panels, logos has a direct relationship with ethos.

### *Be Clear and Concise*

Both Ben and Greg stated that it is important to be clear and concise with one's arguments. However, their definitions of clear and concise vary. Ben defined being clear and concise as turning the text into something that anyone, not just an expert, could read. Greg defined being clear and concise as "being specific and laying the plan out logically." These two definitions are similar but not the same. Ben focused on simplicity and easily understood prose, where Greg focused on specificity and logical argument.

The NCHRP panels did not use the actual phrase *clear and concise*. However, many panel members remarked when something was unclear. Some comments included complaints about not being able to tell if the team was trying to change or manage a process, not being able to tell where the problem resided in the body of the text, or stating that the whole proposal "wasn't too clear." Other members commented on the vagueness of specific sections, including the tasks. These comments suggest that both Ben and Greg are validated in their definitions of being clear and concise. The NCHRP panel stated that if the argument is not laid out specifically, it is vague. Likewise, the panel mentioned that if a text is not simple enough that a reader can navigate the document, the reader is likely to get lost. Therefore, both Ben's and Greg's definitions of clear and concise have merit based on the NCHRP panel comments.

### *The Panel Looks Most at Methodology*

Interviewees believe that one of the biggest factors in writing the proposal is the methodology. Sally believes that a major part of persuading the NCHRP panel is to convince

them that you, the writer, have the best methodology. Greg defines the methodology as “telling the reviewers what you are going to do and how you are going to do it.”

Although Sally and Greg emphasizes methodology, they did not go into detail about what the methodology consists of. All three interviewees stated the importance of responding to the RFP and outlining the tasks. This response, they believed, depended on the subject matter and responding to the RFP’s research questions. However, after looking at the NCHRP panels’ comments on methodology, I noticed a more general pattern emerge from the data.

The pattern emerged as I grouped like responses. The sentences/clauses from this group, (46 sentences/clauses) fell into one of two categories: 1) the proposers mentioned/emphasized  $x$  in their research plan, or 2) the proposers did not mention/emphasize  $x$  in their research plan.

The variable  $x$  can contain any specific method, task, or approach. Most NCHRP panel members expected proposers to mention a specific method, insight, attitude, task or approach. Panel members examined the specific method, etc., to see if it was in line with their own expectations. The following sentences/clauses are examples of when panel members recognizing that a specific element of the research plan matched their expectation, e.g., when the proposer mentioned/emphasized  $x$ :

- “They point out explicitly about the embarrassment that the organization will suffer.”
- “They talked about a self analysis guide”
- “They discussed a web site”
- “They talk about a ‘ribbon-cutting attitude,’ that’s right on!”

Likewise, the NCHRP panels also noticed when an expectation was not mentioned, or when the proposer failed to mention/emphasize *x*:

- “They didn’t say who was doing the interviews, which are important.”
- “They didn’t mention the DOT as a reference.”
- “They don’t even talk about transportation.”
- “They didn’t talk about how the website would be supported.”

My purpose in mentioning these sentences/clauses is to point out that the interviewees did not mention, or perhaps did not consciously recognize, the importance of mentioning or emphasizing a specific method, etc. that the reviewers are looking for. In the logical arguments that proposers make in the research plan, the proposer attempts to align his or her method, method, insight, attitude, task or approach (*x*) with the panel members’ expectations. The lack of detail mentioned by the interviewees may signify a gap between their understanding of the logical argument in the methodology and the NCHRP panel’s expectations.

#### *Show Understanding of the Problem*

Another large group that incorporated statements from all of the interviewees and NCHRP panels referred to the concept of demonstrating understanding of the research problem (e.g., what led to the RFP in the first place). Sally believed that the NCHRP panel focuses on how the proposer can show how they explain and understand the problem. She stated that the panel needs to know that you understand the problem and can solve it. Ben expanded Sally’s explanation, stating that the proposer must demonstrate the same understanding of the problem that the panel has. He stated, “you need to show them something that says, ‘they get

it.” Greg simply stated that the problem statement of the proposal should go at the beginning of the proposal. The interviewees believed that to effectively persuade the panel that they understand the research problem, they must specifically mention that understanding in the body of the proposal and that their understanding must align with that of the panel.

The NCHRP panel members placed emphasis on if the proposer showed that they understood the problem. Both NCHRP panels mentioned understanding the problem on almost every single proposal that they looked at. The panels also mentioned, as part of understanding the problem, if the proposers understood the impediments to completing the project and solving the problem. Mentioning impediments in the proposal was important to the NCHRP panel members. An NCHRP A member states that the proposers did not demonstrate an understanding of the impediments to the project. Another member stated that he saw a proposal that stated that there were no impediments. The panel stated that the proposer missed the point because there were specific impediments that the review panel was looking for.

The interviewees emphasized and understood the importance of mentioning understanding of the research problem. However, they did not specifically mention the importance of mentioning an understanding of impediments, which may suggest a gap in what they perceive the reviewer is looking for. Therefore, interviewees should expand their definition of understanding the problem to also understanding the project’s impediments.

### *Citing Research*

All three interviewees discussed the importance of citing research. Ben and Greg stated that literature helps you “know what you are talking about.” Sally stated that she read over 200 articles for an NCHRP proposal, and that she felt that that was “overkill.” She stated that the feedback from the panel complimented her on her knowledge of relevant past research projects, but that knowledge was not enough to convince the panel to give her the project. The interviewees’ perceptions of citing past research was that it helps them build up their own logical argument based on past projects. Nevertheless, Sally’s experience taught her that a near-perfect understanding of the past research does not necessarily show the NCHRP panel that she is the best person for the project.

The NCHRP panels both only mentioned citing past research in one sentence/clause each. NCHRP A stated that one proposal, for no apparent reason, is not current with the documentation. NCHRP B stated that a proposal team was the only one who mentioned a specific source. Because both panels mentioned very little about prior research, it is possible that it is not as important as other aspects of the logical argument. Therefore, proposal writers may want to read just enough to show that they understand the concepts, as Ben suggested, but not to overemphasize citing research as a logical persuasive argument.

### *First Pages are Most Important*

All interviewees believed that the first two pages are the most important part of the proposal. Sally suggested that most reviewers do not read past the first few pages unless you give them reason to. Greg stated that the best place to present statistics and other facts is “right up front” in the introduction or problem statement.

The NCHRP panels mentioned very little concerning the first two pages of proposals. A member of NCHRP A was the only person to mention the first pages or parts of the proposal and did it only in two sentences/clauses. Both instances were negative stating that one introduction missed the point and that, in spite of its detail, the opening of another proposal was “off the mark.” Because the NCHRP mentioned little concerning the first two pages of the proposals, it is difficult to know if there is a potential gap between proposers and the panels. However, the lack of NCHRP sentences/clauses may suggest that the first pages are not necessarily the most important.

The above logos-related groups show some potential gaps between proposal writer perceptions and NCHRP panel emphases. The following groups are sentences/clauses that were mentioned repeatedly by the NCHRP panel members, but were not mentioned at all by any of the interviewees. These groups show a more definite logical gap in writer perceptions vs. NCHRP panel emphases.

#### *Finding the Correct Level of Detail*

Both NCHRP panels discussed the proposal’s level of detail. The panels referred to detail in the context of defining terms, and overall tone of the proposal. Most panel members referred to detail in a positive context. For example, the NCHRP A panel states that one proposal was more easily understood than another because it went into more detail. An NCHRP B member stated “I think one of the things that led us to this [choosing this proposal] is that it is focused and detailed in its focus.” Likewise, proposals that lacked detail when defining terms were scrutinized by reviewers. One NCHRP B member states that she was confused throughout the whole proposal because a term was not defined at the beginning. The NCHRP comments

imply that more detail in the proposal, especially when defining terms, makes the proposal easier to understand.

### *Presenting New Ideas to the Panel*

Both panels mentioned that proposers presented several new ideas that they had not previously thought about. The NCHRP A stated that the new idea was an interesting idea, even though the panel did not go into depth. They also stated that the idea fed directly into the project. The NCHRP B new idea was the creation of a website. One panel member stated that although the idea was a good one, the new idea still would not make or break the proposal. The presentation of new ideas could be beneficial to proposers, if they fit into the framework of what the NCHRP panels are looking for.

### *The Importance of Figures, Tables, and Flowcharts*

The NCHRP panels mentioned the figures, tables, and flowcharts. NCHRP A members found some of the tables and figures very useful in helping them understand the proposer's methods. Other panel members mentioned that creating a specific table was used to take up more space and that it did not present them with any new information. The comments from the NCHRP members suggest that proposers have a responsibility to create useful figures, tables, and flowcharts that help support the proposal.

The logos-coded sentences/clauses as they were grouped above showed that the interviewees understood many of the main concepts discussed by the NCHRP panels. However, there were still a significant number of groups that are possibly not well understood by the proposers, which were emphasized by the NCHRP panels, such as patterns in the



methodology, the level of detail, the presentation of new ideas, and the use of graphics. These groups show potential gaps in the persuasive logic used by proposal writers to persuade NCHRP panels.

### *Pathos*

Pathos-coded sentences/clauses are the least mentioned group in the three appeals. These sentences/clauses mostly reflected like or dislike of some specific factor in the proposal, which reflected a different appeal. For example, one NCHRP A member states, "I liked how they set up interviews in the tasks." The latter part of this statement refers to the methodology, which would be classified as logos. In spite of the small amount of feelings that were expressed by the NCHRP panel, several groups of topics emerged from the data that are worth discussing. Most of these groups relate the panels' feelings about an ethical or logical component of the proposal.

### *Making a Good Impression*

Greg states that making a good first impression is important in writing an NCHRP proposal. The NCHRP panels specifically mentioned being impressed/not impressed with the team/individual and their experience. Therefore, the NCHRP panel sentences/clauses suggest that the feeling of being impressed related directly to ethos.

### *Invoking Excitement*

When I asked Ben how he appealed to the NCHRP panel's emotion, he said, "You tell the story to excite the imagination." He explained that one needs to tell the panel how you will accomplish the project in an exciting new way. However, none of the NCHRP panels

mentioned being excited about the project methodology. They expressed more surprise at different elements of the proposal, and some of the surprise was negative. For example, an NCHRP proposal member states that he was “astounded” because he noticed that a proposer copied sections from a former proposal. An NCHRP B member stated that he was also shocked that a proposal lacked a specific individual. These two examples show that the members’ surprise was not positive. Therefore, being excited, according to Ben’s definition, is not the same as being surprised. Because Ben’s concept of getting the panel excited was not addressed by the NCHRP panel, perhaps it is either what is already expected by the panel, or it is not as important as Ben believes.

*“I Like/Dislike . . .”*

Interviewees did not mention persuading The NCHRP panel members to enjoy, like, or dislike aspects of the proposals. In fact, the interviewees state the opposite. Sally states the opposite, “I don’t consider if they are feeling warm fuzzies.” When I asked Greg if he tries to influence the NCHRP panels’ feelings, he simply said “no.” Nevertheless, the NCHRP panels mentioned in many sentences/clauses that they liked or disliked several specific parts of their proposal.

As stated in the introduction to Pathos, sentences/clauses combine feelings with ethos and logos-related comments. All of the “I like/dislike” sentences/clauses mentioned were attached to logos-related sentences/clauses. The “I like/dislike” comments usually relate to elements of the methodology such as the research approach, the budget, and the important of specific factors that panel members looked for. Based on Sally’s and Greg’s perceptions and

the NCHRP comments, proposal writers may not believe that feelings of like or dislike are important in the context of a logical or ethical argument.

The analysis of pathos shows that there are significant gaps in the understanding of evoking panel members' feelings in the context of the proposal. Although, compared to the other appeals, the pathos-coded sentences/clauses were fewer, they still show that the NCHRP panel members expressed feelings of like and dislike. However, the feelings were associated with the other two appeals of ethos and logos, which may suggest that Pathos is suppressed in the proposal writing genre. This suppression of genre may be further evident in the interviewees' direct denial of using pathos as a persuasive strategy. Therefore, the perceptions of proposal writers may significantly underestimate or not believe that the persuasive appeal of Pathos is relevant.

## CHAPTER 5: CONCLUSIONS

The previous section discussed the findings of the research and the specific groups of sentences/clauses within the appeals. It suggested that some specific proposal writer perceptions did not coincide with what the NCHRP panels actually discussed. This section expands the analysis discussion to explore conclusions about each appeal. Then, it relates these conclusions to the overall concept of persuasion in proposal writing.

The persuasive appeal of ethos was overall understood by the interviewees. Most of the groups' discussions, with the exceptions of a few outliers, prove that the proposal writer's perceptions equaled the NCHRP sentences/clauses. Therefore, the credibility of the individual and the team is highly valued by both writers and reviewers and can influence the panel's winning proposal selection.

Logos was the most emphasized appeal, yet was not completely understood. Although proposal writers understand the importance of presenting facts in the methodology, they underemphasized several important factors of the logical argument in the proposal such as the level of detail, presenting new ideas, and using graphics. The proposal writers' perceptions of using logical presentation of facts as a persuasive act is not necessarily as congruent with the NCHRP discussion as writers believe.

Pathos was the least understood by all groups involved. The proposal writers perceive that appealing to the NCHRP panels' feelings is largely unimportant. However, the NCHRP comments imply that, even though feelings are usually linked to the two other appeals, they are still a significant part of the persuasive process. Therefore, the largest gap I found

between transportation research proposal writers and reviewers is that dealing with pathos, which may suggest suppression in the proposal writing genre.

I believe that this study of the NCHRP proposal process provides great insight into persuasion and proposal writing. From a rhetorician's point of view, using Aristotle's appeals to examine proposal writing was effective in identifying some of the gaps between writer and reviewer. For proposal writers, this study provides several benefits that will allow writers to understand better how to use persuasion in their writing. Based on this research, I propose that proposal writers, specifically NCHRP proposers, implement the following:

1. Make sure to build a collaborative relationship with someone who is known liked by individuals on the panel.
2. See grammar and organization in the proposal as important in building positive credibility as it is in avoiding negative credibility.
3. Find out as much as possible regarding the expectations of the panel members through the IIPP and RFP. They should also realize that the panel members will be looking for specific methods and arguments that may not be apparent in the IIPP or RFP.
4. Do not rely on past research to write a successfully persuasive proposal.
5. Do not believe that the reviewers only look at the first pages.
6. Present new ideas only within the framework of the reviewers' expectations
7. Find a balance in the level of detail that is used.
8. Use figures and tables to help illustrate points. Make sure that they convey appropriate information and do not just take up space.

9. Avoid any unpleasant surprises that may put off the reviewers.

For future research, researchers could identify other genres where the appeals can be used effectively, such as business or workplace documents. Further research comparing specific discourse communities would also serve to provide additional insight into genre. Other research may include a study of pathos as a suppressed persuasive strategy in proposals.

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