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An Investigation into the Current Status of the Paradigm
Shift in Technical Writing Textbook Pedagogy

A thesis
presented to
the faculty of the Department of English
East Tennessee State University

In partial fulfillment
of the requirements for the degree
Masters of Art in English

by
Terre D.M. Byrd
May 2002

Darryl E. Haley, Chair
Isabel Stanley, Committee Member
Judy Slagle, Committee Member

Keywords: Technical Writing, Paradigm Shift, Aristotelian Rhetoric

ABSTRACT

An Investigation into the Current Status of the Paradigm Shift

in Technical Writing Textbook Pedagogy

by

Terre D.M. Byrd

The purpose of this thesis is to determine whether a paradigm shift is occurring or has occurred in technical writing textbooks since 1994. This study will further the work of Jerold J. Jeansonne, who chronicled the paradigm shift in technical writing textbooks from 1900 to 1994. Using product and process orientation guidelines, this thesis will examine several technical writing textbooks produced after 1994. The findings will then be calculated to determine the present status of the paradigm shift.

The thesis will also propose that the technical writing paradigm shift mirrors the paradigm shift in academic writing textbooks. To make this connection, the rhetoric of Aristotle will be employed to show that textbooks, whether they are academic or technical, are essentially argumentative. In light of this, particular attention will be given to Aristotle's characteristics of artistic argument: rational, ethical, and emotional appeal.

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CHAPTER 1

INTRODUCTION

Composition pedagogy has, in the past two decades, been deemed by many leading scholars to have undergone a pedagogical paradigm shift from product-focused models to process-focus models. Scholars researching and reporting this change include Maxine Hairston, Richard E. Young, Donald Graves, Sharon Pianko, Linda Fowler, Duane Roen, Steve Anderson, and Charles Kostelnick. These composition and rhetoric scholars have produced articles that detail the shift and textbooks that incorporate the new method of instruction. For example, Maxine Hairston published "The Winds of Change: Thomas Kuhn and the Revolution in the Teaching of Writing" in 1982. This article states that a paradigm shift in academic writing moved the focus from the product to the process. While Thomas Kuhn originated the term "paradigm shift" he meant it only to be used within scientific disciplines. Hairston's article instead applies the term to writing. A later article by Hairston, "Different Products, Different Processes. A Theory about Writing," again voices her claim of a paradigm shift in composition. Richard E. Young follows suit with his "Paradigms and Problems: Needed Research in Rhetorical Invention." Young also applies Kuhn's term "paradigm shift" to composition. This article also suggests that the textbooks of a discipline offer the most insight into a paradigm (31). For that reason, it is natural for a person investigating the paradigm shift, either in academic or technical writing, to research the current textbooks produced in the discipline. This thesis will do exactly that.

Academic and technical writing are alike in many areas. While composition and technical writing focus on two different genres of writing, they employ the same rhetoric

to achieve their ends. All written documents, whether academic or technical, are essentially argumentative and, therefore, inherently similar. These two genres of writing also employ the rhetoric of Aristotle to guide readers successfully in the forms of argument and persuasion. For that reason, it is necessary to review technical writing textbooks in order to determine whether or not technical writing textbook pedagogy has followed or is following the pedagogical paradigm shift that academic writing has undergone. The results of this review will offer insight on the place of technical writing in the academic arena and on the relationship between technical and academic writing. This thesis will continue the research of Dr. Jerold Jeansonne, who completed his Dissertation entitled "The Paradigm Shift in Technical Writing Textbooks Pedagogy" in 1996 at Oklahoma State University. Since Jeansonne reviewed textbooks up to 1994, technical writing textbooks published after 1994 will be analyzed in order to determine the present status of the paradigm shift Jeansonne claims is occurring in his 1996 dissertation. While this thesis will mirror Jeansonne's in several areas-- namely, in the argument that technical writing is similar to academic writing and in the importance of rhetoric in both academic and technical writing-- it will employ a different, and more detailed, methodology in analyzing the textbooks.

The chapter of this thesis entitled "Analysis of Major Textbooks in Technical Writing" will determine in which category the textbooks I have reviewed fit best. The textbooks have the possibility of qualifying as either process-oriented, product-oriented, or a combination of both process- and product-oriented. Product orientation and process orientation are terms that can be used effectively to compare and contrast technical writing texts as well academic essays. In product-oriented texts, the writing process is

viewed as a linear action; only the outcome is evaluated. One plans what one wants to write, undertakes the writing process, and edits the finished work. These books often show models and devote much time discussing what finished products should look like, while paying little attention to the methods that achieved the finished work.

Process-oriented texts work around the idea that writing is not a linear action. The writer is constantly discovering more about the composition he or she creates as he or she is creating it. In the process of writing the writer moves freely within the linear action that characterizes product-oriented writing. One moment the writer may be writing, the next planning, and the next editing. The methods that a writing teacher uses to achieve the finished work, whether they be brainstorming or peer consultation, are emphasized more than models.

Some textbooks combine both product and process-oriented instruction. These textbooks usually divide their contents in nearly equal parts. For example, one unit will be instruction on the writing process, while one unit will deal with product-oriented instruction, such as formatting. These textbooks usually present process-oriented instruction first, followed by product-oriented instruction. It is a rare occasion when a book presents product-oriented instruction first or intersperses the two orientations within one chapter. However, at least two of the books reviewed do just that.

This thesis will begin with a review of fifteen technical writing textbooks produced from 1994 to the present. Using product-oriented and process-oriented guidelines, I will determine whether the text is solely product or process-oriented or if it combines the two. My guidelines, which will be covered in more detail in the "Methodology" section of this thesis, state that at least three or more units devoted to

the processes of writing are needed to qualify a book as being process-oriented. In turn, if a textbook offers less than three units on the writing process, but no more than three units of product-oriented instruction, it qualifies as a combination of both process and product orientations. Product-oriented instruction includes sections or pages on format, structure, and patterns that apply to the writing of technical documents and that technical documents follow. I decided that for a textbook to be declared as being fully product-oriented at least seventy-five percent or more of its contents should be product-oriented instruction. Percentages were chosen instead of units because of the lack of units in those textbooks that were deemed to be fully product-oriented. Actually, these textbooks can even be referred to as guidebooks because they are shorter and their emphasis is only on the finished product. In the "Conclusion" I will present my opinion that the guidebook is the only book form that presents solely product-oriented instruction.

The use of argumentation in technical writing textbooks is interesting because it proves that the texts are essentially similar to academic composition. In choosing argumentation as the defining and essential discourse method, I will refer to Aristotle's artistic form of argument and its characteristics: rational, ethical, and emotional appeal. Rational appeal usually appears within process-oriented instruction in technical writing textbooks. Often, it is used to argue the cause or beliefs of the speaker or writer. Rational appeals rely on justifying reasonable information presented. If thought is not given to reason during the processes of writing a document or speech, then it is unlikely the audience will be receptive. Ethical appeals also usually appear only during process-oriented instruction as opposed to product-oriented instruction. Ethical appeals present material to the audience that emphasize the "right" thing. Connected to this

rhetorical appeal is the importance of ethics in technical writing. Several technical writing books reviewed devote many pages (sometimes entire chapters) to ethics. The inclusion of ethical instruction appears to be growing more popular as many later editions of textbooks add this material. Appeals to emotion are the last characteristic of artistic argument that Aristotle describes. These appeals play on the emotion of the audience in order to argue for a cause or belief. While this method is not as popular as rational and ethical appeals in the field of technical writing, it is still discovered in sections on analyzing audiences.

Therefore, I will propose that the similarities of technical and academic writing occur not only in the rhetoric they employ but also in their paradigm shifts. I will also set forth examples from the textbooks of the Aristotelian rhetorical appeals to reason, ethics, and emotion. These examples will prove that many technical writing textbooks produced after 1994 employ this rhetoric to instruct readers in the discipline. Because of the wide use of rhetoric in technical writing and because of rhetoric's place in academic writing, the two disciplines are very similar. And, because many composition scholars agree that their discipline has undergone a paradigm shift from product-oriented instruction to process-oriented instruction, it is likely that the paradigm shift Jerold J. Jeanson determined to be happening in 1994 may still be occurring.

This review is important to scholars in rhetoric and composition studies because all teachers of technical writing should know the present status of the paradigm shift in technical writing. This will allow instructors to incorporate the new orientation or disregard it. Whether they chose to do one or the other may not be as important as whether they know the advantages and disadvantages of the orientations. Awareness of

the paradigm shift is of the highest order. The status of the paradigm shift will also further the relationship between the two disciplines of academic and technical writing. If technical writing should follow academic writing in a paradigm shift, then it is more likely to be viewed as a form of composition in university English departments.

CHAPTER 2

METHODOLOGY

This review and analysis of technical writing textbooks determines whether a paradigm shift is occurring or has occurred. To determine the status of the paradigm shift I collected fifteen major college-level technical writing textbooks and guidebooks produced after 1994. After compiling the books I determined them to be either process-oriented or product-oriented or a combination of the two. Guidelines for determining the status of the books will be discussed in the "Defining the Categories" section.

This methodology is composed of five major sections.

- The Scope of the Study
- Excluding Textbooks
- Collecting Textbooks
- Defining the Textbooks
- Results

The Scope Of The Study

To gather the most accurate results for this study I reviewed college-level technical writing textbooks in order to calculate the status of the paradigm shift and to determine the orientation of the books. Only one of the books reviewed, *Technical Communication: A Guided Approach* (Published by West), by June Dostal and Deborah St. Vincent, could possibly be regarded as a secondary school text. I decided to keep the review of this book in the study because there were many college-level reviewers of this book listed. Other than this book, the books I chose were unanimously either books that a college-level instructor could use for his or her technical writing courses, or college-level

supplemental guidebooks that a university professor could suggest to or refer to his or her students. At least one of the books I chose has been used in a technical writing course taught at East Tennessee State University.

Excluding Textbooks

I decided to exclude several books that are associated with technical writing but could not benefit the scope of this study. They are as follows:

- Books that Focus on a Particular Technical Writing Document or Presentation
- Books that Focus on a Specialized Subject
- Books Intended for a Special Audience

Books That Focus On A Particular Technical Writing Document Or Presentation

I excluded books that focus on a particular technical writing document or presentation because of the limited amount of instruction they provide. These books might devote their entire contents to discussion and instruction on letters, proposals, memos, etc. These books do not offer material that could be useful in my overall study of the paradigm shift. While a technical writing book on presentations may offer material I could use in my study of rhetoric and persuasion, it could not give me a good idea of where this material fits in concerning the paradigm shift. An example of this type of book can be seen in Bud Porter-Roth's and Ralph R. Young's *Request for Proposal: A Guide to Effective RFP Development* (2001).

Books That Focus On A Specialized Subject

I excluded books that are specialized in regards to the technical writing field, such as those on technical editing and those dealing with document design. These books are too narrow in scope and would present that same problem as technical writing books

that are devoted to a specific genre. These books are also aimed toward a specific audience, such as a technical writer. An example of this type of book would be Karen A. Schriver's *Dynamics in Document Design: Creating Text for Readers* (2002).

Books Intended For A Special Audience

I excluded books intended for a special audience because, like the two prior categories, these offer too narrow a scope for the purpose of this study. These books could range from technical writing practices in the medical field to technical writing instruction for contractors and construction workers. These books, while offering useful information, do not further the work of this thesis in regard to technical writing being relative to academic writing. An example of this type of book would be David W. Rigby's *Technical Document Basics for Engineering Technicians and Technologists* (2001). This book deals only with the documents popularly used in those professions.

Collecting Textbooks

The textbooks I collected for review were all modern, esteemed, college-level technical writing textbooks. Several books were reviewed in separate editions because of my need to determine whether changes had been made in the newer editions that related to the paradigm shift. All of the books I reviewed were published after 1994.

Defining The Textbooks

The textbooks I collected for review had the possibility of either being fully product-oriented, fully process-oriented, or a combination of the two. The combination of the two orientations could either be manifested in leaning toward one orientation or the other, but, essentially, showing characteristics of both. All of the books I reviewed seem to work well with these three categories. This section will define these categories:

- Process-Oriented
- Product-Oriented
- Process and Product-Oriented Combination

Process-Oriented

Process-oriented textbooks are concerned more with the writing process than with the finished product. These textbooks devote greater than three units to the process of writing. This usually manifests itself in audience analysis, brainstorming, planning, writing, and revision. The modern books that I reviewed often covered the subject of collaborative writing and ethical writing as well. This nearly always led into a discourse on writer's responsibilities. Amid the discussion of these various topics, Aristotle's appeals to reason, emotion, and ethics were usually highlighted. In the three textbooks that I labeled as being wholly process-oriented, a statement to the same effect was found in the preface or introduction of the work. Thus for a book to be considered as wholly process-oriented, it had to match the following criteria:

- Three or more units on writing process

Three Or More Units On The Writing Process. In the years from 1994 to the present, technical writing appears to be producing textbooks that combine both process and product guidelines. For this reason, I felt it was necessary for textbooks that are to be defined as wholly process-oriented to have at least three or more units on the writing process. This method was chosen because most of the textbooks that combine both orientations usually have at least one chapter or unit devoted to writing process.

I present Paul V. Anderson's *Technical Communication: A Reader-Centered Approach* (1999) as fully process-oriented because of the following:

- Unit 1 Introduction
- Unit 2 Defining Objectives
- Unit 3 Planning
- Unit 4 Drafting Prose Elements

These units focus heavily on the process of writing. And, as well, Anderson states in the preface that he intends to present a process-oriented text (vii). Thus this book easily qualifies as being fully process-oriented. Paul V. Lannon's textbooks, *Technical Writing* (1997) and *Technical Communication* (2000) also qualify as being process-oriented under these guidelines. In both of these books, Lannon offers three units of process-oriented instruction and two units of product-oriented instruction.

Product-Oriented

Product-oriented textbooks focus on the end product of the writing process. These textbooks often include models and graphs of what a finished technical writing document should look like. Many times, the books that qualify as product-oriented textbooks give step-by-step instruction on how to form a generic technical writing document, while offering little or no instruction on the process of getting to the step outlined. In this study, the two books I determined to be product-oriented were actually supplemental guidebooks. These books are not organized by units but by chapters. This is probably due to their smaller size in relation to other textbooks. Therefore, I decided to use percentages based on page numbers to get a more accurate calculation of the degree of product-oriented material presented in the books. For these reasons, I decided to qualify a textbook as being product-oriented if it devoted more than 75% of its contents to product-oriented instruction. This detailed way of calculation is required

because of the high number of textbooks that combine both product and process-orientation on a nearly equal basis.

Seventy-Five Percent Or More Of Contents Devoted To Product-Oriented Instruction. Using this guideline, I determined two textbooks, Pfeiffer's *The Pocket Guide to Technical Writing* (2001) and Holloway's *Technical Writing Basics: A Guide to Style and Form* (1999), as wholly product-oriented. Both of these books are supplemental guidebooks. It is highly possible that fully product-oriented textbooks are no longer being produced, and that only supplemental books fill the role of being fully product-oriented. Further research into this area may prove this conjecture. The percentages for the amount of product-oriented instruction in these two textbooks are as follows:

Pocket Guide to Technical Writing: 86%

Technical Writing Basics: A Guide to Style and Form: 80%

Both of these guidebooks offer a useful template of what to look for in a textbook or guidebook that is fully devoted to product-oriented instruction. Both rely heavily on format and lightly on style. And both textbooks offer little instruction that could be viewed as process-oriented.

Process And Product-Oriented Combination

I considered textbooks that were not apparently process-oriented or not blatantly product-oriented and which had nearly equal parts of both elements, to be a combination of both the process and product orientations. These books often followed a similar pattern in their content construction. Many times I found that a textbook that combined both process and product orientations devoted one or two units to the process of writing followed by three or less units on the format of the product produced. For this reason, and

because three or more units on the process of writing were required for a textbook to be fully process-oriented, I decided that one or two units of process-oriented instruction alongside three or less units of product-oriented instruction could qualify a textbook as being a combination of both orientations. I wanted to limit the number of units for the process-oriented instruction because more than two units of process-oriented instruction often numbers a large volume of pages. As well, I wanted to limit the product-oriented instruction to guarantee my qualifications for fully product-oriented texts. This allowed for the remaining majority of the textbooks to be categorized. As this thesis will present, the greatest number of technical writing textbooks being produced at the present time are a combination of both process and product orientations.

One Or Two Units On Process Coupled With Three Or Less Units On Product. I decided to use the method of locating one or two units on process orientation coupled with three or less units on product orientation after I found that a majority of the textbooks being produced after 1994 combined both of these instruction orientations. Such pinpointed guidelines were needed to delineate these combination oriented textbooks from textbooks deemed to be either fully product-oriented or fully process-oriented. Using this method, I was able to determine that ten of the fifteen books I reviewed are a combination of both product and process orientations.

Results

I labeled each textbook I reviewed as either process-oriented, product-oriented, or a combination of both process and product orientations. The results of this thesis indicate that sixty-six percent of the textbooks I reviewed according to this methodology were a combination of both process and product orientation. The methodology used is

a more detailed and specific methodology than Jerold J. Jeansonne employed in his dissertation, which produced the same results. In the appendix to this thesis I present the result of these findings in year-by-year sequence. The textbooks I have reviewed were all published after 1994, the year in which Jerold J. Jeansonne's research stopped. The “Analysis of Major Textbooks in Technical Writing” chapter in this thesis will more thoroughly discuss each textbook I reviewed.

In the “Works Cited” portion of this thesis, I list all the works that I have reviewed for analysis and all of the work I have reviewed for general information on paradigm shift movements within academia and technical writing.

CHAPTER 3

ANALYSIS OF MAJOR TEXTBOOKS IN TECHNICAL WRITING

The purpose of this analysis is to investigate the current status of what Jerold J. Jeansonne deemed in his 1996 Doctoral Dissertation to be paradigm shift in technical writing textbook pedagogy (Oklahoma State University.) Jeansonne reviewed technical writing textbooks published from 1908 to 1994. Jeansonne's research determined that technical writing textbook pedagogy did undergo a paradigm shift in those years. He writes in his introduction, "My study demonstrates that technical writing textbook pedagogy has shifted from a product-dominated orientation to a process-dominated orientation but has not completely shifted to a process-dominated orientation" (6). Thus, at the time of Jeansonne's dissertation, technical writing textbooks were incorporating a combination of both process- and product-oriented instruction. This analysis of technical writing textbooks published after 1994 will determine whether college-level technical writing textbooks are product-oriented, process-oriented, or a combination of both product- and process-oriented and how these textbooks indicate the current status of the paradigm shift. This analysis will also determine the extent to which the textbooks employ Aristotelian rhetoric in their instruction. (By reporting both of these aspects when analyzing the textbooks, the results will better prove the relationship of technical writing to academic writing, and the place of technical writing in academia.)

John M. Lannon's *Technical Writing (7th Edition, Longman)* was published in 1997. This book shows process-oriented technical writing pedagogy with minimal product-oriented diagrams. With chapter titles such as "Solving the Information Problem" and "Solving the Ethics Problem," this book delves not only into the ways in which the

writing process is undertaken, but also ventures into the area of rhetoric. Chapter 4, "Solving the Persuasion Problem," offers good insight:

You face a persuasion problem whenever you express a viewpoint readers might dispute....Your goal might be to convert readers to a different way of thinking, to reinforce one particular way of thinking, or to create a new way of thinking. In any event, you need to make the best case for seeing things *your* way. (41 Lannon 7th ed.)

This statement points to the argumentative nature of persuasion and reinforces the idea that all writing genres are essentially argumentative. The chapter on persuasion continues with instructions on how to make an Aristotelian appeal to rational thought. Pointing to both the power connection and the relationship connection as possible ways to achieve a connection with an audience, Lannon relates that the most sensible appeal is a rational one (45 Lannon 7th ed.). Such appeals to reason are not new in technical writing, but current textbook pedagogy appears to embrace and expound upon them more than before.

Ethical appeal is employed by Lannon to foster thoughtful actions on the part of the reader. Chapter 5 is devoted fully to the question of ethics in the workplace and in technical documents. Obligations, ideals, and consequences are covered for their importance. In going over these topics, Lannon quotes from Vincent Ruggiero's 1991 *The Art of Thinking*: "[An ethical] dilemma exists whenever the conflicting obligations, ideals, and consequences are so very nearly equal in their importance that we feel we cannot choose among them, even though we must" (Lannon 77). Lannon even includes an "ethics checklist" at the end of the chapter in *Technical Writing* (7th) that encourages the reader to ask himself or herself questions such as, "Am I being honest and fair?,"

"Would I still advocate this position if I were held publicly accountable for it?," and "Am I reasonably sure this document will harm no innocent persons or damage their reputation?"

Now, beyond the rhetorical instruction, the book offers many other process orientation guidelines. One of the best examples of this is found in Chapter 6 on email. In this instance, instead of offering a product-oriented rudimentary guide to constructing email, the chapter uses bullets to propose such guides as "Email is democratic;" therefore, shy people can express their views equally, and "Email can foster creative thinking," so that the lax, and often grammatically uncomplicated email message, can actually produce better benefits than the structurally sound, yet creativity bare conversation. Because Lannon's textbook devotes three units to process-oriented instruction, this text qualifies as process-oriented as determined by the "Methodology" section. It offers some product-oriented samples, but they appear as little more than a good faith production of what the book devotes ample rhetorical instruction to do.

Lannon reproduces much of this textbook in his next edition (8), which changes its title from *Technical Writing* to *Technical Communication* (2000, Longman). The implications stemming from this change of title are massive and reflect the change in pedagogy this thesis studies. Whereas a book titled *Technical Writing* would seem to be concerned mostly with the end-product of the technical writing process, the title *Technical Communication* conveys that the most important part of the technical writing process *is* the process. This is because most often communication in technical writing is conducted during the process of writing; however, it also happens with the product of the writing in mind.

Once again, Lannon reinforces the importance of classical rhetoric in the technical writing process. This is evident throughout the book and even glamorized with the cover illustration, *Book of Knowledge of Mechanical Processes*, by Al Dajarzi (c. 1300), of which Lannon writes:

[The painting] represents the fusion of old and new that embodies technical communication. While technical communicators use classical rhetorical principles, they do so with the most modern tools and in the service of up-to-the-moment technology. (ii)

In the second edition, Lannon iterates the earlier edition's instructions on ethical dilemmas. A checklist for ethical communication ensures readers that their message will be accepted by the audience. It includes such measures as, "Do I make a clear distinction between 'certainty' and 'probability?'" and "Do I give candid feedback or criticism, if it is warranted?" (78). Such questions further the ethical instruction Lannon presents in *Technical Writing*. Lannon again presents a textbook that qualifies as solely process-oriented, having at least three units on the writing process. This edition changes very little from his earlier edition; however, a full chapter is devoted to collaboration, which I mention in the "Methodology" chapter as a newer, process-oriented task that is growing in importance.

Paul V. Anderson's *Technical Communication* (4th edition, Harcourt Brace) produced in 1999, states in the preface that it "remains a process-oriented textbook." This text offers a reader-centered approach to developing all media and forums associated with technical writing. Use of Aristotelian rhetoric is also presented in instructing the reader in the art of persuasion. This is evident in Chapter 5, which covers the importance

of providing reliable evidence to support claims and in justifying the line of reasoning employed. Both of these tactics would be a rational appeal to the audience presented with the evidence and the justification. The same chapter continues with instructions on how to build an effective relationship with an audience. This part of the text resounds with similar ideas given in Lannon's *Technical Writing*: establish credibility, expertise, and power, yet be as non-threatening as possible. These techniques qualify as emotional and rational appeals.

Chapter 12 can also be viewed as using an appeal to reason. Here the author covers the use and design of graphics and pictures. With such headlines as "Good design encourages readers to feel good about a communication and its subject matter," the author suggests that that which is visually unappealing is also uninviting and less likely to be favorably received or effectively understood (323). And again in this chapter Anderson discusses the art of persuasion, pointing to the argumentative nature of the text:

Guideline...How you want to influence your readers' attitudes. As mentioned above, design affects the way your readers feel. You need to create designs that will shape your readers' attitudes in the way you desire. (334)

As mentioned in the preface, this textbook is essentially process-oriented and can be determined to be so by the guidelines of my methodology. At least four units in this textbook deal directly with the process of writing. This is presented first and primarily in bold letters in the first chapter of the book. Here Lannon writes, "The main advice of this book: Think constantly about your readers" (11). Thinking about the audience is one of the primary requirements for a rhetorical approach, but it is also

one of the first steps in the process of writing. Lannon follows his instruction with information on defining objectives, planning strategies, giving tips on research, and using effective prose styles. Product-oriented instruction is used in this book, but only at a very basic level and as a secondary means to the process-oriented instruction.

Technical English (8th ed., 2001, Longman), by Nell Ann Pickett et al., offers much the same information that Lannon offers in his *Technical Writing* and *Technical Communication* books. However, this book attempts what Lannon conveys through a more product-oriented stance. While the authors blatantly refer to the use of emotion and rational appeals, they do so in a very brief paragraph:

Persuasion is the process of using combined emotional and rational appeals and principles. Emotional appeals are directed towards feelings, inclinations, and senses; rational appeals are directed toward reasoning, logic, or intellect. Many times, emotional appeals carry more weight than rational appeals. (478)

The authors could have easily rounded out this paragraph by mentioning the third classical Aristotelian appeal: the ethical. Whether it would carry more weight than the emotional appeal is debatable, but its connection to the other two appeals is not.

However, while this book takes a more product-oriented stance than the process-oriented Lannon books take, this text can still pass for being process-oriented, too. Perhaps it is best to categorize this book as having the definite aspects of both orientations. While most of the other technical writing books have tended to focus on rhetoric for their process-orientated tasks, this book focuses on other aspects of the process in producing a technical document. Process-oriented instruction is evident

in several areas of the book. A good example is found in Chapter 3, which deals with clear language:

Tone, tact, and nonbias play major roles in effective communication. In any writing situation, using an appropriate tone, tact, and impartiality indicates your concern for the reader.....The writing situation-the subject, the purpose, and the audience- determine tone. One writing situation may call for a humorous tone, another for a serious one.....Ethical communicators are honest about readers' needs. They avoid manipulating the reader through tone. (34-35)

Dealing with tone, tact, and bias in technical writing occurs in the process of writing if it is to appear in the product. Tone, according to Pickett, "indicates your attitude as a writer toward the subject and the audience" (34). Tone can have massive rhetorical power if employed correctly. Tact, according to Pickett, means "treating readers with respect, being concerned about and considerate of the readers' feelings" (35). Using tact in dealing with an audience can be seen as another rhetorical method in arguing or swaying an audience to one's claim. Because Pickett describes bias as, "your preference for some ideas or courses of action over others," nonbias must imply shielding these personal preferences from the audience (36). These concerns are of the highest order if the audience is to be receptive to the message presented.

Pickett's textbook offers both product- and process-oriented instruction. This textbook does so with nearly equal instruction for both methods. Unit two and Unit three can be viewed as process-oriented while Unit 4 and Unit 5 can be seen as primarily product-oriented instruction that focuses on technical document formats, etc. Therefore,

this book presents a good example of a combination of both product- and process oriented instruction. For that reason, the book is a good all-purpose manual for both the seasoned and new technical writer.

June Dostal and Deborah St. Vincent's *Technical Communication: A Guided Approach* published in 1997 (West) is another example of a combination of both process- and product orientation. While the book is full of detailed graphs and minute instructions on how to produce proposals, memos, and various other types of technical documents, it also offers two units on the writing process. Yet, the process-oriented units can be overshadowed by the product-oriented instruction. And, surprisingly, the book offers less than six pages on persuasion in letters and documents. These tips are sparing and generic:

When writing a persuasive document, such as a proposal, keep the needs of the audience in mind. If the reader doesn't perceive a need for what you are proposing, your ideas are likely to be rejected. Your job as the writer is to identify the reader's need and show how your suggestions fulfill this need. Most people are resistant to change. Your proposal must explain how the proposed changes will benefit the reader and the organization.

(361)

Like some of the product-oriented blueprints of letters and graphs presented in this book, the directions on how to be persuasive appear helpful but become difficult to employ when an attempt is made from such spare guidelines. The information put forth on composing persuasive letters is no more helpful:

The introduction needs to arouse the reader's attention and interest.

If the reader already has an interest in the message, getting attention is

easy.....To get the reader's attention, use a statement that interests the reader. Use reader-centered ideas, and avoid words such as *I*, *we*, *us*, or the writer's name that reflect self-interest. (290)

Once more the authors offer information that is decidedly product-oriented and, therefore, spare with information on the process of creating the document. However, the textbook offers two units of process-oriented instruction (Unit 2 and Unit 3) and three units of product-oriented instruction (Unit 4, Unit 5, and Unit 6). Like Pickett's *Technical English*, this textbook follows roughly the same content pattern, with process-oriented instruction in the beginning chapters and product-oriented instruction and format guides with examples near the end.

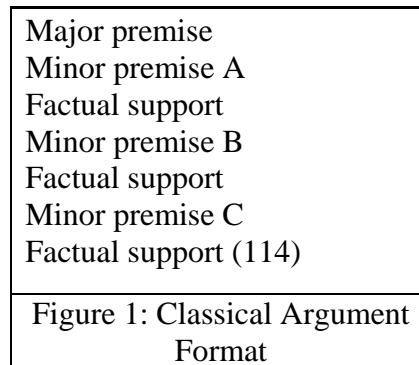
In identifying this text as a combination of product- and process-oriented, but being overshadowed by product orientation, it is also important to identify it as an entry-level work on technical writing. The manuscript reviewers were a mix of high school and technical college teachers, therefore signaling that the work may be more suitable for secondary courses or two-year colleges than for four-year institutions.

The Elements of Technical Writing (2nd ed., 2001, Allyn and Bacon), by Thomas E. Pearsall, serves as a basic guide to all elements of technical writing document production. This is the only one of three supplemental technical writing guidebooks reviewed that can be deemed to be a mixture of both product and process orientation. Yet only a few pages (114-118) offer tips and information on the argument process. It is interesting that even this instruction follows a product-oriented type of guideline (114). Pearsall outlines a discussion format that mirrors the following figure:

In a classical argument format, you would support a large opinion

by a series of smaller opinions, which are in turn supported by facts.

In argument, the large opinion is called the major premise; the smaller opinions are called the minor premises. Your discussion format might look like this:



The guidebook offers one unit on writing processes and one unit on the formats of technical writing documents. This seems to work well, and it furthers Pearsall's stance as a supporter of both process and product orientations. And, it also fits well within the guidelines of combined product and process orientation as proposed by my methodology. This book, though smaller, is structured in content the same as the other combined product- and process-oriented textbooks.

In looking at Thomas Pearsall's other technical writing textbook, *How to Write for the World of Work* (6th ed., 2000, Harcourt Brace), one finds an encompassing text that enlarges the process-oriented material presented in his supplemental guidebook, *The Elements of Technical Writing*. In this book the reader will again find a textbook devoted to both process- and product-oriented instruction. Pearsall and his co-authors, Donald H. Cunningham and Elizabeth O. Smith, offer models and instruction on visuals, proposals, memos, letters, expense reports, surveys, resumes, etc. These are helpful and are used sparingly so as not to be overbearing. As far as process orientation is concerned, the book

is clearly geared to this step in writing. Chapter 3, entitled "Persuasion and Scientific Argument," covers Aristotle's emotional appeal well, and a small footnote indicates the importance of classical rhetoric in technical writing: "Knowledgeable readers will see in all this our debt to Aristotle, a debt that we cheerfully acknowledge" (57). The instruction on rhetoric seems to begin with the following sentence: "To be persuasive, we must be credible, we may use emotional appeals, and we should use facts and logical analysis" (57). This refers to at least two of Aristotle's appeals: rational and emotional. To be credible one has to present facts and thus appeal to reason. Ethical appeal could also be seen as being a part of this process. The book relates: "Perhaps most important of all, your readers must see you as a person of goodwill who has their interests at heart"(58). To have the appearance of goodwill is to present a positive ethical stance. Other sections of the book deal directly with ethical writing. This can take the form of employing ethical judgments in writing and in speaking, which is decidedly Aristotelian, to being honest about giving credit for research (47-50).

Emotional appeal elicits much discussion from the authors in *How to Write for the World of Work*. This is helpful to the writing process and fortifies technical writing's dependence on this classical form of rhetoric. Several interesting and insightful points are made concerning the use of emotional appeal:

The use of emotion may be the aspect of persuasion we distrust the most. Partially, this distrust comes from our fear that use of emotional appeals can distort the truth. For this reason, we take emotion out of scientific argument and insist instead upon a logically organized array of facts and well reasoned opinion.....Nonetheless, the very power of emotion

makes it a force that we are unlikely to avoid using when it can be helpful.

You can legitimately appeal to your readers' emotions, especially by showing how your ideas will benefit them.....Of course, an argument cannot depend entirely on emotional appeal, but emotional appeal can gain readers' interest and help you lead them to an analysis and interpretation of the data- an appeal to reason and logic. (59-60)

While credibility and emotional and rational appeal seem to be the strong points of this section, other sections offer notable process-oriented instruction, as well. Everything from workplace and collaborative writing to reports offer the reader detailed hints on how to gather ideas and begin the work.

The Pocket Guide to Technical Writing (2nd ed., Prentice Hall), by William Pfeiffer, was produced in 2001. Like Pearsall's *Elements of Technical Writing* (2001), this is a shorter, less academically-g geared technical writing book. In accordance with its supplemental nature, the book can be determined to be a product-oriented text. Sixty pages of the two hundred page book are devoted solely to product examples. These offer a blueprint of what the finished work is supposed to look like. Chapter 2, titled "Structure: Achieving Order and Design," is also product-oriented, devoting itself to how the product should be ordered and how visually enticing it will appear. Only seventeen pages are devoted to the actual writing process. The process section covers such methods as brainstorming and understanding the audience. However, the book seems to assume that the writing process is the same for everyone, as it urges readers to "write your first draft quickly" and "don't stop to edit" (12). This instruction appears to be process-oriented, yet in actuality it could easily be product-oriented because the instructions seem

to be concerned only with what the writer achieves, not how he or she achieves it.

Because such little content in the book deals with the process of writing, and because the book is void of units, I calculated a percentage for the book's product-oriented content to see if it would meet my guidelines for a solely product-oriented textbook as defined by my methodology. Confident it would, I found the book far exceeded the needed percentage with an estimated eighty-six percent of its content deemed product-oriented.

No mention of the use of rhetoric or of Aristotle's appeals could be found in this text. While appeals to the audience were mentioned, it was only suggested that the speaker or writer appeal to the audience's interest and education levels (6). This lack of rhetoric may be due to the book's smaller size; however, this is not necessarily true for all smaller technical writing guidebooks. For example, Pearsall's *The Elements of Technical Writing* provides some instruction on rhetorical principles.

Like Thomas E. Pearsall, William S. Pfeiffer is author of both a supplemental type technical writing guidebook and an academically-suited technical writing textbook. But unlike Pearsall's works, Pfeiffer's guidebook is devoted almost entirely to product-oriented instruction, as described above, while the academic textbook combines both product- and process-oriented information. While Pfeiffer's *Pocket Guide to Technical Writing* was deemed to be eighty-six percent product-oriented, his *Technical Writing: A Practical Approach* clearly states in the preface:

Continuing feature #1: Focus on Both Process and Product. This book immerses students in the process of technical writing while still emphasizing practical formats for getting the job done. After initial chapters that discuss the planning, drafting, and editing process,

the bulk of the book provides guidance for writing the most common types of documents. (iii)

As stated, Pfeiffer's *Technical Writing: A Practical Approach* begins with an emphasis on the process of writing. The sections have titles such as "Why Am I Writing This Document" and "What Response Do I Want from Readers" (11). These topics offer the reader good insight on how to get started with their document. Later in the book, specific documents that stem from the process-guided information will be shown in example form. Other combination process- and product- oriented textbooks follow this structure. This appears to be one of the most effective ways of teaching the aspects of both orientations of technical writing.

As far as rhetoric is concerned, *Technical Writing: A Practical Approach* suggests, as most do, that factual evidence be presented in documents and speeches (129). This offers the most obvious appeal to reason. A call for logic also supports this appeal (131). These tips and the others referred to by the author form the basis for a good argument, which the book calls "the basis for all technical writing"(128). This statement is the most solid support of the idea I propose in my introduction, which is that all textbooks, whether they are for academic or technical writing, are essentially argumentative. For this reason rhetorical principles adapt to both disciplines.

Philip C. Kolin's *Successful Writing at Work* (6th ed. 2001, Houghton Mifflin), combines both process and product orientation. Each chapter, whether devoted to letters or reports, offers a section on the process of composing the technical document and a format example of what the finished product should look like. This approach appears to work well. A good example of this structure is found in Chapter 6, concerning

business letters. The reader is first encouraged to use, "diplomacy and reader psychology:"

Writing effective customer relations letters requires skill in human relations and reader psychology. Regardless of the news...you need to be a diplomatic and persuasive writer...The letter should reveal your sensitivity to their needs...You have to see the letter from the reader's perspective and anticipate the reader's needs and reactions. (202)

Kolin recalls the earlier review of Nell Ann Pickett's *Technical English* and especially her use and definition of tact. Kolin's instruction is followed by at least thirteen letter examples. The letter examples are also interspersed with product-oriented instruction on where to present the main point of the letter and how follow-up letters should be organized (206).

While the instruction on persuasion does not directly identify its roots in Aristotelian rhetoric, it notes such tactics as using logical arguments, which can be seen to be a rational appeal (23). An example of service advertisement listed below this instruction employs rational appeal to its fullest extent. With persuasive sentences such as, "We can reduce your x-ray costs by a minimum of 28%" and "Avoid long waits in overcrowded hospitals," this example appeals to the reader's reason and emotion (23).

Tips on ethical writing appear on pages 24 and 25 of Kolin's *Successful Writing at Work*. In these chapters, the author urges the writer to use honesty and fairness in all aspects of their work. Doing such will not only benefit the company, but also result in an exemplary reputation, which will appeal to the customer or audience (24). This reference, while not obviously noting its connection to the Aristotelian appeal to ethics, is definitely

such. Because Kolin's textbook offers both product- and process-oriented instruction, along with references to Aristotelian rhetoric, I presumed it would be a combination of both orientations. My methodology determined this fact to be the case also, with Kolin devoting one unit to process-oriented instruction and three units to product-oriented instruction.

Brian R. Holloway's *Technical Writing Basics: A Guide to Style and Form*, published in 1999 (Prentice Hall), follows the same style as the other shorter technical writing guidebook, William S. Pfeiffer's *Pocket Guide to Technical Writing*. That is, these two books are determinably product-oriented with little or no time devoted to the process of writing. Also, like the other book, this book is more of a supplemental book and is not overtly academic.

In keeping with the product-orientation style, Holloway's book gives distinct instruction on how to construct memos, proposals, manuals, etc. This instruction is coupled with examples of what the finished product should look like. However, the book does venture as far as mentioning the importance of classical rhetoric in the structure of persuasive presentations such as essays, speeches, and reports. While Aristotle is not mentioned by name, references to inductive and deductive reasoning are made that may be attributed to him (23). And an allusion to classical rhetoric is presented in terms of how a product, whether it be spoken or written, is constructed. The allusion is actually classical Aristotelian rhetoric as interpreted by Cicero and is reproduced in the following figure:

Exordium. The first part of the introduction is an exordium, or a direct acknowledgement of your audience.

Narratio. Then follows an illustration of the subject, which leads to-

Propositio. The thesis of the presentation. This ends the introduction.

Divisio. The first part of the body defines the key terms, or presents the structure of the argument to the audience.

Confirmation and Confutatio. These parts of the body explore problem/solution, or pro/con. This is the heart of the argument.

Conclusio. The conclusion, which should refer to the narratio if possible.

(134)

Figure 2: Classical Aristotle Format as Interpreted by Cicero

As shown, the rhetorical principles presented here are done so in a product-oriented fashion. The processes needed for completing the steps are not discussed. For this reason, the book is almost entirely product-oriented.

Apart from these very spare references to rhetoric, the book devotes the larger part of its contents to product-oriented instruction. This fact is evident in Chapter 3, which emphasizes the format of letters and memos, and again in later in chapters that deal with writing summaries, instructions, directions, and reports. The book offers several examples and models within these product-oriented chapters. Only Chapter 1 and 2, which would encompass 42 pages of the 208 page work could be considered process-oriented. Therefore, approximately eighty percent of the content of this book is product-oriented. This percentage falls well within the seventy-five percent rule I set forth in the "Methodology" chapter.

Sharon and Steven Gerson's *Technical Writing: Process and Product* (3rd ed. 2000, Prentice Hall) offers a good mixture of the two orientations. This book is one of the best organized texts for the combination. Documents, e-mails, research, and reports, among many other technical writing products are covered. The items are described first and then the reader is guided in the process of the construction in the same chapter. Equal time seems to be given to both process and product instruction. This organization differs from the usual content's page as seen in the other combination process- and product-oriented books. Content that intersperses the instruction is arguably the better form, because the process instruction is made relevant to each separate technical writing document and not applied to whole discipline in general. An example can be seen in Chapter 12, "Instructions and User's Manuals." A brief description of this chapter could be related in this manner: The author's encourage the reader to decide on objectives, consider criteria (such as a title or introduction) and the tone and style of body of the work, and make a proper conclusion (276-280). After the initial instruction, the reader has a "Process" section that helps by giving a step-by-step approach to getting started with writing instructions. The "Process" section is divided into pre-writing, writing, and revising and offers tips on how to clarify an audience, determine focus, organize steps, and begin the writing (285-288). After the process-oriented instruction, the chapter ends with nearly thirty pages of formatting help. This manner of content firmly anchors the book as a combination of both process and product orientations.

Concerning rhetoric, Gerson's *Technical Writing: Process and Product* makes the usual suggestion that factual and fair evidence be reported (44). The instruction can be seen as both an Aristotelian appeal to reason and ethics. This information is

within one of the longer sections on ethics encountered in the modern technical writing books I reviewed. Eight pages (42-50) are devoted to ethics, which signal the rise in importance of this topic, which is referred to in the "Methodology" chapter.

Business Communication (2001, Prentice Hall) by Melinda Kramer is an academically-aimed technical writing textbook that combines both process- and product-oriented instruction. The author claims she has combined both orientations in the preface, but suggests that she has focused on process-oriented information:

[Employees] find themselves in work situations or facing management problems from which needs to communicate arise. From those needs stem choices that ultimately result in a written or spoken product--sometimes both. Certainly complete information about letters, memos, reports--and much else besides--is here. But this book places the emphasis on context first, then on the stream of decisions a thoughtful business person should make to achieve maximum communication success....(xvii-xviii)

Kramer's book is decidedly more process-oriented than product-oriented. Considering its large size--more than 500 pages-- there are few blueprints or hard instruction on what the finished technical writing product should look like. There is, however, more than ample instruction on such things as identifying the audience, being mindful of that audience and fellow employees, and writing techniques in general. One entire chapter is devoted to ethics-- "The Ethical Context of Business Communication" (404-433). This section dwarfs any previous discussion on ethics and signals the growing importance of the topic, which I have referred to throughout this thesis.

While *Business Communication in Context* is more process-oriented than product-

oriented it still offers a combination of the two. An example of how the author combines the orientations can be seen in Chapter 8, which covers report writing. While one paragraph is headed, "Is This Report Really Necessary," and suggests a process-oriented function within the writing of the report, the next paragraph is headed, "General Characteristics of Memo Reports" (267). Throughout the book, process-oriented instruction is interspersed with product-oriented instruction with little or no warning. The functionality of this is arguable. While in the Gerson textbook, *Technical Writing: Process and Product*, interspersing instruction of both orientations seemed to work well, in this textbook the information seems to be overwhelming at times.

Kramer's *Business Communication in Context* does not discuss persuasion and argument in themselves but rather how they relate to specific technical writing documents. In her book, Kramer presents persuasion as it is applied to business letters (195-207), claims (196-200), collection letters (201-204), and sales letters (204-207). This information could be very beneficial if another section near the beginning of the book contained information on persuasion and the appeals to reason, emotion, and ethics.

Overall, I estimated the book to have two units of information that were process-oriented and three units of product-oriented instruction. This estimate was calculated by figuring the numbers of pages devoted to process and product instruction in each unit, and then estimating the total pages for both orientations. *Business Communication in Context* was one of the more difficult books to determine in units since the process- and product-oriented information was interspersed so freely within the units.

Daniel G. Riordan and Steven E. Pauley's *Technical Report Writing Today*

(Houghton Mifflin, 1996) offers an excellent example of a textbook that combines both product- and process-oriented instruction. The textbook offers equal parts to both orientations, giving two units to process orientation and two units to product orientation. As well, the textbook follows the normal practice of putting the process-oriented instruction before the product-oriented instruction. The book is set-up as follows: Unit 1 and Unit 2 are entitled "Technical Writing Basics" and "Technical Writing Techniques" and Unit 3 and Unit 4 are entitled "Technical Writing Applications" and "Professional Communication." The first two units offer instruction on such things as defining audiences, style of writing, research methods, and summarizing. The last two units offer blueprints and step-by-step methods for achieving basic technical writing documents such as reports, manuals, proposals, and letters. While this textbook does not directly mention Aristotelian rhetoric or the three appeals, several areas of instruction in the book seem to be linked. Noticeably, these occur in the discussions on establishing identity and credibility with an audience. The discussion on establishing identity with an audience mirrors the Aristotelian appeal to reason. Here the author encourages the speaker or writer to form a trust with the audience:

You must establish your identity. You are a guide; the reader has to trust you in order to act on what you say. Trust is based on two things: the way you present yourself and the background you have. You present yourself, in part, by developing an intellectual and visual logic, but also by using a certain tone, with the proper words and concepts in the proper places. (60)

Riordan and Pauley suggest using logic in what appears to be both product- and process-

oriented ways. Developing intellectual logic with the audience could pass for process-oriented instruction since it would be addressed prior to forming the speech or document. Employing proper placement of concepts and proper words almost venture into product-oriented areas because one would likely follow a blueprint or established method to do so.

The discussion on credibility in the textbook mirrors many ideas put forth in the discussion on establishing an identity. Once again, no direct mention of rhetoric is made, but several instructions are tantamount to the appeal to reason. This fact is evident in the following passage:

When you deliver information, a key ingredient of your message is your credibility. I will tend to accept your message if I feel you are a credible person in the situation. Credibility grows out of several elements: competence and method. Competence is control of appropriate elements. If you act like a competent person you will be credible. The items discussed in this text will all improve your credibility-- attention to formatting, to organization, to spelling and grammar, and to the audience's needs. Competence is also shown by tone.... Method includes the acts you have taken in the project. Simply put, audiences will view you as credible if they feel you have "acted correctly" in the situation. If I can be sure that you have worked through the project in the "right way," I will be much more likely to accept your requests or conclusions. (298)

Riordan and Pauley again fit their appeal to reason to both process- and product-oriented

aspects. For example, formatting would probably fit best in the product-oriented category since one would likely follow a basic, accepted pattern in making their document. Yet, such things as grammar and being attuned to the audience's needs would come into play during the process of making the document, thus qualifying as process-oriented instruction.

The section on credibility also offers what could be seen as an appeal to ethics. Here Riordan suggests that the speaker or writer will build credibility if the audience believes that the "right thing" has been done (298). Again, while not directly mentioning rhetoric, the authors have presented materially unmistakably connected to the appeals to reason and ethics, with their instruction urging technical writers to act in the "right way" to build credibility (298)). To go along with this point of interest, the authors have also dedicated four pages of the book to a short section titled "Technical Writing is Ethical" (11-15). This section encourages technical writers to do such things as, "use unambiguous language," "use format honestly," (12) and "use direct simple expression" (13).

Riordan and Pauley slightly alter the textbook *Technical Report Writing Today* for their eighth edition produced in 2002 (Houghton Mifflin). Again the textbook can be deemed to be a combination of process- and product-oriented instruction with two units devoted to the processes of writing and two units devoted to the products of writing. Few things change in this edition compared to the sixth edition. However, one important contribution to the early section on ethics is the appearance of the code of ethical conduct as prescribed by Society for Technical Communication. This code details how seriously technical writers should take their efforts to communicate and follows Riordan's and

Pauley's earlier suggestions in their short sections on establishing identity and gaining credibility, both of which appear again in this edition of the textbook. The presence of this code of conduct in the textbook points to the growing concern of employing ethics in the workplace and the dedication of large portions of textbooks to ethical instruction. The following figure is an example of the code of conduct as it appears in Riordan's and Pauley's book:

<p>As a technical communicator, I am the bridge between those who create ideas and those who use them. Because I recognize that the quality of my service directly affects how well ideas are understood, I am committed to excellence in performance and the highest standards of ethical behavior.</p> <p>I value the worth of the ideas I am transmitting and the cost of developing and communicating those ideas. I also value the time and effort spent by those who read or see or hear my communication.</p> <p>I therefore recognize my responsibility to communicate technical information truthfully, clearly, and economically. My commitment to professional excellence and ethical behavior means that I will</p> <ul style="list-style-type: none">• Use language and visuals with precision• Prefer simple, direct expression of ideas• Satisfy the audience's needs for information, not my own need for self expression.• Hold myself responsible for how well my audience understands my message.• Respect the work of colleagues, knowing that a communication problem may have more than one solution.• Strive continually to improve my professional competence.• Promote a climate that encourages the exercise of professional judgement and that attracts talented individuals to careers in technical communication. (15-16).
<p>Figure 3: Technical Writer's Code of Conduct</p>

As in the previous edition, no direct mention of rhetoric, appeal, or persuasion is mentioned in this edition. Yet, just as with this presentation of the code of ethics and

the retaining of the instruction on such things as credibility and establishing identity, the book continues to offer some rhetorical material. Therefore, this book remains a combination of product- and process-instruction in both the devotion of equal units to product- and process-instruction and in presenting rhetorical ideas in the instruction.

CHAPTER 4

CONCLUSION AND IMPLICATIONS FOR FUTURE RESEARCH

This study is perhaps the only known investigation into technical writing textbooks published after 1994 for the purpose of determining the status of the paradigm shift or for the purpose of showing the use Aristotelian rhetoric in the technical writing discipline in order to relate technical writing to academic writing. Using a detailed and specific methodology, my review of fifteen technical writing textbooks determined that nearly all the books were either process-oriented or a combination of process- and product-oriented. Perhaps only two books can be described as being mostly, if not fully, product-oriented; Brian R. Holloway's *Technical Writing Basics: A Guide to Style and Form*, and William S. Pfeiffer's *Pocket Guide to Technical Writing*. Three books qualified as being solely process-oriented according to the methodology used. They were John M. Lannon's *Technical Writing and Technical Communication* and Paul V. Anderson's *Technical Communication: A Reader-Centered Approach*. The remaining ten textbooks were a combination of both process and product orientations. The high number of combination product- and process-oriented textbooks demonstrates that the paradigm shift has moved from technical writing textbooks being fully product-oriented in the early part of the twentieth century (as examined and recorded by Jerold Jeanson's dissertation) to a combination of product- and process-oriented instruction at the end of the twentieth century and the beginning of the twenty-first century.

The combination of both product and process orientation in the textbooks reflects that the most effective mode of teaching which emphasizes the writing process while researching the elements and models of technical writing documents is most effective.

Jeansonne also refers to the effectiveness of the combination of both orientations in his dissertation:

Also, many process-oriented textbooks include elements and samples of technical writing documents. This fact perhaps means that even though authors realize the advantages of the process orientation over the product orientation, they also realize that some aspects of the product-oriented pedagogy, particularly elements and samples of technical writing genres, are effective pedagogical methods, especially when combined with the process orientation. (53)

Here, Jeansonne is referring to examples of technical documents and their formats by using the term, "technical writing genres." These examples are a highlight of product-oriented textbooks, although they appear freely in combined product- and process-oriented textbooks. The effectiveness of these samples is supported by Jeansonne's dissertation and by the findings of this thesis. The proliferation of combined process and product-oriented textbooks attests to this. Jeansonne, while admitting that he has not reviewed any college-level technical writing books since 1996, supports the idea that the majority of current technical writing textbooks probably combine both product- and process-oriented instruction because industry, in general, follows this model. In an email correspondence he states the following:

I have been working in industry for the past eight years, and industry, as academe, in my experience, use a combined process and product approach in technical documents (including technical training materials) as well as in the technical training itself. I have not looked closely at university

textbooks for quite some time, but I believe textbooks follow industry, so I would assume that textbooks are still combining the approach, which, I also believe, is the best approach. (Email, 5 March 2002)

In addition, my research found that most of the combined process- and product-oriented textbooks appeared to follow a similar format in content arrangement. That is, the process-oriented instruction tends to come prior to the product-oriented instruction. While two of the combined process- and product-oriented textbooks did not strictly follow this arrangement, eight did. And, some of the textbooks that did not qualify as a combination of the two orientations followed similar content arrangement.

The use and importance of Aristotle's rhetoric, in particular the three characteristics of artistic argument: rational, ethical, and emotional appeal, is often cited or referred to in the textbooks reviewed. Only one book, William S. Pfeiffer's *Pocket Guide to Technical Writing*, had no direct mention of rhetoric. June Dostal's *Technical Communication* is also very spare in regards to content on rhetoric. *Business Communication*, by Melissa Kramer, refers only to persuasion in writing letters and memos. And, both editions of *Technical Report Writing Today*, while not using rhetorical terms in their instruction, do offer rhetorically based guidelines. However, even if these five textbooks are not included in the calculation for the number or percentage of textbooks employing rhetoric (and four arguably could be considered), the overwhelming evidence shows that rhetoric is very important to technical writing and is discussed in a majority of textbooks. Eight textbooks clearly refer to rhetoric in their instruction. That number confirms that over half (roughly 54%) of the textbooks chosen for this review include blatant rhetoric instruction or ideas. And twelve (80 %) of the textbooks

could easily be viewed as showing some form of rhetorically based instruction. These numbers prove that technical writing usually employs rhetoric in both instruction and presentation. With academic composition textbooks providing instruction on rhetorical principles also, the high percentage of technical writing textbooks employing rhetoric suggests that technical writing is closely related to academic writing. Appeals are made to audiences of both technical and academic writing documents. And both of these areas of writing rely on argumentative writing styles to achieve their ends. This argumentative style is evident in the appeals to reason, ethics, and emotion and in the art of persuasion.

The analysis of textbooks also points to a possible correlation between the type of orientation the textbook follows and the company that publishes the book. Both textbooks that I deemed to be solely product-oriented, Pfeiffer's *Pocket Guide to Technical Writing* and Brian R. Holloway's *Technical Writing Basics: A Guide to Style and Form*, were produced by Prentice Hall. Harcourt Brace and Longman published the three solely process-oriented textbooks that I reviewed; Paul V. Anderson's *Technical Communication: A Reader Centered Approach* and John Lannon's *Technical Writing and Technical Communication*. Of the remaining combined process- and product-oriented textbooks, one was by Longman, one was by Allyn and Bacon, one was by West, three were by Prentice Hall, four were by Houghton Mifflin, and one was by Harcourt Brace. The implications of these findings may be that the publishing company Prentice Hall may favor product-oriented textbooks, while Harcourt Brace favors process-oriented textbooks and Houghton Mifflin favors a combination of the two orientations. Further research on this topic may produce similar results that are more conclusive.

The result of this thesis determined that technical writing textbook pedagogy is

either still undergoing a paradigm shift, as explained in Jerold J. Jeanson's 1996 doctoral dissertation, or that the paradigm shift has halted with the result being that a majority of college-level technical writing textbooks combine both the product and process orientations. According to the rules of my methodology, ten textbooks qualified as a combination of both orientations. This percentage constitutes sixty-six percent of the textbooks reviewed. Further research will be needed to determine if the paradigm shift continues with a combination of product and process orientations, or if the paradigm shifts back solely to product- or process-oriented, or to a new method altogether.

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Invention." *Research on Composing: Points of Departure*. ed Charles R. Cooper and Lee Odell. Urbana: NCTE, 1978. 29-47.

APPENDICES

APPENDIX A

Technical Writing Textbooks Reviewed:
Categorized by Date and Orientation as Reflected by my Methodology

1996

PROCESS/PRODUCT

Riordan, Daniel G. and Steven E. Pauley. *Technical Report Writing Today.*

6th ed. Boston: Houghton Mifflin, 1996.

1997

PROCESS

Lannon, John M. *Technical Writing.* 7th ed. New York: Longman, 1997.

1997

PROCESS/PRODUCT

Dostal, June and Deborah St. Vincent. *Technical Communication: A Guided*

Approach. New York: West, 1997.

1999

PROCESS

Anderson, Paul V. *Technical Communication: A Reader-Centered Approach.* 4th

ed. New York: Harcourt Brace, 1999.

1999

PRODUCT

Holloway, Brian R. *Technical Writing Basics: A Guide to Style and Form.*

Upper Saddle River: Prentice Hall, 1999.

2000

PROCESS/PRODUCT

Gerson, Sharon J. and Steven M. *Technical Writing: Process and Product*.

3rd ed. Upper Saddle River: Prentice Hall, 2000.

Pearsall, Thomas E., Donald H. Cunningham, and Elizabeth O. Smith. *How to Write*

for the World of Work. 6th ed. New York: Harcourt Brace, 2000.

Pfeiffer, William S. *Technical Writing: A Practical Approach*. 4th ed. Upper Saddle

River: Prentice Hall, 2000.

2000

PROCESS

Lannon, John M. *Technical Communication*. 8th ed. New York: Longman, 2000.

2001

PROCESS/PRODUCT

Kolin, Philip C. *Successful Writing at Work*. 6th ed. New York: Houghton

Mifflin, 2001.

Kramer, Melinda. *Business Communication in Context*. Upper Saddle River:

Prentice Hall, 2001.

Pearsall, Thomas E. *The Elements of Technical Writing*. 2nd ed. Boston: Allyn

and Bacon, 2001.

Pickett, Nell Ann, Ann A. Laster, and Katherine E. Staples. *Technical English: Writing,*

Reading, and Speaking. 8th ed. New York: Longman, 2001.

2001
PRODUCT

Pfeiffer, William S. *Pocket Guide to Technical Writing*. 2nd ed. Upper Saddle River:
Prentice Hall, 2001.

2002
PROCESS/PRODUCT

Riordan, Daniel G. and Steven E. Pauley. *Technical Report Writing Today*. 8th ed.
Boston: Houghton Mifflin, 2002.

APPENDIX B

Number and Type of Technical Writing Textbooks Produced by Year as Reflected by my Methodology

YEARS	1994	1995	1996	1997	1998	1999	2000	2001	2002
Product	N/A	N/A			N/A	1		1	
Process	N/A	N/A		1	N/A	1	1		
Product and Process	N/A	N/A	1	1	N/A		3	4	1

VITA

Terre Davenia Michelle Byrd

Personal Data: Date of Birth: August 19, 1977
 Place of Birth: Johnson City, Tennessee

Education: Milligan College, Elizabethton, Tennessee;
 Bachelor of Arts in English and History minor, 1999
 East Tennessee State University, Johnson City, Tennessee;
 Master of Arts in English, 2002