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~~INVENTIONAL PROCEDURES~~: HOW IMPORTANT ARE
THEY FOR THE FRESHMAN COMPOSITION STUDENT?

by

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In "Paradigms and Problems: Needed Research in Rhetorical Invention," Richard Young notes that the "current-traditional paradigm" does not acknowledge the art of "invention" as a subdiscipline.¹ The problem with not acknowledging invention as such is that during the last twenty years composition has been studied more and more as a process, yet the components within the current-traditional paradigm do not seem to allow for this process view to be considered seriously because they focus not on how a writer composes, but on the finished product. The current-traditional paradigm focuses on the "analysis of discourse into words, sentences, and paragraphs; the classification of discourse into description, narration, exposition, and argument;...usage (syntax, spelling, punctuation) and...style (economy, clarity, emphasis); the preoccupation with the informal essay and the research paper; and so on" (Young, "Paradigms" 31). These features are important because the reader as well as the writer makes judgements about a piece of writing based on the manipulation of these components of composition. Making use of correct grammar, spelling, organization, and a clear style, then, is worth emphasizing in the composing process as those advocates of the current-traditional paradigm do. However, among the features included in the current-traditional paradigm should be an important addition, the art of invention.

Since the current-traditional paradigm does not focus on the composing process, many textbook authors either fail

to include invention in their texts or outline it so sketchily that students will not be able to comprehend invention's value. Although there has been no outward opposition to the presentation of invention, there has not been a specific desire for instructors utilizing the current-traditional paradigm to teach invention either. Young attempts to explain why, saying that the advocates of this paradigm see rhetoric as "the art of presenting ideas" while other disciplines are considered responsible for developing inquiry techniques and knowledge within students ("Paradigms" 32). Young reports that a second argument proponents of current-traditional rhetoric seem to hold is that "creative processes, which include the composing process, are not susceptible to conscious control by formal procedures" ("Paradigms" 32). Young points out, however, that the first argument does not hold true because it has been tried. Current-traditional rhetoricians have relied on other disciplines for the cultivation of inquiry methods, yet the results were not, according to Young, that successful. The second argument seems to make more sense. It is natural and perhaps a healthy notion not to want to bring to the surface what may be more successful at a lower level of consciousness. The idea that invention is a process that works well on a subconscious level is true. That does not mean, however, that invention cannot work more efficiently if used both subconsciously and consciously by the writer.

If we can offer our students various ways to help

them discover information, gathered from personal experience or other available resources, and if we teach them to systematically use these procedures, it seems likely that the inventional methods will eventually become for them tacit knowledge. While one can understand those who believe that cultivating inventional procedures on a conscious level will inhibit the natural ability of the subconscious mind to work, it is possible that their fear is unfounded. A method that could help students discover information by allowing them ways to search their subject more systematically should be very satisfying. Part of the problem, however, is that teachers at every level of education, elementary, secondary, and college, inadvertently neglect invention because they are unaware of its potential; or, they are skeptical of its value because they are not yet familiar with the various inventional tools. Instead, then, teachers often continue teaching only those features present in the current-traditional paradigm such as grammar, fluency in writing, and usage standards... matters which are less subjective in the grading of papers.

These features are, of course, important and necessary, but because the focus of composition instruction has been shifting to a process orientation, the current-traditional paradigm has been considered by Young to be in a "state of crisis" and is considered by those leading in the field of rhetoric today to be in a state of crisis yet.² A transition has been taking place and the current-traditional para-

digm's emphasis on the finished product excludes the needs of the writer, which the addition of invention in the paradigm would satisfy. In order to enhance the current-traditional paradigm, methods of invention need to be given more careful consideration. A problem arises, however, when we seek to ascertain how well inventional procedures contribute to the art of composing because criteria for substantially evaluating these procedures are lacking. These criteria are crucial because without them and without rhetoricians agreeing upon the same criteria, no final judgments about these methods of invention can be adequately justified. Therefore, Young attempts to give us guidelines for determining which inventional methods are most likely to be beneficial. To assess which are the most adequate theories of invention he asks the following questions:

Does it [the inventional procedure] do what it claims to do?...does it provide an adequate account of the psychological processes it purports to explain? And does it increase our ability to carry out these processes more efficiently or effectively? Does the theory provide a more adequate account of the processes and more adequate means for carrying them out than any of the alternatives ("Paradigms 40)?

These questions are of key importance because they can lead us to some valid conclusions about inventional procedures. Within the framework of this report, then, I will review and evaluate the presentation of inventional procedures in several composition textbooks. Before attending to this matter, however, I think I should first explain the meaning of invention. Clarifying this term is import-

ant because it is often used interchangeably with "prewriting" and "heuristic."³ And in some cases, authors of texts are guilty of misinterpreting the term all together. Therefore, I will not only expound on invention but will also introduce some of the procedures described as inventional so the reader will become familiar with them.

Invention is sometimes difficult to understand because it is not so much a concept as it is a process within a composing process. It is what moves the writer forward, sometimes by making her first look backward, or from a different perspective. As William Covino points out in "Making Differences in the Composition Class: A Philosophy of Invention," discovering "differences" is a major function of an inventional procedure.⁴ Covino clarifies this idea by explaining Kenneth Burke's pentad, Young, Becker and Pike's tagmemics, and Peter Elbow's freewriting.

In discussing Burke's pentad with its five perspectives---act, agent, agency, scene, and purpose, Covino acknowledges it as a system that allows whoever is using it to differentiate one perspective from another. He further illustrates his point that invention is a process of finding differences by describing the "tagmeme," telling us that making use of the tagmemic grid has the advantage of encouraging a writer to analyze a topic so as to differentiate its features from those of another, to differentiate between it and the context or system it belongs to, or to differentiate it from the parts that make it up.⁵ In discussing free-

writing Covino cites Elbow who explains that during free-writing, "The writer may begin with topic A, and end up with topic B or C or D. Through a series of transformations the writer discovers what she really wants to say" (1).

According to Covino the common feature which classifies each of these methods under the term invention, then, is the fact that they are processes or systems that help the writer discover ideas about her topic by revealing differences in perspective (as in the pentad or the tagmeme). Freewriting is revealing to the writer because it helps her see the unsystematic and diverse directions she may want to follow.

There may be other procedures that fall under the heading of invention, and to discover what they are, it is best to look more closely at Covino's essay to learn how he has come to evaluate the three procedures already cited as inventional. Covino did not simply decide that finding differences was part of invention. He validates his beliefs by explaining Jacques Derrida's interpretation of "differance."⁶ This term is synonymous with "play" or what Derrida calls "the movement that structures every disassociation" (Covino 2). Like invention, play, or movement, then, brings about the possibility of conceptualization. Put more simply, invention promotes the discovery of knowledge through play or "differance." But what invention is, is the process of discovering differences that lead in various directions, giving the writer a larger number of choices so he can plan to ease the differences and bring incongruous elements together to

form meaningful content within a discourse.

If we use this interpretation of invention, then, what present methods other than freewriting, tagmemics and the pentad can be considered inventional? Brainstorming? Pre-writing? Looping? Aristotle's topics? Clustering? Actually, all five of these methods are inventional. The least structured are brainstorming and clustering. And even though these two methods are typically presented as heuristics to help student writers begin analyzing or even choosing their topics, they are methods that give students different leads to follow, a key element in an inventional procedure. The problem I have in acknowledging these two methods as inventional is that they are not explained in texts as being helpful throughout the entire writing process. And since invention itself is a process, it must be seen as a recursive aid to the writer as he composes a piece of writing. It should help the writer resolve the disagreements he finds as he writes, and neither of these methods is explained in a way to aid the student in doing this.

Looping, although it may be helpful to a student attempting to find a topic or to narrow the focus on a subject is not necessarily a procedure that yields a great deal of information. It is somewhat like freewriting but more restrictive. The student writes for a certain amount of time, stops, reads and chooses an idea which she feels she can expand on, and summarizes it in a new sentence. The first loop is then completed and she begins the second with

the summary sentence from the first loop. She continues looping until she has discovered something substantial to write about.

This method could not easily be used throughout the writing process because it is too time consuming and the reasoning behind it too narrow. Not surprisingly, then, the authors whose texts I have reviewed and who present looping (sometimes called capsuling, sprinting or focused freewriting) are Donald Hall, Elizabeth McMahan and Susan Day, Jean G. Pival and Michael E. Adelstein, and Maxine Hairston. Because these authors neglect explaining the value of invention and consequently fail in helping students to discover the various, multiple ideas that capsuling might offer, I am hesitant to consider looping a viable inventional procedure; although it may be useful for the purpose of finding a specific topic or thesis.

Unlike looping, prewriting, if used as Gordon Rohman and Albert Wlecke present it, is a fundamentally valuable inventional procedure. It fits the description of invention because it poses a problem that must be solved by the writer. The problem is usually presented in the form of what Rohman and Wlecke call the meditation or the analogy. In Prewriting: The Construction and Application of Models for Concept Formation in Writing, Rohman and Wlecke argue that the student writer can become engaged with his topic through making use of his senses. When the student does this by implementing the use of the meditation, the writer

conceptualizes his topic in a meaningful way because he has made the experience his own.

In explaining the meditation Rohman and Wlecke say that even an abstract idea or concept can be made clearer by putting it in a concrete setting and meditating on it. To do this the writer must use his powers of memory, understanding, and will, so he can begin to engage himself with this topic in terms of his own experience, categorizing and conceptualizing the topic in a way that is unique to him. He must notice the details that make the experience real or important to him. Then he can understand what he wants to communicate to others about this topic and what it means to him. For instance, if a student wanted to write an essay about his fears of taking exams he would, in the process of writing his paper, meditate on the scene where the fear has occurred and mentally place himself in those surroundings. He would experience his fear (so he could relate it to others accurately) by observing, perhaps, the size of the classroom where the test is given, the number of students taking the test with him, the temperature, the time on the clock, the tangible awareness of his heart beating, and anything else that contributes to this fear.

By examining his own sensory perceptions, then, the student would not only find specific details that cause his fear, but would also discover practical ways of finding solutions to lessen this fear. His purpose for writing the paper, then, would become self-evident and therefore, more

meaningful as well.

Because the meditation is used recursively, it easily fits into the category of invention. When the writer experiences a block while writing, he can return to the scene he has created for his subject and choose more details through the use of his senses. He may have to return to the scene quite often or perhaps very few times. Secondly, the very fact that reviewing the scene will help refresh the writer's memory, allowing him to ease the differences that occur when he encounters a block, is a major function of an invention-al procedure.

The analogy is utilized by the writer in a somewhat different way than the meditation, and yet, it too, can be easily classified under invention. The analogy is particularly beneficial because the writer must return to it often throughout her writing. This method requires that the writer see and explain her subject through the terms and details of another object or event that is quite different from it yet has some similar features. By comparing the two so closely, then, to discover how they can be viewed as similar, the writer has to see her subject in a way she never has before. She must bring the perception of the unfamiliar object (event or subject) into focus by explaining it with the already known or familiar object. This process requires close analysis throughout the student's writing because she has to continually compare. Because of this, the analogy is inherently a recursive process if used appropriately.

The journal, another prewriting tool presented by Rohman and Wlecke, is an inventional procedure also. However, it serves a different purpose than do the analogy and the meditation. Whereas these two are usually a means to generate information during the actual writing of a paper (and the journal may serve this purpose also), I believe, as Rohman and Wlecke do, that the journal's first function is to allow a student to get to know himself well and become comfortable with the way he assimilates and transforms events or ideas into his own experiences. The journal can be a viable inventional tool in preparing for formal writing because it allows the student the opportunity to write down and make sense of an event for the first time, without the confines of rules of form, grammar, and spelling, that may otherwise inhibit his perceptions of an event. This kind of writing gives the student freedom to openly express his views without fear of being castigated for his thoughts or writing style. Furthermore, once he transcribes his thoughts on paper, the student can reread what he has, combine it with other knowledge he possesses or has found in other sources such as magazines, journal articles or books, and learn from the new combination of differences he has brought together.

Unlike the journal, yet also falling under the term invention much earlier than any other method discussed so far, are Aristotle's topics. Although they aid the writer in quite a different way than do the journal, the meditation,

looping, brainstorming, and clustering, the topics are clearly an effective inventional procedure if presented accurately to the student writer. In classical rhetoric, invention, which includes Aristotle's topics was, as Young points out, "first in importance and the first art used in the composing process...designed to help one discover valid or seemingly valid arguments" ("Paradigms" 36). The topics, then, can easily be claimed as an inventional tool, even by Covino's interpretation. When students use the topics to discover arguments, they are searching all of their resources (past experiences, observations, books or articles they have read) for relevant information to develop those arguments, and finding ways to solve the problems encountered in the piece of writing that may be unsatisfactory to readers or even to themselves. To discover and develop supporting evidence, students employ tautology based on the topics of definition, comparison, contrast, circumstance, antecedents, contradictions, and others. These heuristic probes can stimulate the memory and bring forth relevant information or help generate ideas that will guide students in finding information in other sources.

Procedures other than those already mentioned are introduced in textbooks as well, but they usually stem (either directly or indirectly) from other inventional methods. Procedures that allow students to view things from different perspectives, such as "cubing" or "prism thinking," may shadow the art of tagmemics, but are generally inferior to

Young, Becker and Pike's tagmemic model.⁷ Procedures that actually belong in the discussion of the journal are sometimes presented as individual prewriting methods; included in this group are mapping, anecdotes, lookout spots scouting, noting and charting. Each of these methods requires the writer to be more aware of her surroundings so she may record intricate details by making use of the senses.

Techniques similar to brainstorming are listing, clustering, and code words. The only difference between using code words and brainstorming is that the former are placed before the student, usually as a means to brainstorm for more ideas associated with that word. Code words are somewhat more focused than brainstorming, and yet a student can come up with many different ideas for a topic because each word calls to mind different types of subjects. Clustering has a narrower focus yet because the subject is already assumed and any ideas relating to it are circled and attached to the head word. It gives the student a visual picture of the diversity of his subject; he can then add to the cluster by brainstorming for more ideas and details.

A system which seems similar but in my opinion is inferior to Burke's pentad is the journalist's questions (who, what, when, where, why, and how). Although this closed set of questions is valuable in itself, it is not as effective as Burke's dramatistic method because it does not guide the student in discovering the relationships inherent within the topic. "The pentad," as Young points out, though, "is an

aid in discovering the essential features of the behavior of groups or individuals" ("Paradigms" 37). In simpler terms, Burke's pentad allows the writer to see more deeply into her subject because she is expected to look at the dynamic interaction between the agent and the agency, or the agent and the scene, or the agent and the purpose, and so on. Of course, some information brought about by making use of these ratios may overlap, but at least the writer will have looked at several possibilities that might have been missed if the journalist's questions had been used instead.

* * * * *

Now that these terms for inventional procedures will be somewhat familiar to the reader as I review the textbooks later in this report, I want to continue and explain the difference between two other terms, "structured" and "unstructured heuristics."⁸ (See footnotes 3 and 5 also). Since some rhetoricians believe that one type may be more beneficial than the other (depending on the maturity of the student), it is important we know how they differ. Once we recognize this difference we will be able to evaluate more adequately the texts which incorporate the different types.

The unstructured heuristic is one which depends either completely on or very heavily on the imagination of the writer. If I may use an analogy, an unstructured heuristic is much like the earliest cars that were cranked in order to be started, whereas the structured heuristic is like the automatic car of today. The old car, without the help of an-

other person, called for much energy on the part of the driver to get it started, requiring, perhaps, several cranks before the car (mind) began to purr. Unfortunately, the first crank might have been the hardest, taking so much energy that the next crank would not come any easier. Until the driver had put much effort into cranking the car, it would not move forward. Furthermore, if the car happened to run out of fuel (ideas) and shut down, the difficult process of cranking had to be started all over again.

The automatic car, however, is more dependable. When the driver decides he wants to take a drive (write a paper), he has only to place the key in the ignition (choose an appropriate structured heuristic), put the car in drive (begin asking the questions about the topic inherent in a procedure), and take off. Of course, like the driver of the old car, he may take some side trips, possibly end up in a ghost town, but once he decides to go again he knows that his automatic transmission is going to reliably take him to his destination (to the heart and purpose of what he wants to say) with less trouble getting started and at a much greater speed.

Though this analogy may be an oversimplification of structured and unstructured heuristics, I believe it makes my point. Structured heuristics such as Burke's pentad, the journalist's questions, Aristotle's topics, and tagmemics offer writers a systematic way to view their subjects. Certain questions inherently present in each of these systems

make it easier for writers to search out information. Therefore, the mind is not overtaxed by trying to think of one idea that will hopefully snowball into others. It is true, however, that the mind may digress from the thesis when using the structured heuristics, but the important point is that the student will have a broader view of his subject than if he were using an unstructured method. Furthermore, by the time the student is a freshman in college, he should have the opportunity to learn and use more systematic ways of discovering ideas; the student may more readily accept structured inventional procedures than he would have earlier.

Winterowd suspects that maturity has some bearing on how well a person will respond to structured and unstructured heuristics. He believes there is a "readiness" factor in being introduced to these heuristics. In their article "Eureka! An Assignment: Heuristics in Theory and Practice," Winterowd and Crane report:

It may well be that the ability to use given heuristics correlates with Piaget's stages in cognitive development. From ages four to about twelve, as operational thinking begins to emerge, children might well use "appositional" heuristics such as brainstorming, with more structured heuristics being introduced toward the end of the period. From eleven or twelve onward, when children develop the ability to use abstract formal operations, more structured heuristics could be introduced (23).

If what Winterowd and Crane suspect is true, and they do admit the need for research to prove this, by the time students enter the freshman composition classroom, they should be ready to understand and make use of the structured inven-

tional procedures as well as the unstructured. Oddly enough, many college freshman texts emphasize the unstructured heuristics. This is most likely the case because instructors find brainstorming, listing, freewriting and others much easier to teach. They are familiar; furthermore, these methods do not take as much class time to present as the more structured procedures might.

Perhaps we would be more amenable to teaching various kinds of heuristics if, as Young and Winterowd suggest, we understood the theory behind invention. The irony, of course, is that invention and the procedures that constitute it cannot be considered in theoretical terms until they are researched in more depth, as acknowledged theories would be. Because the current-traditional paradigm is accepted by so many who are unwilling to seriously consider alternatives to it, though, few undertake the research necessary to view it as a more substantial theory. Therefore, those of us who believe in the value of invention must carry out our own research.

On the following pages I will be reviewing contemporary freshman composition texts to see how invention is being perceived by various authors. I will try to determine how full and accurate these texts' presentations of invention are, and how intelligible they are to the freshman student. These two goals are important because if there is to be a change in our attitudes toward the value of invention, we must first make sure that our perception of it is quite

clear. If the procedures included in textbooks are not providing students with adequate means to help themselves discover more information on their subjects, then we must realize that the textbook has somehow failed in teaching students how to prepare themselves for a major step in the composing process. After all, if we are going to view composition as a dynamic process as well as a finished product, we must be willing to teach students the inventional tools that allow the writer of the composition to change and move through the process with positive results.

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Textbook Choice for Review and Analysis

The group of texts I have chosen to review is a small sample, but it should give some insight into what a number of rhetoricians are saying about invention. These texts were chosen for one or several of the following reasons:

1. The text was written by a rhetorician highly visible in the field, who specializes in the area of invention, and who has researched and written articles on the subject.
2. The text is popular and has sold well. (Popularity has been determined either by the edition number of the text or through information gathered from Donald Stewart's "Textbooks Revisited," an essay where texts having sold 100,000 copies or more are cited).
3. The textbook has apparent innovative material on the subject of invention.

The following are popular texts written by rhetoricians who are authoritative on the subject of invention: The Contemporary Writer by W. Ross Winterowd; Process and Thought by Frank D'Angelo; Problem-Solving Strategies by Janet Emig, Janice Lauer, Gene Montague, and Andrea Lunsford. Others that are popular and sell well include the following: The Writer's Rhetoric and Handbook 2nd ed. by Elizabeth McMahan and Susan Day; St. Martin's Guide to Writing by Charles R. Cooper and Rise B. Axelrod; Writing Well 4th ed. by Donald Hall; The Holt Guide to English 3rd ed. by William Irmischer; The Writing Commitment 3rd ed. by Michael E. Adelstein and Jean G. Pival; A Contemporary Rhetoric 3rd ed. by Maxine Hairston; and Writing With a Purpose 8th ed. by James M.

McCrimmon. Texts chosen because they are at least slightly innovative in their presentations of invention are those written by William Irmischer, Frank D'Angelo, Linda Flower, W. Ross Winterowd, and Emig, Lauer, Montague, and Lunsford, all of which have already been mentioned. Included in this group as well is Patrick Hartwell and Robert H. Bentley's Open to Language.

I have categorized the last group as innovative because the authors included in their presentations a more "accurate" description of the inventional method(s) they provide, often a more in-depth view of invention's function, and a particular concern for at least one of the four inventional methods Young cites as being substantial theories that have emerged in response to composition being viewed as a process.⁹ These four theories, according to Young, are "classical invention, Kenneth Burke's dramatistic method, D. Gordon Rohman's prewriting method, and Kenneth Pike's tagmemic invention" ("Paradigms" 35).

To begin reviewing, then, I will analyze texts by Winterowd, Flower, and Hartwell and Bentley, because these authors are especially concerned with invention in rhetoric. Since Winterowd's text gives the broadest view of invention, I will discuss his text first. The Contemporary Writer fully explores the subject of invention. Not only does Winterowd include in this text the unstructured and more familiar procedures, but he gives serious attention to the four substantial theories of invention just mentioned. Win-

terowd begins his section on invention, however, by first explaining brainstorming, clustering and the six journalistic questions. By discussing brainstorming in two different ways, he allows students the opportunity to make better use of this unstructured method. For example, he suggests that listing attributes of the concepts or ideas discovered in the immediate brainstorming period, listing alternatives to those attributes, and then combining the items from each list can help produce even more ideas on a particular subject than if students simply followed the brainstorming activity as presented in most texts. For instance, Winterowd begins with the school cafeteria as a subject, brainstorms and lists certain features that characterize it, expands on one of those features (in this case it is the kind of dishes used in cafeterias) and creates another catalogue in which alternatives to the problem of using certain kinds of dishes have been discovered.

When he continues his discussion of clustering and the journalist's questions, Winterowd demonstrates his concern for the student and the importance of all inventional procedures being presented well. Clustering is described as a variation on brainstorming with a visual view of the subject. This idea may be simple but because of its simplicity it will remain with students longer.

In presenting the six journalistic questions (common in many texts) he goes beyond the usual explanation of them, encouraging students to use them as pivotal points for gener-

ating specific questions that produce more adequate ideas. This explanation is notable because it helps students recognize the difference between the journalist's questions and Burke's pentad. Once Winterowd has made this distinction, he continues to explain the terms in the pentad---act, agent, agency, scene and purpose, so that students will be able to see the relationships these terms have to each other, clearly expressing that acts are motivated, and that what happens is due to an agent's behavior. He also interprets "scene" differently than a writer might in answering the journalist's questions. "Scene" for Winterowd can include not only time and place, but a particular era in history or the economic or social climate which colors the writer's viewpoint. These multiple aspects of scene are not often brought out by other authors. Furthermore, in Winterowd's presentation of the pentad students are asked to consider the different ratios these terms can be used in to develop questions that may give new insights into a writing task.

Appended to this list of intentional procedures are tagmemics, prewriting, and Aristotle's topics. Although a few other authors attempt to describe tagmemics, Winterowd's explanation is most intelligible. For simplicity he labels it "shifting perspectives." Winterowd employs the language that Young, Becker and Pike have used for tagmemics, explaining that a subject, whether it is a concrete object or an abstract concept can be viewed from five perspectives. These perspectives are as follows: The subject can be viewed

(1) as a static, isolated entity, (2) as one among many of a class, (3) as a part of a larger system, (4) as a process rather than a static entity, and (5) as a closed system rather than as an entity. Although this type of phrasing and terminology may seem difficult for the freshman student to comprehend at first, Winterowd quickly makes the concept of static entities, processes, and systems concrete by first taking the topic of the Los Angeles freeway system through these five perspectives and then doing the same with a ballpoint pen. As he presents these perspectives he asks relevant questions about the subject which relate to the perspectives. For example, to reveal the meaning of an isolated, static entity, Winterowd asks, "What features characterize it?" (Contemporary Writer 95). Then he answers the question replying, "The pen is a cylinder exactly five inches long. The upper two inches consist of a silverish metal, a little under one-half inch in diameter, and tapering slightly toward the top, which consists of a button that is depressed to retract or push out the ballpoint..." (Winterowd, Contemporary Writer 95).

Winterowd, by setting up a general question that could apply to anything, and then describing in detail some of the features of a particular subject (a ballpoint pen), makes it clear to the student what is meant by static entity. To make tagmemics even clearer, however, Winterowd includes the complex but useful tagmemic grid. He begins his exploration of the grid by explaining that it is "based on two concepts,

the first of which is a way of knowing, and the second of which is a way of viewing" (Winterowd, Contemporary Writer 96). He then cautiously reveals that before a person can know anything, whether it be an abstract idea or a concrete object, he has to know several things about it, "contrast: how it differs from everything else in its class, variation: how much it can change and still be itself... and distribution: where it typically occurs in its class" (Winterowd, Contemporary Writer 96). Winterowd goes on to say that what is known can then be viewed as (1) a particle, (2) a wave, or (3) a field. He explains these categories carefully and finally comes up with six master questions which originate from the nine questions presented in the nine-celled tagmemic grid of Young, Becker and Pike.

The exercises Winterowd includes are specifically geared to each inventional procedure, but those following his section on shifting perspectives are especially good since he suggests interesting projects. For instance, he asks students to analyze and write on the efficiency or success of a restaurant of their choice. Or, he asks them to choose a subject that has to do with college living, requiring them to employ tagmemics. Because these topics are of interest to students, the exercises will be more enjoyable and will also prompt them to use the structured heuristic.

Perhaps the most distinctive feature of Winterowd's section on invention, though, is his inclusion of prewriting. His discussion of the analogy, the meditation, and the

journal is undoubtedly based on Rohman and Wlecek's Prewriting: The Construction and Application of Models for Concept Formation in Writing. This is significant because although other authors include what they designate as prewriting in their texts, most of them do not demonstrate a knowledge of Rohman and Wlecke's view of it because they have not read the original document. Instead, they get information of prewriting from other texts. Winterowd, however, is clearly familiar with it.

His rendering of what the analogy is could offer students more guidance in its application, and though he could have chosen better sample analogies, Winterowd is careful to explain the analogy's importance. He points out, for instance, that extended analogies, even if they are rather unusual, stimulate the writer to think; therefore, they are useful in exercising our students' imaginations and in creating new insights.

The meditation is presented quite well by Winterowd. He expresses the main points of the meditation by capitalizing on scene and asking the writer to imagine and dramatize an event that will both stimulate and direct the writer in discovering material. To do this, the student must add character, plot, actions, and motives to the drama. Since he explains that the writer is the central character, the student has to become actively involved in the meditation, adding more interest to the exercise.

Meditation and analogy are placed in Winterowd's chap-

ter on the journal, but in this section he also includes interior monologues, abstract-concrete sentences, and exposition. In explaining these mental tools of invention in intelligible language, then, Winterowd clarifies the value of the journal.

The last of the inventional methods Winterowd presents is Aristotle's topics. Unlike so many of the other authors, he acknowledges their significance as a tool for developing ideas rather than as a means to classify types of writing. He discusses facts, analogy, definition, classification, and comparison and contrast in such a way that the freshman student could easily comprehend his presentation. The topics, then, add to the richness of Winterowd's discussion of invention.

Although other authors may provide a number of inventional methods, their reasoning behind doing so may not be as clear as Winterowd's. He explains to his readers that "these procedures seem to relate to personality or mental style. Some people just naturally take to certain methods of developing subject matter and find them immediately valuable while other methods always seem cumbersome, more bother than they're worth" (Contemporary Writer 57).

Such a statement immediately puts the student at ease with the methods that do not come easily for her. Furthermore, Winterowd is careful to point out that it is not the method that is important but the results, again allowing the student to be comfortable with the inventional procedure

best suited to her.

Another author who provides a number of inventional procedures is Linda Flower, whose text is Problem-Solving Strategies. Unlike Winterowd, Flower does not elaborate on her explanation of heuristics but simply introduces tagmemics, Aristotle's topics, and the analogy. Instead of detailing each procedure's strengths, Flower simply demonstrates each method with an example. She chooses as her subject the "active reader," and carries this topic through each procedure mentioned. To illustrate, she uses Aristotle's topic, definition, to describe what the term means, reporting, "Active reading is a constructive process in which a person seeks information and builds a coherent meaning from a text" (Flower 75). In describing this same subject, but through the view of the particle in tagmemics she states, "Active reading is made up of a number of processes, including previewing the text to set up expectations and questions that reading will fulfill; searching for key information as one reads; summarizing the gist of the passage to oneself; and making connections as one reads" (Flower 76). Finally, in viewing active reading through the "personal analogy" she writes, "As an active reader I see myself trying to make each idea my own personal possession. Or it is as if I were trying to explain the text to a child who kept asking questions" (Flower 77).

I include these few examples to demonstrate that they are not as helpful to a student as they could be if given

more explanation. However, Flower is careful to address the expectations of the reader when she claims her intention is only to introduce these ideas, and not give full coverage of them; therefore, we do not expect more. One disturbing point, though, is that the exercises supporting this section are too demanding of the student if Flower is not going to provide further information on these procedures. One such exercise reads as follows: "C. Systematic exploration. Break into three groups and analyze a common topic from the three different perspectives of Aristotle's topics, tagmemics, and analogy. Use each of these systematic methods to create new ideas and develop insight into your subject. Then compare your results. What would you say are the special strengths of each method" (Flower 79)?

The exercise is really quite good but because students have not been given a full account of these three methods, how will they be able to carry out the demands of the assignment? The problem, then, lies not in the accuracy of the procedures she introduces, nor in the vocabulary, syntax, or organization of the presentation, but in the fullness of the explanation she gives for each. Flower does suggest other texts a person can go to if he wants more information, but without making use of these sources, it is doubtful that the student would gain a very deep understanding of these structured inventional procedures discussed by Flower.

Of course, besides these more complicated methods she also provides two simpler, unstructured ones, brainstorming

and talking to the reader. Flower explains brainstorming much differently than other authors, urging the student to keep writing during this process without censoring. She claims the difference between it and freewriting is that brainstorming is goal-directed thinking while freewriting is "a form of free association or stream-of-consciousness self-expression: one idea leads to another, which leads to another, like links in a chain" (Flower 73). In brainstorming, claims Flower, "Your ideas radiate out from your central focus like spokes radiating from the hub of a wheel" (73). I believe Flower makes her point. She is especially concerned that writers get something down on paper so they can overcome writer's block and discover the problem they want to solve. Her enthusiasm for brainstorming, then, as well as for other heuristics is understandable and warranted.

Her verbal inventional procedure is also interesting. In it Flower suggests that students imagine themselves talking to other people about their problem (subject) so they will have a greater sense of what needs to be said. Furthermore, as Flower explains, verbalizing ideas allows students the freedom from the immediate horror of thinking they have to write polished prose from the very beginning---a relief to all students.

In retrospect, Flower's text is innovative. She has included a number of important inventional procedures, and even though it would be beneficial for students if these heuristics were expanded upon, the text does offer some

good advice. Also, Flower presents the value of resting and incubating ideas, a part of the process of invention discussed by Young, Becker and Pike in Rhetoric: Discovery and Change, which is quite important to the struggling student writer.

Like Winterowd and Flower's texts, Open to Language by Patrick Hartwell and Robert H. Bentley is also innovative. It is unique in that it offers a complete unit on invention, extending over three separate chapters. They are "Analysis: Thinking with Concepts," "The Common Places of Invention," and "The Special Places of Invention." Interestingly enough, the journal, brainstorming and freewriting are not fully discussed in any of these three chapters. Instead, they are placed in the earlier chapters of the book where the only significant variation in Hartwell and Bentley's presentation of them occurs in their explanation of freewriting. They suggest it is an appropriate way to tone up the muscles used in writing, a necessity, they believe, to write fluently.

In their unit chapters on invention, then, Hartwell and Bentley illustrate the construction of an argument, demonstrate the heuristic potential of Aristotle's topics, and provide a variety of problems geared to initiate students to think in a way contrary to what they may be accustomed to. These are all important and therefore deserve closer observation.

"Analysis: Thinking with Concepts" is the first of the

three chapters on invention. In it Hartwell and Bentley stress to the student, "You are an invention machine" (493). Then they continue to explain that invention, or the discovery of ideas is an ongoing process throughout writing. To be more concrete in explaining techniques available and helpful to the writer, Hartwell and Bentley summarize freewriting and brainstorming, as well as the rhetorical triangle, which the authors claim, "is a potent device for invention: The writer who knows her reader and her position as writer has solved the most difficult problems of communication" (494). Further still, Hartwell and Bentley believe that making a commitment to the reader will generate ideas also, because once a writer has claimed that something is true or false, inadequate, unimportant, or whatever, she must find ideas to support her statement. It is a commitment which she has made to the reader and which must be followed through. The last element mentioned, then, that generates ideas, is style. "Styling a message," claim Hartwell and Bentley, "is a way of re-seeing, a testing of the possibilities of words, and hence, a kind of discovery" (494). I believe this is an interesting viewpoint and follows what Covino has said in his article, "Making Differences in the Composition Class: A Theory of Invention," that content cannot be separated from form and style. And if content is the generation of ideas, perhaps Hartwell and Bentley do not think it necessary to offer specific guidelines for inventional procedures that would help students in forming their thought. In-

stead, they encourage students to develop ideas as they work on discovering the grounds and the claim for a particular argument.

To aid students in accomplishing this, Hartwell and Bentley provide numerous examples based on Toulmin's logic, oftentimes expounding on the same subject as they describe different elements of argumentation. Following are two examples they use:

Grounds: Democratic processes are rarely shown on television= so claim: Militant young people are totally unacquainted with them.

Grounds: Five of the fifteen books on the Times non-fiction best-seller list are about money= so claim: These days, almost everybody seems to worry about money (Hartwell and Bentley 505).

The chapter continues with examples of "warrant" based on Toulmin's logic such as:

He must be guilty.

Why?

The little old lady positively identified him.

I think your belief in the testimony is unwarranted.

Not at all. She has firsthand knowledge of the crime, and she has no reason to lie (506).

Examples like this one, when combined with a brief explanation of warrant, grounds, and claim, are beneficial to students and easily understood because the subject makes clear each term's meaning.

Hartwell and Bentley's second section, "The Common Places of Invention," is also useful. In it the authors discuss definition as a heuristic, pointing out its value because of its inclusion of classification, example, and contrast, all of which are topics that aid the writer in devel-

oping her subject. Another strength in this section is that the authors use questions to help the writer think in depth. The questions hinge on the key terms, change, sequence, and context, terms that reflect Young, Becker and Pike's particle, wave, and field. Instead of asking what the features of an object or an event are as Pike would in looking at a subject as particle, Hartwell and Bentley ask, "How and in what ways can X change? When does it become something different? What was X in the past (months ago, years ago)? What is it likely to become in the future? What could it become? What couldn't it become" (536-37)? The authors have provided questions such as these for each term, and though they are thought-provoking, I feel they would be more powerful and have more impact on students' abilities to recall and make use of them if a concrete subject were to be placed in the context of each set of questions. Perhaps some believe students need to be exposed to abstract concepts in order to gain maturity in their ability to think. Though this may be true, I also feel that freshman students exposed to as complicated a method of invention as presented here (as change, sequence, and context) need to be given a more detailed explanation of the system before they can adequately utilize it with abstract ideas.

The third chapter of Hartwell and Bentley's unit on invention, "The Special Places of Invention," is designed to aid students in learning how to solve problems through different perspectives than what they may be accustomed to.

To ease students into this mode of thinking the authors present a "confidence-destroying quiz," asking students to answer "true" or "false" to statements such as:

Columbus discovered America in 1492.

The world is round.

There is no such thing as a child psychologist (Hartwell and Bentley 555).

The authors then provide some rather interesting insights into their answers. For instance, the world they say, is not round but is flattened near both poles. The usual answer is, of course, that the world is round, as opposed to being flat.

Hartwell and Bentley then present four methods by which a student may enhance his abilities to think differently and with more options than he might without their use. The methods include cross-breeding ideas, learning to think paradigmatically, learning to think visually, and learning to think analogically. Each is explained briefly with an example following.

The example given for cross-breeding ideas, for instance, focuses on an archeological discovery made by a journalist completing a book on the background of a lunar space program as he accidentally comes upon a clipping about a prehistoric bone marked by scratches. When he cross-breeds the ideas from his studies and what is found in the clipping, he comes up with a valid and significant discovery.

Each method is given as precise an example as the above, yet I feel the explanations of each method are too brief to be as valuable to the student as they might. In general,

ten, Hartwell and Bentley's Open to Language has many innovative ideas with clear examples, but in order to better satisfy students' needs, it would be beneficial if some of their explanations were fuller.

The Holt Guide to English by William Irmischer is a text in which the section on generating topics is quite satisfying. Irmischer obviously advocates the use of Burke's pentad and shows his enthusiasm for it, as Winterowd does, by presenting it clearly and precisely, emphasizing the heuristic properties of the interrelationships of the pentad's questions. Irmischer not only explains the pentad with perspicuity, but also gives students examples of different ways to see a particular subject. In this case it is the painting called Nighthawks by Edward Hopper. By using a visual agency to teach the pentad, Irmischer demonstrates how the change in perspective can generate different kinds of information even though the same inventional procedure is used.

Irmischer does not fail to discuss other heuristics, however; he also includes tagmemics, and like Winterowd explains it in the terms used by Young, Becker and Pike in Rhetoric: Discovery and Change. Although he does not include the tagmemic grid, Irmischer does offer students the questions that are generated from it. Furthermore, in asking the questions inherent in tagmemics, Irmischer is careful to use a concrete example. Instead of using the ballpoint pen as the object of analysis as Winterowd does, Irmischer focuses on the "student" as the topic. By offering

and asking questions about such a tangible subject, he gives students a way to recall the elements of particle, wave, and field. In addition, Irmischer supplies a specific student example of how the tagmemic model is applied so as to enhance students' perceptions of tagmemics.

With clear explanations accompanied by substantial examples of these inventional procedures, the readers of this text have a distinct advantage when writing their own papers, especially if they practice these heuristics by following the assignments Irmischer offers at the end of the chapter. The projects he suggests are well stated and targeted specifically so students will use the pentad or the tagmemic questions. To illustrate I have included two project examples:

1. Apply the pentad to topics like distress, frustration, contentment, fulfillment, courage, disaster, depression, euphoria, comfort, extravagance. Observe in what way a topic must be particularized immediately in order to be developed.
2. Apply the particle--wave--field model to an act or object: a new building on campus, a proposed freeway through the city, a particular strike, a strong opinion you hold. After you have generated your material, see what the possibilities for writing are. What have you discovered? Formulate a thesis, and write an essay, using as much detail as possible (Irmischer 49).

Irmischer, I feel, is more thorough in his presentation of invention than some of the other authors. In relating to his readers the topics of Aristotle, he is precise, carefully expressing, for example, how definition can be used to develop a subject, whereas other authors sometimes describe it as a tool to organize. Although he does not expound on

classification and comparison and contrast, he does present a brief explanation of inductive and deductive reasoning with an emphasis on the syllogism, giving the student yet another inventional procedure to help in generating logical arguments.

Although Irmscher includes several heuristic procedures in The Holt Guide to English, he is partial to one, the pentad. This partiality to an inventional method is not uncommon if we judge by Process and Thought by Frank D'Angelo and Four Worlds of Writing by Janice Lauer, Janet Emig, Gene Montague, and Andrea Lunsford. Both texts render the generative power of one inventional procedure only. For Lauer, Emig, Montague, and Lunsford, Pike's tagmemics are consistently mentioned, while in D'Angelo's text, Aristotle's topics are given priority. Each text gives ample treatment to the inventional method it presents, incorporating its use into the different forms of discourse. In Four Worlds of Writing the authors integrate tagmemics (which they call "exploring") into expressive, persuasive, and expository writing. Similarly, D'Angelo integrates the topics into the different forms of discourse in his text. But he cautions his students about informative, literary, persuasive, and self-expressive discourse stating, "You should think of the four broad categories not as specific kinds of writing, but as ways of classifying the numerous kinds of writing or speaking that you will do" (D'Angelo 16). D'Angelo's advice here is notable because it illustrates his ability to

see the diversity and application of the topics as an in-ventional tool for all types of writing situations. He does not pigeonhole them as strictly influential in persuasive writing, for example. Nor does he assume that only one topic or "mode of discourse" as he calls it, is acceptable or even desirable in a piece of writing. "In most writing the modes are mixed," notes D'Angelo, "but because a dominant mode is usually present, the importance of isolating the modes is for simplicity's sake" (17). The topics, then make up the main body of the text where D'Angelo defines and explains such key terms as definition and classification, briefly outlines the audience, purpose, and kind of discourse for which the topic could be used, and finally, provides students questions relating to each term that will help them generate ideas.

Like D'Angelo, the authors of Four Worlds of Writing also provide questions in their text which are specifically designed to help students understand what Young, Becker and Pike mean by tagmemics. Once they transform Pike's terms into "static," "dynamic," and "relative" and explain each in clear language, they offer students an "exploratory guide." This guide is a list of statements which prompts a response in the writer so he can discover his subject more easily. The advantage of the exploratory guide is that for each type of writing assignment there is, the statements which direct the writer in finding more information are somewhat different. For example, when students are asked to write about

places, statements listed under "static" are:

- Recall and record as many features as you can about your place---aspects that describe and define your place so that anyone can distinguish it from other places.
- Note down as many of your attitudes toward your place as you can.
- Identify the parts that make up the whole of your place (Lauer, Montague, Emig, and Lunsford 25-26).

But statements listed under "static" for writing about issues are as follows:

- Define your issue, distinguishing it from other issues like it.
- Record the details of your personal experience with it.
- Determine the sides of the public debate on the issue (154).

Although these statements address different types of subjects, the value of the "closed set" of questions in tagmemics is not sacrificed. Both sets of statements urge students to look at the parts of a whole. These exploratory guides, then, are quite useful. They allow students to see the generating power inherent in tagmemics no matter what the writing situation is.

Without exemplification, however, the explanation behind tagmemics these authors provide may not be as beneficial. Fortunately, exercises which ask students to apply tagmemics, as well as student examples incorporating their use, are included in each unit. To illustrate, the authors of Four Worlds of Writing first duplicate several pieces of students' work in one of which a particular student has written the following:

Rio
static view

The beach
--harsh, white sand
--brown, lean bodies
--the smell of gasoline mixed with the salty air...

dynamic view

--movements in early morning
--digging a hole in the sand, wriggling into it and watching people arrive
--the vendors setting up...(Lauer, Montague, Emig, and Lunsford 33-34).

The authors label each work as writer 1, 2, or 3 and in the exercises provided, ask students to read the piece (called an exploration) and encourage them to see it from a static, dynamic, and relative view, questioning:

Static

What distinctive features of the places do the writers provide?
How specific are the details?...

Dynamic

What movements have the writers captured?
What physical or historical changes have been noted?...

Relative

In what categories do the writers place their subject?
What reasons are given for such classification?...
How fully have the writers explored the comparisons or contrasts that were made (Lauer, Emig, Montague, and Lunsford 32)?

Exercises such as this one are exceptionally useful and demonstrate the value these authors have placed on invention.

D'Angelo shares this value and shows his concern for the student by including full length student examples. For instance, in discussing comparison and contrast he includes a sample paper entitled, "Two Women" in which the student writer has compared two sculptures, one called "The Flying Woman" by Paolo Soleri and the other by Francisco Zuniga called "Woman at Siesta." The paper is rich with detail de-

scribing each sculpture's weaknesses and strengths, and concludes with a final evaluation supported by earlier evidence.

This example is satisfactory not only because of its meticulous detail and organization, but because the subject is so interesting. D'Angelo is careful, too, to provide appropriate exercises to motivate students into practicing the inventional potential of comparison and contrast. Following are some he has included:

1. For purposes of class discussion and as an exercise in invention, compare or contrast:
 - a. two styles of clothing
 - b. two movies
 - c. two television shows
 - d. two songs...
2. Discuss, as an exercise in invention, some of the cultural differences that exist between any two nationalities, racial groups, special interest groups, or subcultural groups in the United States (D'Angelo 142).

Although the authors of Four Worlds of Writing and Process and Thought could further benefit the student by providing additional heuristics, I can still confidently recommend either text since both remind students of the potential of the topics and tagmemics in generating relevant information.

* * * * *

POPULAR TEXTS AND THEIR TREAT-
MENT OF INVENTION

Although some of the forementioned texts are also popular, they are more innovative than those I will discuss here. Writing With A Purpose, The Writing Commitment, A Contemporary Rhetoric, and St. Martin's Guide to Writing all include a number of inventional procedures, but for the most part, these methods are unstructured. For instance, James McCrimmon's Writing With A Purpose includes code words, brainstorming, freewriting, and the journal. Though he considers lookout spots, scouting, and mapping as separate inventional procedures, they may be better suited to his discussion of the journal since they are geared toward helping students see and observe their world with more precision. Procedures much like these are noting and sketching, found in Adelstein and Pival's text, The Writing Commitment.

The only structured heuristics in McCrimmon's text are speculating and Aristotle's topics while Adelstein and Pival present the journalist's questions, the topics, and what they designate as changing perspectives. McCrimmon's speculating hinges on Pike's tagmemic theory, but because he describes it in such brevity, using terms difficult for students to understand, and fails to adequately explain how students can employ this method in their own writing, I feel students are not really encouraged to utilize it. Aristotle's topics are presented in much the same way, and are described as though they are static entities rather than dynam-

ic processes that can change with the students' applications of them. Furthermore, because students are given no guidance on how to apply them to their own writing, putting them to use would be difficult.

Adelstein and Pival present the topics differently than McCrimmon, but they do restrict their potential. This is because the authors tend to categorize specific inventional methods with particular types of writing, suggesting (at least indirectly) that some procedures are better suited to certain writing situations than others. The journalist's questions, for example, are considered to be best for personal writing, changing perspectives, for descriptive writing. What I find unusual, though, is that while presenting methods for persuasive writing, which for the Greeks and Romans in classical rhetoric was a most appropriate place for the topics, these authors suggest using Larson's question list and personal dialogue which they claim are "specifically designed for persuasive writing (Adelstein and Pival 287). This claim may be valid, but to exclude Aristotle's topics in this section seems proof that these authors are not completely comfortable with the inventional properties of the common topics.

It is surprising, then, when they discuss definition, cause and effect, classification, and others in expository writing, that the questions they ask are as functional as they are. Adelstein and Pival do ask pertinent questions, though, such as:

Definition: How would you define, describe or characterize the subject?
Effect: What effect or result does it produce?
Cause: What has immediately caused it? What are its underlying causes?
Classification: How would you classify or categorize it? Is it part of a larger group? Can it be divided into larger parts, types, kinds?
Advice: What do others advise about? What are your views?
Comparison: What is similar to it? In what respects? Different from? In what respects (195)?

These questions provide students a wealth of information and since they are presented with concrete examples, their function is more powerful. However, the authors, both directly and indirectly, indicate that these common topics are most valuable when used to organize a paper. This is quite a different view of the topics since in classical rhetoric they were considered a major part of invention, a category in its own right. Another shortcoming evident in this text is the over-all impression it gives of prewriting. For Adelstein and Pival, prewriting is anything students do before they actually begin writing a paper, such as finding a topic, planning, outlining, and/or freewriting. Perhaps this view of prewriting is warranted, but it lacks the concept-formation principle that Rohman and Wlecke see as a major function of prewriting.

In general, then, Adelstein and Pival present an inaccurate view of prewriting, fail to give full meaning to Aristotle's topics, presume some inventional procedures more valuable than others, and like McCrimmon, include very few exercises that encourage the use of invention. Therefore, I find their text's presentation of invention, and McCrimmon's

as well, inadequate.

Other texts which treat invention superficially are Maxine Hairston's A Contemporary Rhetoric and Rise B. Axelrod and Charles R. Cooper's The St. Martin's Guide to Writing. Although these texts include both structured and unstructured methods, the message that comes across to students in their presentations is mixed.

For example, Hairston encourages students to look to the topics for information and ideas, yet she also separates each topic into an explanation of how students can write an argumentative paper using one specific topic only. This could be beneficial but it also undermines the topics' capacity for generating ideas. Another disturbing problem I find in Hairston's presentation is her advice on using the topics. Rather than explaining to students how to apply them, she stresses what students should avoid. In her discussion of the argument from cause and effect, for example, her key phrases in guiding students are: "Avoid oversimplification, do not confuse coincidence with causation," and "Avoid setting up scapegoats" (Hairston 277-78). Again, this may be valid advice, but it fails to give students constructive suggestions on how to develop their ideas.

In rendering information on other procedures, Hairston uses clear language in an enthusiastic manner, but again she unintentionally sends students signals that invention is not so important. If she believed it was, she would explain its procedures in more depth and provide examples demonstrat-

ing their value.

Axelrod and Cooper's The St. Martin's Guide to Writing provides examples for some of the inventional methods it presents but certainly not for many of the more complex ones. For instance, Axelrod and Cooper, who consider outlining to be an inventional procedure, give three specific examples of the different outlines there are, the scratch, the topic, and the sentence outline. But when they discuss Burke's pentad, Pike's tagmemics, Aristotle's topics, and Rohman and Wlecke's prewriting, none are given. I find this rather disconcerting since college freshman are probably most familiar with outlining and least familiar with these other methods. Because they are complex, they should be given more attention and should be explained with more accuracy. Axelrod and Cooper, however, distort the quality of the closed set of questions which distinguishes the pentad and tagmemics from other inventional procedures. I do not think the authors purposely exclude this element from their explanation, but it is no less an unfortunate mistake since it is the closed set that allows students to easily remember the basic questions that need to be asked about a subject. I do acknowledge the importance of the questions they provide, but because the theories behind tagmemics and the pentad are incomplete, I am not comfortable with their presentation of them.

Another factor which concerns me is that Axelrod and Cooper include in each unit a section call "Invention," with

with subheadings such as "Listing Problems," "Choosing an Important Problem," "Probing Your Subject," and others. But in this section on invention the authors consistently encourage students to use "listing" rather than any of the more complex inventional methods mentioned later in the text. As in Hairston's book, then, I am led to believe that Cooper and Axelrod do not strongly endorse the use of structured procedures. Instead, they emphasize such techniques as annotating, paragraphing, and summarizing, which have been practiced and accepted in the current-traditional paradigm. Because of this, I do not feel The St. Martin's Guide to Writing contributes to correcting the faults inherent in current-traditional rhetoric. Therefore, I do not think it would be the best choice of texts.

Unfortunately, two other popular texts whose authors are intent on preserving the current-traditional paradigm are Donald Hall's Writing Well and The Writer's Rhetoric and Handbook by Elizabeth McMahan and Susan Day. Both texts' treatment of invention is superficial. Neither of them expounds on any of the four major inventional methods considered by Young to be significant in the changing view of composition. Nor are the few procedures presented by them of any consequence. The brevity with which the authors discuss invention, their emphasis on matters of paragraphing, unity, sentences and usage, their failure to include exercises to motivate students to use the procedures, and their narrow views of the function of Aristotle's topics and Rohman and

Wlecke's prewriting, confirm their lack of interest in the subject.

While Hall pigeonholes the topics for use in expository writing only, McMahan and Day completely misinterpret invention. Rather than acknowledging it as a discovery mechanism, they consider it a technique to find a thesis and narrow a topic. Prewriting is also misconstrued by them and is described as a strategy of planning for which person (first, second, or third) students should write in; certainly not a view which contributes to the need for and potential of invention.

Another fault I have discovered in this text is that despite the fact that McMahan and Day present freewriting, they clearly encourage students to develop essays using the thesis sentence followed by subpoints with details and examples to support it. I find this message contrary to the reasoning behind inventional methods, especially considering McMahan and Day's remarks to students whose thesis is difficult to grasp. Rather than encouraging students to freewrite or brainstorm when they encounter writer's block, they insist, "If it turns out that your thinking is fuzzy, do not try to hide it from yourself. If you cannot get your thesis down clearly in a sentence, face up to it: You need to think some more. Do not go any further until you are able to see a single, clear workable idea expressing the main point of your paper" (22).

I cannot condone this kind of advice, particularly

since it is presumptuous on their part to assume that all writers (students) think as they do, and develop ideas as they do. Granted, for some students the advice to stop and just think may be warranted, but for others who must see their ideas on paper before capturing the emerging thesis, this advice may be completely unwarranted and damaging as well.

Unfortunately, then, neither Hall's nor McMahan and Day's text is very attentive to the needs of the writer in the difficult process of composing. Instead, both books cater to the need considered most important in the current-traditional paradigm without regard for the change taking place in composition. Therefore, instructors who are progressive and willing to expose students to the dynamic process of composing should avoid the texts Writing Well and The Writer's Rhetoric and Handbook.

* * * * *

CONCLUSION

Having examined these twelve texts, I find only one that incorporates the use of all four major inventional procedures mentioned by Richard Young, and that text is Winterowd's The Contemporary Writer. There are texts, though, that include full and accurate presentations of at least one or two of the four methods of invention. Among these are Irmscher's The Holt Guide to English, D'Angelo's Process and Thought, and Lauer, Emig, Montague, and Lunsford's Four Worlds of Writing. Hartwell and Bentley's Open to Language also offers a substantial account of several important inventional methods, but because of its somewhat confusing arrangement and limited explanations I would not prefer it. Another text accurate in its presentation of tagmemics, analogy, and Aristotle's topics is Flower's Problem-Solving Strategies. However, her discussion of these inventional procedures is merely an introduction and too brief to be very beneficial to students.

Several texts which appear to be innovative when paging through their contents, but actually are not, are James McCrimmon's Writing With A Purpose, Adelstein and Pival's The Writing Commitment, Maxine Hairston's A Contemporary Rhetoric, and Axelrod and Cooper's The St. Martin's Guide to Writing. The fault I find in these textbooks is that their views of inventional methods are inaccurate, too brief, and/or misleading. They do present their material intelligibly to the freshman student and also provide a number of inven-

tional procedures. The problem, however, is that their presentaion of these methods is not well developed. It is notable, nonetheless, that these authors at least attempt to provide students with some notion of invention. The authors of Writing Well and The Writer's Rhetoric and Handbook, on the other hand, barely mention ivenction, and when they do, seem to undermine its importance and briskly move on to what they consider the more important matters of usage, style, and organization---clear reminders that the current-traditional paradigm is preferred.

Although I am certain that each of these texts has value of some sort, only a few are innovative and accurate in their presentation of invention. And because the current-traditional paradigm would be enriched by including invention as viewed by Young, Becker and Pike, Rohman and Wlecke, W. Ross Winterowd and others, it is important we take notice of its value in the progression of rhetoric. We must learn to view a composition as a process the writer has control over rather than as something we encounter only after a finished product is before us. We need to encourage our students to make use of invention.

But how can we teach them of invention's potential in their own writing? We can encourage them to view composition as a dynamic process by choosing texts such as The Contemporary Writer, Process and Thought, The Holt Guide to English, and Four Worlds of Writing so our students will become familiar with the more structured and most advanced

inventional methods. We can urge students to use invention-
al procedures by assigning the appropriate exercises provid-
ed by the authors, and suggest students try various proce-
dures when they begin writing. But our students must be
given an accurate, fully developed and intelligible presen-
tation of invention if they are to remember the procedures
and use them in the future. That is why the texts we choose
are so important and why I urge choosing those that have the
best presentation of invention.

* * * * *

NOTES

¹ The validity of the term "current-traditional rhetoric" is sometimes questioned by composition and rhetoric scholars; nevertheless, the philosophy on which it is based is deeply rooted in the vitalist assumptions of the nineteenth century rhetoricians while its major features (described early on in this text) make up the "current-traditional paradigm" (Young, "Paradigms" 29). The term "invention" refers to the art of systematic inquiry by which a writer gathers information from various sources (including personal experiences, observations, and reading materials). Invention is a process which works on a subconscious level but can also work on a conscious level if heuristic devices are used to trigger the inventive power of the mind (Young, Rhetoric 120).

² A "state of crisis" usually develops very slowly. In this case, the current-traditional paradigm is considered to be in a state of crisis because it lacks emphasis on invention and therefore, is unable to solve the problems inherent in viewing the composition as a finished product only, especially since composition is now being viewed as a process (Young, "Paradigms" 33-35).

³ While "heuristic"'s meaning is synonymous with "invention," prewriting in this text is a specific inventional method presented by D. Gordon Rohman and Albert Wlecke (explained in further detail on pages 8-11 of this text). Sometimes, however, prewriting is considered to be anything the

the writer does prior to writing a paper, often having little, if anything to do with formal inventional procedures.

⁴ "Differences" as presented by Covino are synonymous with Jacques Derrida's "differance" or "play." The differences encountered by the writer as he develops a text occur when conflicts arise or when an undetermined elusive balance in describing through words, the actuality of a thing, is felt by the writer (Covino 2).

⁵ "Tagmeme" is a discipline-specific term which refers to a structure of inquiry that leads writers to consider various choices to choose from when writing a paper. The multiplicity of perspectives the tagmemic grid supplies allows the writer to see his subject as a particle, wave, or a field (a static entity, a dynamic or changing entity, or as a multi-dimensional system). It also allows the writer to see the contrast, variation and distribution of his subject. Tagmemics will be further discussed on pages 22-24 of this text (Young, Rhetoric 127).

⁶ "Differance" is synonymous with "differences" cited in note four.

⁷ "Cubing" is a specific inquiry technique by which a student explores a writing topic through the following six perspectives: Description, comparison, association, analysis, application, and argument (Axelrod and Cooper 466-67). "Prism thinking" is less likely to be associated with tagmemics because it focuses on the writer rather than on the

subject. Yet it still suggests the writer view his subject from different viewpoints. In this case, from the standpoint of the writer as participant (in an event), as a spectator, or as a reporter (Hairston 42-43).

⁸ "Structured heuristics" are those inquiry methods in which a specific set of questions that can be applied to any subject in any context are used to discover information. Among the methods considered to be structured are tagmemics, Burke's pentad, and Aristotle's topics. An "unstructured" heuristic, though it too is an inquiry system, is less specific, requiring the writer to use his imagination to come up with new questions or ideas for each individual subject. Examples of unstructured heuristics are brainstorming and clustering (Winterowd and Crane, "Eureka" 21-22).

⁹ "Accurate" in this text means that the inventional procedure is presented as closely as possible to the way the originator of the method had intended with the purpose of discovering ideas in mind.

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INVENTIONAL PROCEDURES: HOW IMPORTANT
ARE THEY FOR THE FRESHMAN COMPOSITION STUDENT?

by

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ABSTRACT

Current traditional rhetoric, with its heavy emphasis on usage, limited organizational patterns, and mechanical correctness, and its neglect of invention, has failed to meet the needs of the freshman composition student. Because composition is presently being taught as a process, students now need guidance in understanding invention. Invention includes many procedures which help writers systematically search all their resources for information on a topic. Four inventional methods which have emerged significantly in the past twenty years are a revival of classical rhetoric's topoi, Kenneth Burke's dramatistic method, D. Gordon Rohman and Albert Wlecke's prewriting, and Richard Young, Alton Becker, and Kenneth Pike's tagmemic theory. These four methods are discussed in some contemporary freshman composition textbooks but are sometimes represented as means other than to discover information. Occasionally, they are represented as organizational strategies or as modes which a writer might use to write descriptive or persuasive papers, therefore limiting the capacity of the inventional method to solve composition problems. Other texts, however, are enriched by their addition of well represented inventional methods.