

SETTING FREE THE BIRDS: HEURISTIC APPROACHES
TO THE TEACHING OF CREATIVE WRITING
AT THE COLLEGE LEVEL

A Dissertation
Presented to
The School of Graduate Studies
Drake University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Arts

by
Peggy Baldwin Parris
June 1983

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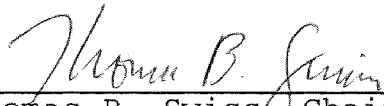
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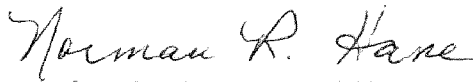
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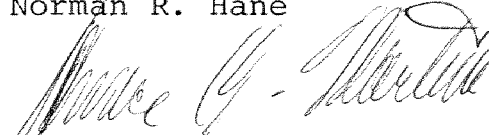
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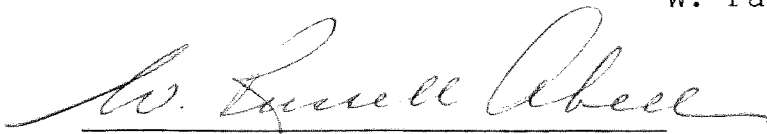

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An abstract of a dissertation by
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Problem. While creative writing classes have been a part of college curricula for nearly fifty years, little has been done to address the difficulties that students have in getting started with writing tasks, particularly in finding a subject and generating raw material at the pre-writing stage for their poems and stories. The unfortunate assumption that the poet, or any imaginative writer, is invariably subject to some inborn mysteriously prompted inspiration before writing begins has kept the poetic process beyond the control of student writers; the same mystique has likewise prevented teachers from taking advantage of research into the creative and writing processes done by psychologists and rhetoricians, which might serve to give students more conscious control over stimulating their own creative abilities.

Procedure. A review of the literature related to invention in rhetoric and composition since the time of Aristotle and to research into the psychology of creativity and the creative process revealed a large number of discovery techniques, or heuristics, which might have application for the creative writer. Criteria for effective heuristics were established, and techniques measured against them. Two heuristics, the tagmemic invention matrix and Burke's pentad, were specifically adapted for and presented to beginning creative writing students for use in their work, along with free writing as a mode of transcription. Follow-up questionnaires and individual interviews were used to determine the usefulness to the students of the discovery devices. Creative writing textbooks were reviewed for heuristics, and some methods were formulated for presenting heuristic approaches in the classroom.

Findings. Students who used the tagmemic and pentad procedures generated more raw material for their work at the pre-writing stage than had been their usual practice, which helped them to get started with their writing assignments. Use of the discovery devices proved helpful in drawing forth information from memory

and giving writers additional concrete, specific details to feed their imaginations for their first and subsequent drafts. Some students found the use of heuristics so beneficial that they were inclined to continue using them, and all students were given some insight into the degree to which they had conscious control of their own creativity. Only three heuristic procedures were found to be specifically mentioned as such in a limited number of creative writing texts currently in print: free writing, list-making, and journal-keeping.

Conclusion. Creative writing students can benefit from instruction in techniques to increase their creativity and for controlling their own creative and writing processes. No currently available creative writing textbook contains adequate heuristic-based instruction, so teachers have an obligation to inform themselves about such procedures and to present those that will best aid their particular students in developing their own creative abilities as writers of poetry and fiction.

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INTRODUCTION

The black and white dog with the big nose sits on top of his dog house, a typewriter in front of him, his paws poised over the keyboard. "It was a dark and stormy night," he types briskly. He stops. He stares straight ahead. Perspiration breaks out on his doggy forehead. Snoopy is trying again to write a novel. He looks at what he has written. In a balloon over his head, he thinks, "Sometimes when you are a great writer, the words come so fast you can hardly put them down on paper..." He looks distressed. "Sometimes."¹

And sometimes the writer, particularly the student writer, finds that the words will not come at all. Writing students are required to produce against a deadline more pressing than any except for that of professional journalists, and yet, as beginners, they are the least equipped to write on demand. Such an instructional system may be born of necessity and may, indeed, develop self-discipline in the student writer,

¹ Charles Schultz, Peanuts, United Features Syndicate, Inc., 1971, reprinted in Jeff Rackham, From Sight to Insight: Steps in the Writing Process (New York: Holt, Rinehart and Winston, 1980), p. 443.

but what develops is, as often, frustration and despair. Even the most self-disciplined professional poet or fiction writer knows times, too, when the words just will not come; most adopt techniques intuitively, or through trial and error, to get themselves moving again. The problem of generating words and ideas for writing and attempts to devise procedures for facilitating their flow has concerned philosophers and scholars, as well as writers, for more than 2,300 years. But the results of those centuries of concern are of small comfort to Snoopy and other writers like him if they have not been exposed to the existing techniques for stimulating ideas for their creative writing.

Donald M. Murray, a writer who teaches writing, has said,

We need to take all the concepts of invention from classical rhetoric and combine them with what we know from modern psychology, from studies of creativity, from writers' testimony about the prewriting process.¹

The need exists for a synthesis of pedagogical theory in writing with research in creative behavior and

¹ Donald M. Murray, "Write Before Writing," in The Writing Teacher's Sourcebook, ed. Gary Tate and Edward P. J. Corbett (New York: Oxford Univ. Press, 1981), p. 178.

sound creative writing practice to produce effective procedures that will help students in generating ideas for their imaginative work. Generating ideas is the function of heuristics, which are discovery or invention techniques. Since the time of Aristotle, heuristics have been used in the teaching and practice of rhetoric, whether spoken or written. More recently, those researching the psychology of creativity have found that heuristics can be fruitfully employed, too, for stimulating creative behavior in problem-solving situations.

Systematic approaches to creativity, however, may strike some as antithetical. Many poets and fiction writers, some of whom are teachers of creative writing, have a deep suspicion of method. They do not want to look too closely at the composing process for fear, as Hemingway said, that any conscious examination or attempt at intervention might "spook" their writing.¹ Such assumptions--that creative processes are not susceptible to conscious control, that the poet (meaning any imaginative writer) has a special intuitive and inspired vision, that the poet is born with a natural power for great or original thought--

¹ George Plimpton, ed., Writers at Work, 2nd series (1963; rpt. New York: Penguin, 1982), p. 220.

are as old as Plato and have been kept alive by the theories of the nineteenth-century Romantics. Shelley, in his "Defense of Poetry," elevated the poet to a near-divinity who "participates in the eternal, the infinite, and the one," calling him¹ "the happiest, the best, the wisest, and the most illustrious of men."² Similarly, Emerson, in his essay, "The Poet," pictured him as "the complete man . . . isolated from his contemporaries," on whom fall the impressions of nature.³

With the Romantics, one sees "a general shift of emphasis . . . away from the principle that the poet produces his own subject matter . . . by habits or deliberate acts of learned artistry . . . to the converse principle that poetic substance . . . is generated in the poet's soul."⁴ Perhaps the Romantic poet/theorist who has most influenced those who are suspicious of conscious method is Wordsworth. In his

¹ The use of the masculine gender is the choice of the author cited in every case.

² Percy Bysshe Shelley, "A Defense of Poetry," in Critical Theory Since Plato, ed. Hazard Adams (New York: Harcourt Brace Jovanovich, 1971), pp. 500, 512.

³ Ralph Waldo Emerson, "The Poet," in Critical Theory Since Plato, Adams, p. 545.

⁴ Robert Marsh, "Invention," in Princeton Encyclopedia of Poetry and Poetics (Princeton, N.J.: Princeton Univ. Press, 1974), p. 402.

"Preface to the Second Edition of Lyrical Ballads," Wordsworth described the poet as a man "endowed with more lively sensibility . . . who has a greater knowledge of human nature, and a more comprehensive soul, than [is] supposed to be common among mankind," and through whom poetry comes as "the spontaneous overflow of powerful feelings . . . recollected in tranquillity."¹ To all of which Ezra Pound replied some one hundred and fifty years later, "The mere registering of a bellyache . . . is not enough. . . . Any damn fool can be spontaneous."²

Ironically, Pound, the most famous "madman" of the twentieth century, and his colleague, T. S. Eliot, spent most of their professional lives attempting to rid modern poetry of Romantic influences and to refute the long-held myth of the poet as a naif made mad by the gods. "Our fascination with creation as a kind of divine madness," Richard Lloyd-Jones says, "leads us to undervalue the acts of creation which may be rational and thus teachable."³ However, the creative

¹ William Wordsworth, "Preface to the Second Edition of Lyrical Ballads," in Critical Theory Since Plato, pp. 437, 441.

² Plimpton, 2nd series, p. 42.

³ Richard Lloyd-Jones, "Ex Nihilo, . . .," College English, Adams, 40 (1978), p. 145.

process by which the writer generates ideas "seems a mystery only if we contemplate the results rather than the steps along the way . . . Our long preoccupation with products rather than processes has built up a veil of mystification around invention."¹ If the creative writer believes that composing is only a registering spontaneously of "the impressions of nature" or of the "overflow of powerful feelings" or that it is what I. A. Richards called "a sort of catching of a non-verbal butterfly in a verbal net . . . then he is deprived of the very thing that could help him."²

True, as Robert M. Pirsig notes, "when analytic thought . . . is applied to experience, something is always killed in the process . . ."

But what is less noticed in the arts--something is always created too. And instead of dwelling on what is killed it's important to see what's created and to see the process as a kind of birth-death continuity that is neither good nor bad, but just is.³

¹ Robert De Beaugrande, "The Process of Invention: Association and Recombination," College Composition and Communication, 30 (1979), 267.

² I. A. Richards, So Much Nearer: Toward a World English (New York: Harcourt, Brace and World, 1968), p. 175.

³ Robert M. Pirsig, Zen and the Art of Motorcycle Maintenance (New York: Bantam, 1975), p. 77.

The essential point for creative writing students is to learn to exploit both intuition and conscious control. Conscious control need not undermine the imagination writers use in composing poems or stories, especially if they use it to put themselves "in the way of stimulation, the kind of stimulation that will actively 'generate' ideas in [their] mind[s] and thereby produce . . . specific [subjects] and things to say about [those subjects]."¹ Heuristics are just such ways of stimulation, and, as William A. Covino has found, heuristic strategies produce creative behavior when employed with an open, playful, and receptive attitude such as is required of any imaginative activity.²

The process of creating a work of art--a painting, a poem, a pas de deux--consists of two aspects: the imaginative concept and the technical execution. The two are inseparable in the finished product, and both must be present in order for the creative act to take place. When a high level of the two are present in equal measure, a striking and original work

¹ Jacqueline Berke, Twenty Questions for the Writer: A Rhetoric with Readings (New York: Harcourt Brace Jovanovich, 1972), p. 15.

² William A. Covino, "Making Differences in the Composition Class: A Philosophy of Invention," Freshman English News, 10, No. 1 (1981), 4.

results, and one can no longer "know the dancer from the dance," to quote Yeats. In writing, as in all the other arts, the technical aspect is the only one of the two that is fully teachable. "There is a technique," Katherine Anne Porter once said of writing, "there is a craft, and you have to learn it."¹

Although creativity per se is not teachable in the usual sense, the innate creative abilities of student writers can be nurtured, stimulated, and liberated by means of techniques such as heuristics, which can be taught. "The writer dreams of art, but he works at craft."²

The question of the extent to which creativity can be taught will be discussed further in Chapter II. The question of whether creative writing can be, or even should be, taught deserves attention here, because it is still raised occasionally by those who subscribe to the Romantic concept of the poet, despite the fact that such courses are now an established part of most college and university curricula. Creative writing courses have "existed at some schools since the early years of the century--Columbia, Iowa,

¹ Plimpton, 2nd series, pp. 154-55.

² Donald M. Murray, A Writer Teaches Writing: A Practical Method of Teaching Composition (Boston: Houghton Mifflin, 1968), p. 13.

Chicago, Washington to name a few of the earliest."¹ However, in 1931, when Paul Engle began the Writers' Workshop at the University of Iowa, "academic traditionalists (as Engle later recalled) thought the term 'creative writing' an obscenity."² Engle, R. V. Cassill, and other pioneers in the field have since been vindicated. Today, more than 250 programs offer undergraduate and graduate degrees in creative writing.³ In 1966, a study group at the landmark Anglo-American Dartmouth Conference of the Modern Language Association issued findings which said, in part, that the teaching of creative writing has "intrinsic worth in terms of the deeper regions of personality development and an entire range of inner satisfactions" even for the student who is not called to making writing a career.⁴ And, according to W. Ross Winterowd, a leading theorist in composition and rhetoric, creative writing classes will continue to survive,

¹ Eric Staley, "AWP: A Continuing Tradition of Support," AWP Newsletter, Oct. 1982, p. 1.

² X. J. Kennedy, Introd., Writing Poems, by Robert Wallace (Boston: Little, Brown, 1982), p. vi.

³ Staley, p. 1.

⁴ Alice Glarden Brand, "Creative Writing in English Education: An Historical Perspective," Journal of Education, 162, No. 4 (1980), 75.

simply because at their best they are more intense and rewarding experiences for students than the theme-a-week mixture of sociology and "well-supported" opinion about everything under the sun that makes up the normal--not the best--garden variety writing class.¹

Even granting the benefits that students may derive from engaging in imaginative writing, those who view the poet as an inspired person of genius may yet cavil at the effectiveness of or the need for creative writing courses for those who, through inner necessity, will become poets or writers of fiction by profession. But the late novelist and critic John Gardner once wrote that the genius which makes a writer

is as common as old shoes. Everybody has it, some more than others, since no one can hope to use up more than a very small portion of his or her native gift. Every nightmare (and even dogs have them) hints at the secret reserves of imaginative power in the human mind.

In any case, Gardner said, "I can think of only a handful of well-known American writers who have not taken creative writing courses, and usually not one but several."² Fiction writer and long-time teacher

¹ W. Ross Winterowd, Contemporary Rhetoric: A Conceptual Background with Readings (New York: Harcourt Brace Jovanovich, 1975), p. 9.

² John Gardner, Introd., Becoming A Writer, by

of writing R. V. Cassill agrees: "Those who disparage any kind of instruction in [creative] writing have a point when they say you can't make a silk purse out of a sow's ear. In my experience, though, it has turned out that very few sows want to become silk purses."¹

No writer who ultimately has something to say will be harmed by first learning how to say it well. Aristotle believed that "what men did instinctively they could do more effectively if they consciously schooled themselves in the art of that activity."² And with Aristotle and his Art of Rhetoric, the formal development of systematic heuristic procedures for writers had its beginning. That creative writing and rhetoric seem strange bedfellows is largely due to the unfavorable connotations which surround the latter. Writing, or speaking, which relies more upon style than content, especially that favored by politicians and other public figures, has come to be called mere rhetoric, implying an emptiness and even a measure of deceit. In the teaching of writing at the college

Dorothea Brande (1934: rpt. Los Angeles: J. P. Tarcher, 1981), pp. 12-13, 17.

¹ R. V. Cassill, Writing Fiction, 2nd ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1975), p. xv.

² Edward P. J. Corbett, Classical Rhetoric for the Modern Student, 2nd ed. (New York: Oxford Univ. Press, 1971), p. 41.

level, the terms rhetoric and composition are often used interchangeably, implying expository, discursive, analytical writing and a measure of emptiness as well.

However, rhetoric, in its original, classical sense, was the art of discovering or inventing and presenting persuasive arguments in support of a proposition. Aristotle held that "rhetoric had no peculiar subject-matter but could be used to talk about any subject whatsoever."¹ And although they were taught as separate processes, rhetoric and poetics share such capacities in common that in the teaching of classical rhetoric "the ancients specifically inculcated imaginative visualization, and taught it from the poets."² For instance, Longinus' essay, "On the Sublime," attributed to the Greek philosopher of the third century A.D., was concerned with the rhetoric of oratory, but it drew its examples from poetry, "illuminating the bearing of poetic on rhetoric," and vice versa.³ Longinus proposed that, although sublimity is the "echo of a great soul"--an idea the Romantics picked

¹ Edward P. J. Corbett, "What Is Being Revived?" College Composition and Communication, 18 (1967), 167.

² Charles Sears Baldwin, Ancient Rhetoric and Poetic: Interpreted from Representative Works (1924; rpt. Gloucester, Mass.: Peter Smith, 1959), p. 2.

³ Baldwin, p. 126.

out and echoed themselves--the speaker, or writer, should be trained in producing poetic effects.¹

Genius, Longinus argued, is "annulled by lack of art."² After the twelfth century, the art of poetry, too, came to be considered "a kind of argumentation or persuasion . . . and a form of composition (and, as such, to be treated in terms of style, organization and figures borrowed from rhetoric),"³ an attitude which persisted through the neoclassic eighteenth century until the rise of Romanticism and its concepts of the poet's naturally superior imagination and the primacy of the poet's emotions. However, even Emerson called poetry "meter-making argument."⁴

Today, despite lingering Romantic tendencies, poets continue to make use in their work of rhetorical principles, such as proposition and proof. For example, the poet "may conclude, after examining his

¹ [Dionysis Cassius] Longinus, "On the Sublime," in Critical Theory Since Plato, Adams, p. 81.

² Elder Olson, "The Argument of Longinus' On the Sublime," in Critics and Criticism: Ancient and Modern," ed. R. S. Crane (Chicago: Univ. of Chicago Press, 1952), p. 239.

³ Richard McKeon, "Rhetoric in the Middle Ages," in Critics and Criticism: Ancient and Modern, Crane, p. 291.

⁴ Emerson, p. 546.

experience in love, that love is a destructive passion [his proposition]: his proof may be a compelling and convincing image of such destructiveness."¹ Such propositions in poetry, and in fiction as well, are most often implicit rather than expressly stated. According to Jonathan Holden, "the main questions of poetic form right now [are] questions of rhetoric"

If "rhetoric" is traditionally the "art of persuasion," then whenever we consider the ways in which a poet or novelist might have tried to anticipate and play upon the expectations and dispositions of his audience, we are considering the rhetorical aspects of a work of imaginative literature.²

However, Ross Winterowd sees rhetoric as "the global art that develops theories concerning . . . all human discourse, not just persuasion."³ With a firm understanding of the close relationship between rhetoric and poetics, contemporary writing theorists have re-examined the former, concluding that rhetoric "is concerned primarily with a creative process that

¹ Richard E. Hughes and P. Albert Duhamel, Principles of Rhetoric (Englewood Cliffs, N.J.: Prentice-Hall, 1966), p. 96.

² Jonathan Holden, The Rhetoric of the Contemporary Lyric (Bloomington: Indiana Univ. Press, 1980), pp. 13, xii.

³ Winterowd, Contemporary Rhetoric, p. 2.

includes all the choices a writer makes."¹ And because the capacity to create, to discover, to invent, to respond to form are natural human abilities, Ann E. Berthoff says that "both critical and creative writing . . . exercise the forming power of the active mind: the imagination is engaged in a process of making meaning, which may take the form of image or argument, story or discursive demonstration."²

So convinced of the relatedness of rhetoric and poetics was the Committee on the Nature of Rhetorical Invention of the 1970 Speech Communication Conference that they issued the following recommendation:

That the relationship between rhetorical and aesthetic invention be explored; that further, those who wish to develop rhetoric's function as an architectonic art explore modes of discovery in all areas, taking upon themselves the task of systematizing these modes, their respective values, and their transferability from one area to another.³

In the succeeding years, inventionists have responded

¹ Richard E. Young, Alton L. Becker, and Kenneth L. Pike, Rhetoric: Discovery and Change (New York: Harcourt, Brace and World, 1970), p. xii.

² Ann E. Berthoff, Forming, Thinking, Writing: The Composing Imagination (Rochelle Park, N.J.: Hayden, 1978), p. 3.

³ Robert L. Scott et al., "Report to the Committee on the Nature of Rhetorical Invention," in Contemporary Rhetoric: A Conceptual Background with Readings, ed.

to the Committee's charge, developing heuristics for student writers that draw from a rainbow of disciplines, many of which will be examined in this study for their transferability to creative writing.

Heuristic, used both as a noun and as an adjective, is "a rather recent term (1860) and means simply 'serving to find out or discover.'"¹ According to inventionist Richard E. Young, heuristics are

explicit plans for analyzing and searching which focus attention, guide reason, stimulate memory and encourage intuition. . . . reusable heuristic procedures . . . can be taught as well as learned. . . . but one cannot teach direct control of the imaginative act or the unanticipated outcome. . . . the use of heuristic procedures can coax imagination and memory; the intuitive act is not absolutely beyond the writer's control; it can be nourished and encouraged.²

Young and his colleagues, Alton L. Becker and Kenneth L. Pike, caution that heuristics not be confused with rule-governed operations, such as the procedure for finding the least common denominator in arithmetic,

W. Ross Winterowd (New York: Harcourt Brace Jovanovich, 1975), p. 111.

¹ James Kinney, "Classifying Heuristics," College Composition and Communication, 30 (1979), 352.

² Richard [E.] Young, "Invention: A Topographical Survey," in Teaching Composition: Ten Bibliographical Essays, ed. Gary Tate (Fort Worth: Texas Christian Univ. Press, 1976), pp. 1-2.

which "specify a finite series of steps that can be carried out in mechanical fashion without the use of intuition . . . and that infallibly [result] in a correct answer."¹

Further, Ross Winterowd explains that "all heuristics are nothing more than ways whereby the writer can 'walk around' a subject, viewing it from different angles, taking it apart in various ways, probing it."² Far from being restrictive, heuristics are "more effective 'programs' for enabling students to gain the freedom to express themselves than the old by-guess-and-by-golly method."³ An inventionist who has done extensive research and written widely about the benefits to be derived by student writers from invention or discovery techniques, Winterowd says, "A good heuristic gives one a new way to approach subject matter, a [way] that becomes automatic, almost intuitive. Therefore, the best heuristic will have all the elegant simplicity of a profound mathematical formula," without its predicability of outcome.⁴

¹ Young, Becker, and Pike, p. 120.

² Winterowd, Contemporary Rhetoric, p. 90.

³ W. Ross Winterowd, "'Topics' and Levels in the Composing Process," College English, 34 (1973), 708.

⁴ Winterowd, Contemporary Rhetoric, p. 144.

Given the smorgasbord of discovery devices available for teaching to creative writing students, individual heuristic models should be evaluated on the basis of "the value of the information and attitudes that invention procedures generate."¹ The ideal heuristic for the poet or fiction writer should generate a liberating attitude and an abundance of concrete, specific information about people, places, things, ideas, happenings, and emotions, suitable for all possible writing occasions. However, with heuristics, unlike pantyhose, no single discovery device yet exists where "one size fits all." But, even if less than ideal, any heuristic is beneficial to student writers if it starts going the creative process of association and recombination.

Invention theorist Janice M. Lauer has formulated a set of measures for the effectiveness of heuristic models; her criteria are transcendency, flexibility, and generative capacity. A heuristic is transcendent if it is "non-data conditioned"--that is, non-subject specific--"capable of being internalized, of being an habitual guide to writers' inquiries because it can be used repeatably from one subject to another," being

¹ Susan Wells, "Classroom Heuristics and Empiricism," College English, 39 (1977), 469.

memorable and portable. A heuristic is flexible if it "specifies a clear sequence of operations which . . . allow return to previous operations or a leap to subsequent ones if an evolving insight prompts such recursiveness." A heuristic is highly generative if it "engages the writer in a range of operations that have been identified as triggers of insight: visualizing, analyzing, classifying, defining, rearranging, and dividing." Lauer adds, "The most highly generative models would be those which . . . leave no dimension of the subject unexplored."¹

For the student of creative writing, a fourth criterion for the effectiveness of a heuristic must be considered: playfulness. If a discovery procedure is to generate both the material for an imaginative work and the necessary liberating attitude in its user, it must be presented to the student writer in such a way as not to appear mechanical, limiting, or unpoetic, or even anti-poetic. Vestiges of the Romantic mind-set are present even in contemporary college students. Presentation of heuristics is the responsibility of the classroom teacher and will be discussed in Chapter III. In his Counter-Statement, Kenneth Burke,

¹ Janice M. Lauer, "Toward a Metatheory of Heuristic Procedures," College Composition and Communication, 30 (1979), 268-69.

examining the relationship of rhetoric to poetics, writes that "if an old belief existed long enough for genial poets to make it poetic, a new and contrary belief must necessarily seem unpoetic until it in turn has been exploited by a poet."¹

Heuristics can provide the necessary pump-priming for the creative writer if he or she is exposed to them, finds those which are personally most compatible, and learns to make regular and, eventually, habitual use of them. Peter Elbow, a writing theorist who has one foot in both rhetoric and poetics, declares that "it's no good giving creative writing a monopoly on the benefits of intuition or giving nonfiction writing a monopoly on the benefits of conscious control."

The important point is that you should exploit both intuition and conscious control, whichever kind of writing you are doing. Conscious control needn't undermine the intuition you may use in writing poems and stories . . .²

¹ Kenneth Burke, Counter-Statement, 2nd ed. (Los Altos, Calif.: Hermes Publications, 1953), p. 204.

² Peter Elbow, Writing with Power: Techniques for Mastering the Writing Process (New York: Oxford Univ. Press, 1981), pp. 11, 12.

Acknowledgements

The seed which grew into this study was planted by the encyclopedic Kenneth Burke in a 1978 article, in which he suggested that his pentad might have possibilities for generating literary texts as well as for analyzing them.¹ The seedling concept was nurtured by Thomas B. Swiss, who supervised the project and offered the suggestions and encouragement that coaxed it into blossom. A sincerely felt posy of gratitude is extended to Professor Swiss. Appreciation, too, is due Drs. David E. Foster, Norman R. Hane, Bruce K. Martin, and W. Paul Blakely for their assistance; to Gary Gildner for stimulating disagreement; to the Reference Staff of Cowles Library, Drake University; and to the students in the writing classes at Drake and Des Moines Area Community College who participated in the study.

¹ Kenneth Burke, "Questions and Answers About the Pentad," College Composition and Communication, 29 (1978), 330.

CHAPTER I

TOPOI: HEURISTICS DERIVED FROM CLASSICAL RHETORIC

The Greeks had a word for it, and the word was heurisis, meaning discovery or invention. As early as 400 B.C., Thrasyarchus of Chaleedon had written on the subject, but Aristotle is credited with having founded the first system for heurisis in his Rhetoric c. 330 B.C.¹ Although concerned only with persuasive oratory, Aristotle's topoi, or topics, have continued to shape the teaching of writers as well as speakers to the present, the need to discover or invent what to say and about what to say it being a perennial problem. In the topics,² one recognizes the general, instinctive categories into which human experience is classified by the mind. They are the means for approaching

¹ John Henry Freese, Introd., The Art of Rhetoric, by Aristotle (New York: G. P. Putnam's Sons, 1926), pp. xiii-xiv, xii.

² The word topic will be used throughout in its meaning derived from topoi, places or regions, as distinct from its usage as a synonym for the subject of a discourse.

a subject "in a controlled and direct way, coursing the field even as a trained spaniel [does] to spring a quarry," as opposed to "the haphazard way of ranging wildly through the brush in hopes of flushing out an idea."¹

Aristotle divided the rhetorical process into five stages: invention, arrangement, style, memory, and delivery. At the first stage, his topoi constitute locations or common places where one might begin the discovery process. His Common Topics fall into four groups: more and less (the topic of degree), the possible and the impossible, past and future fact, and greatness and smallness (the topic of size).² These he expanded further to twenty-eight topics from which enthymemes, that is, rhetorical syllogisms, could be created (Appendix A), grouped into categories dealing with definition, comparison, and relationships such as cause and effect--ways of thinking which survive as the traditional rhetorical modes of composition.

The young Cicero, writing c. 90 B.C., re-examined the discovery process in his De Inventione.³ Some

¹ Hughes and Duhamel, p. 131.

² Corbett, Classical Rhetoric, p. 35.

³ H. M. Hubbell, Introd., De Inventione, De Optimo Genere Oratorum, Topica, by Marcus Tullius Cicero (Cambridge, Mass.: Harvard Univ. Press, 1949), p. viii.

fifty years later, he conflated his own work with Aristotle's topoi to produce his Topica. Cicero saw, as had Aristotle, that "there is no discussion in which there is not at least one topic involved," although "some topics are better suited to some inquiries than others."¹ His Topica served as the commonplace in the process of inventio, the Latin equivalent of heurisis, for the orators of the Roman school and for speakers and writers of many subsequent generations.

Interest in rhetorical invention declined over the centuries as interest in style rose. Quintilian's De Institutione Oratoria, written c. A.D. 95, emphasized "ingenious analysis, imaginative development," style cultivated for its own sake.² By the fifth century, rhetoric was at the service of theology, and inventio was "a discovery of 'what should be understood.'" When canon law or other theological texts appeared to be contradictory, the hermeneutical heuristic of "circumstances of statement" was employed, considering "who" said it, "where, when, why, how, with what assistance" it was said, to quote from Augustine's

¹ Marcus Tullius Cicero, De Inventione, De Optimo Genere Oratorum, Topica, trans. H. M. Hubbell (Cambridge, Mass.: Harvard Univ. Press, 1949), pp. 377, 443-44.

² Baldwin, p. 100.

De Doctrina Christiana.¹ Medieval rhetoricians also extended their concerns to poetics when poetry came to be looked upon as a mode of argumentation to be dealt with in terms of style, organization, and rhetorical figures of speech. However, the concept of inventio remained eclipsed except as an adjunct to explication. After the twelfth century, the commonplaces were no longer starting points for discovery but "devices for remembering, for amplification, for describing, and for constructing figures."² Erasmus, in the sixteenth century, recommended the keeping of a commonplace book, a practice which became widespread during the Renaissance and for centuries after.³ In these notebooks, scholars and schoolboys alike recorded borrowed lines of verse, striking tropes, and "pithy sayings for future use."⁴ These grab bags acted not as stimulants to invention but as substitutes for originality, ways for filling empty slots in accepted rhetorical forms. The Aristotelian concept of topoi as

¹ McKeon, pp. 265, 267.

² McKeon, p. 292.

³ Corbett, Classical Rhetoric, p. 605.

⁴ W. Ross Winterowd, Rhetoric: A Synthesis (New York: Holt, Rinehart and Winston, 1968), p. 25.

commonplaces for heurisis became lost in the stylistic scramble for the elegant and the ornate.

In the nineteenth century, the importance of an inventio of discovery was further diminished by rhetoricians under the influence of modern science. George Campbell was more concerned with "the 'management' of a discourse after its content has been derived elsewhere." Hugh Blair took the determinist attitude that "invention is the product of innate gifts."¹ Finally, the rhetorical approach to the teaching of writing disappeared altogether in this country "sometime in the 1930's."² However, by mid-century, a new interest in classical rhetoric had begun to flower, but a return to inventio was not among its first blossoms. Brooks and Warren's Modern Rhetoric, one of the most popular textbooks of the early revival, was first published in 1949, and went through three editions, the last appearing in 1970. The second edition (1958) included just two prescriptive paragraphs on "Finding a True Subject," with no mention of the invention process.³ The third edition

¹ J. A. Berdlin, "The Transformation of Invention in Nineteenth-Century American Rhetoric," Southern Speech Communications Journal, 46 (1981), 293.

² Corbett, Classical Rhetoric, p. 627.

³ Cleanth Brooks and Robert Penn Warren, Modern

expanded the search for subject matter to five paragraphs and offered a two-question heuristic--"What do I know about?" and "What am I interested in?"¹--a mere whisper of Aristotle's heurisis but indicative of a voice in the teaching of writing that was growing louder.

Neo-Classic Invention: Heuristics of Modern Composition

According to Edward P. J. Corbett, who has been among the most prominent in the modern revival, "the term rhetoric fell out of fashion [in the late nineteenth century], being replaced with the term composition; rhetoric's association with oratory was once and for all severed, and composition now dealt exclusively with written discourse."² Thus, it was in the field of the teaching of writing that the principles of classical rhetoric were to find new application, and the decade of the 1970s brought an intensification of interest in the invention process. Many questioned

Rhetoric, 2nd ed. (New York: Harcourt, Brace and World, 1958), p. 14.

¹ Cleanth Brooks and Robert Penn Warren, Modern Rhetoric, 3rd ed. (New York: Harcourt, Brace and World, 1970), p. 12.

² Corbett, "What Is Being Revived?" p. 170.

the practicality of Aristotle's topoi, feeling, as James L. Kinneavy does, that "each age and culture must reformulate its own topics . . . [although] the concept of the topics is a valid one."¹

Because of the classical philosophical belief that truth exists a priori and the rhetorician's function is only to find effective ways for expressing it, Aristotle's topics work as a means to that end. Modern sets of topics, as they have recently been formulated, rest on the assumption that the writer's mind is an active maker of truth, and they serve that end, providing stimulation to find something about which to write rather than how to write about it. Aristotelian invention "stresses authoritative confirmation of present belief, while modern modes of inquiry stress imaginative discovery of new facts and relationships."² Such a shift in stress opens up the use of modern rhetorical techniques of discovery to all written discourse, creative as well as persuasive and expository.

A number of writing textbooks have appeared in the last decade which make use of neo-classic topics

¹ James L. Kinneavy, A Theory of Discourse: The Aims of Discourse (Englewood Cliffs, N.J.: Prentice-Hall, 1971), p. 249.

² Richard E. Young and Alton L. Becker, "Toward a Modern Theory of Rhetoric: A Tagmemic Contribution," in The Writing Teacher's Sourcebook, Tate and Corbett, p. 134.

of invention, this is, modern reformulations of Aristotle's topoi. Corbett says, in his Little Rhetoric,

The classical topics were derived from observation of the typical ways in which the human mind thinks about something. But because they are posed in the form of static labels, they don't work as well for some people in turning up usable material for writing assignments as some of the other methods of search and discovery do. When the topics are posed in the form of questions, however, they seem to work better as generating devices for some writers.¹

As a heuristic device, Corbett goes on to list a series of twenty-two questions in four groups: about physical objects, about events, about abstract concepts, and about propositions (Appendix B).

Discovery through questioning, then, characterizes neo-classic heuristics. Richard L. Larson, in an early seminal article (1968), which influenced Corbett and other neo-classic inventionists, had developed an extensive list of questions that teachers "might train students to use" (Appendix C). Divided into seven groups, the seventy-five major questions, some with subsequent sub-questions, Larson felt, were suited to "most of the occasions a student might find for

¹ Edward P. J. Corbett, The Little Rhetoric (New York: John Wiley and Sons, 1977), pp. 41-42.

writing."¹ Although the questions are not subject-specific per se, they are admittedly not all applicable to all subjects. Nor are they as memorable and portable as might be desired of a heuristic. The same criticisms apply to Corbett's list and to Jacqueline Berke's twenty questions for the writer (Appendix D) in her text of the same name, which require responses in one of the traditional modes of discourse--"What does X mean?" eliciting definition, for example--and which are offered as a checklist of "thought starters."²

Even more extensive are Peter Elbow's 190 imaginative heuristic questions divided into ten groups (Appendix E) in his Writing With Power. The difference between Elbow and the other inventionists influenced by Larson is apparent in a comparison of Elbow's first question under the heading of writing about abstract concepts and that of Corbett. The latter's question reads "How has the term been defined by others?" Elbow's question is "What color is ____?" Although Elbow calls his list questions, many of the entries are, in fact, directives: "Imagine you think

¹ Richard L. Larson, "Discovery Through Questioning: A Plan for Teaching Rhetorical Invention," in Contemporary Rhetoric: A Conceptual Background with Readings, ed. W. Ross Winterowd (New York: Harcourt Brace Jovanovich, 1975), p. 147.

² Berke, p. 20.

_____ is a very bad person. Now describe_____." More than any other neo-classic heuristic, Elbow's "questions" lend themselves most directly to use in generating ideas for creative writing because they require descriptive and narrative responses. Too, his directions for using the discovery device encourage an attitude of inventive free-wheeling:

The trick in answering one of these questions is to force yourself to come up with something without spending too long. . . . That means making things up and sometimes producing nonsense: cartwheels of the mind. . . . You need to bring to these questions a spirit of entering in, pretending, playing.¹

However, as admirable as Elbow's "questions" are as idea generators, they are actually just a series of exercises and lack portability and applicability to a wide range of creative writing situations.

More widely applicable are Ann Berthoff's thirteen questions which make up her "Portable Guide to the Logic of Terminologies" (Appendix F), in her Forming, Thinking, Writing. Grouped into categories of appearance, origin, material, organization, and so forth, the questions might be used to elicit ideas for poems and stories if they were rephrased to allow

¹ Elbow, Writing With Power, p. 81.

substitution for the pronoun it. As they stand--"How does it look? (smell, taste, feel, sound) . . . What does it do? . . . How does it work?"--they appear to refer only to inanimate, or at least non-human, objects. Even so, none of the questions deal with temporal or spatial aspects of a subject. Related as they are directly to Aristotle's topoi, Berthoff's questions still retain some of the static quality to which Corbett referred above.

Reviewing neo-classic invention, Ross Winterowd has concluded that lists of questions which attempt to serve as "sets of topics such as Larson's ultimately will not yield as much as heuristics such as Young, Becker, and Pike's [tagmemic discovery procedure],"¹ the next step in the evolution of modern topics of invention.

Tagmemic Invention: Linguistic Contribution to Heuristics

Two branches of science have contributed directly to the development of modern techniques of discovery in writing: linguistics and psychology. The influence of the latter on the teaching of writing will be

¹ Winterowd, Contemporary Rhetoric, p. 144.

discussed in Chapter II. Linguistics, the study of language, including its units, nature, structure, and modifications, has produced the theory of tagmemic invention, which one of its major proponents, Richard E. Young, feels is at the nexus of the two sciences, because "tagmemic invention draws substantially on cognitive psychology, especially on cognition, creativity, and problem-solving."¹

Tagmemic theory, like all structural linguistics, has its roots in yet another science, in the field theory of physics. "Over the past one hundred years physicists have come to look at the universe as a system of particles caught in a complex, dynamic inter-relationship."² During the 1950s, linguist Kenneth L. Pike, at the University of Michigan, developed a system for analyzing the structure of languages by examining the tagmemes, that is, the relationships of each "slot" in a communication to "the verbal or non-verbal items capable of occupying that slot, together with the directives for selecting one member of the set."³

¹ Young, p. 24.

² James Kinney, "Tagmemic Rhetoric: A Reconsideration," College Composition and Communication, 29 (1978), 141.

³ Robert De Beaugrande, "Linguistic Theory and Composition," College Composition and Communication, 29 (1978), 137.

Pike classified tagmemes by three characteristics which relate to the physicist's terms particle, wave, and field. He believed, as do all structuralists, that an analysis of language forms reveals the universal structure of human thought, a model of the mind that produces them; he came to feel that such a tagmemic procedure could be expanded to an analysis of any information and, by extension, to the discovery process needed by writers. Together with Young and Alton L. Becker, Pike developed the theory of tagmemic invention into a heuristic in their writing textbook, Rhetoric: Discovery and Change, published in 1970.

All three theorists have been articulate apologists for their approach. Young and Becker make a distinction between the question-lists of neo-classic heuristics derived from Aristotle's topoi and tagmemic invention:

There are two different (though related) kinds of heuristics: a taxonomy of the sorts of solutions that have been found in the past; and an epistemological heuristic, a method of inquiry based on assumptions about how we come to know something. . . . Aristotelian rhetoric provides a taxonomy . . . Tagmemic theory, on the other hand, provides an epistemological heuristic.¹

Young, Becker, and Pike's tagmemic heuristic,

¹ Young and Becker, pp. 136-37.

despite its sources, requires no knowledge of linguistics or physics to teach or utilize. All that is needed is a basic grasp of "how we come to know something." According to tagmemic theory, the human mind perceives any object, person, event, or abstract concept by means of three factors: the features that make it different from other things (contrast), the variety of ways it can appear and not lose its identity (variation), and where and when it is usually found (distribution). For example, one recognizes an apple by its shape, its smooth exterior, its color, its distinctive taste and smell, all features which distinguish it from and contrast it with an orange or plum, although all three share certain fruit characteristics. Even when the apple is presented in slices or baked in a pie or pureed into applesauce, the variations do not cause it to lose totally its apple identity. That the apple's normal distribution is in the orchard, the supermarket, the kitchen, or the brown paper lunch bag contributes to the simple identification of a shiny, round red object in such places as an apple.

At the same time, any object, person, event, or concept is understood, as opposed to being merely perceived, by means of three relational perspectives: as a single entity, part of a larger system (particle); as a changing entity, part of a process (wave); and as

a system with parts of its own (field). The apple is a particle in the larger system that is the apple tree, including leaf, twig, branch, trunk, roots, and so forth, although this is just one of many systems of which it is a part. The apple is also part of a process--the wave motion--that begins with the bud and blossom as immediate antecedents and passes through the ripening to the wizened fruit that falls to the ground and rots under the snow, again only one of the processes of which the apple is a part. The apple itself is a system--a field of its own--of skin, flesh, core, stem, and seeds. If these six ways of knowing (contrast, variation, distribution, particle, wave, and field) are arranged in a 3x3 matrix, nine ways to consider any subject result.

In Discovery and Change, Young, Becker, and Pike present such a nine-cell chart with appropriate questions to aid the writer in the discovery process (Appendix G). "The perspectives in the chart supplement one another; each reveals a partial truth about the [subject] being investigated." According to the authors, "systematic exploration guided by the chart, can be carried on indefinitely; the process is open-ended."¹ And, say Dean Memering and Frank O'Hare,

¹ Young, Becker, and Pike, p. 130.

whose writing text, The Writer's Work, also incorporates the tagmemic invention heuristic, although "the procedure is systematic, it is not mechanical. The outcome depends on your inner resources: imagination, self-discipline, curiosity, and so on." Such flexible and unlimited invention possibilities, along with its non-subject specificity--"Any object, event, or idea is suitable for investigation by means of particle-wave-field analysis"¹--would seem to make tagmemic invention a promising heuristic for the creative writer.

As a way of determining its usefulness to them, beginning creative writing students were introduced to the tagmemic heuristic and asked to use it in their writing. For this study, they were also asked to keep all pre-writing notes and drafts associated with the writing for discussions, ex post facto, of how they had experienced the process. The Tagmemic Discovery Device given the students (Appendix H) was adapted from Young, Becker, and Pike's presentation in Discovery and Change (Appendix G); a comparison of the two will show the degree of change in tone, diction, and complexity that was deemed necessary for use in

¹ Dean Memering and Frank O'Hare, The Writer's Work: Guide to Effective Composition (Englewood Cliffs, N.J.: Prentice-Hall, 1980), p. 60.

stimulating imaginative responses for more creative ends than the rhetorical analysis for which the heuristic was originally formulated. The adaptation developed for creative writing by this researcher is but one of the many variations on the Young-Becker-Pike theme, others of which will be examined later in this chapter.

Student writers who used the Tagmemic Discovery Device applied the heuristic to a wide range of subjects, which verifies its transcendency as defined by Janice Lauer in her criteria for effectiveness (pp. 18-19). Recounting the manner in which they used it, students described the procedure as flexible as well. The degree of generativeness varied with individual users. As to productivity, several students generated as many as five pages of pre-writing from which they later derived not just one but two or three works. Students frequently reported that the Tagmemic Discovery Device had led them in their answers through a process of association to ideas that they had not foreseen and had provided them with more specific material to manipulate in their first and subsequent drafts than had been usual. A few students remarked upon how much more concrete the language of their poems was after having used the heuristic. Those for whom the discovery device was helpful indicated their

intention to continue using it in the future. Not all of the creative writing students, however, found tagmemic invention congenial. Some thought it too much work; some felt that their own ways of working were adequate. Others who chose not to continue using the tagmemic heuristic echoed the criticisms voiced by a number of writing theorists in recent years.

Although tagmemic invention has been under consideration for more than twenty years and the heuristic procedure available in textbook form since 1970, only recently has it "gradually become better understood and more utilized," according to Charles W. Kneupper. Criticism of the heuristic has focused largely on its scientific language that many find daunting--tagmemics sound like victims of a dread disease--its complexity, and its limited memorability. "The matrix format was selected in part for its memorability."¹ However, it is doubtful that the matrix without attendant questions would be of much value. True, the six terms (contrast, variation, distribution, particle, wave, and field) are memorable, but a writer would need more. Like the question-lists of

¹ Charles W. Kneupper, "Revising the Tagmemic Heuristic: Theoretical and Pedagogical Considerations," College Composition and Communication, 31 (1980), 160, 162.

neo-classic invention, those of the tagmemic procedure are perhaps too numerous to commit to memory.

Another complaint about the Young-Becker-Pike matrix is "the considerable redundancy and overlapping content between cells."¹ However, the fault lies not so much in the tagmemic matrix and its perspectives as in the phrasing of the original model's questions. Those in the particle/contrast and wave/contrast cells, for example, appear especially repetitive: "What are its contrastive features, i.e., the features that differentiate it from similar things and serve to identify it?" and "What physical features distinguish it from similar objects? In particular, what is its nucleus?" These questions were modified considerably in the Tagmemic Discovery Device for creative writing to eliminate such repetition. In defense of the apparent overlapping and redundancy of the matrix, the tagmemic theorists see such going over the same ground from slightly altered points of view as a virtue in that it encourages the writer to be exhaustive in investigating a subject. Also, the overlaps between cells serve as bridges from one cell to another so that discoveries about the subject do not remain discrete but can be integrated as the process proceeds.

¹ Kneupper, p. 162.

The most common complaint about tagmemic invention is that it is "too abstract, complex, or sophisticated for students to understand."¹ Even Ross Winterowd, who includes the heuristic in his text, The Contemporary Writer, acknowledges that it is "perhaps the most complicated discovery procedure that is widely used."² Then, he presents his own somewhat simplified adaptation of the nine-cell matrix (Appendix I). The most striking difference between Winterowd's model and that of Young, Becker, and Pike is the substitution of terms; feature, process, and system replace the physicist's particle, wave, and field. Kneupper suggests a similar modification: "the term 'system' is substituted for field and distribution, the term 'process' for wave and variation, and the term 'static' for particle,"³ thus reducing the number of cells in his matrix to six (Appendix J), a diminution which he feels eliminates the redundancy of the original model, but which requires a greater number of attendant questions, reducing its memorability.

¹ Kneupper, p. 160.

² W. Ross Winterowd, The Contemporary Writer: A Practical Rhetoric, 2nd ed. (New York: Harcourt Brace Jovanovich, 1981), p. 96.

³ Kneupper, p. 165.

Tinkering with the tagmemic invention procedure has become a favorite pastime of contemporary inventionists. Cynthia L. Selfe and Sue Rodi have developed, for example, a heuristic for expressive writing which retains the nine-cell format with a temporal component. Contrast, variation, and distribution become self-definition (how one sees oneself), social definition (how one is defined by relationships with others), and environmental definition (how one is defined by the means used to realize goals); particle, wave and field are replaced with past, present, and future. The matrix itself is presented as a paradigm, a do-it-yourself framework, into which the writer fits the appropriate questions from an accompanying list of sixty-six (Appendix K). This hybrid of tagmemic and neo-classic invention has all the shortcomings of the latter, being tied to a lengthy set of questions. Also, because of its specialized orientation, the heuristic is highly subject-specific--the writer's "I." The authors do note, however, that the "'I' can refer to any individual entity or to any group entity."¹ Given this latitude, the questions, with some modification, might be used to generate ideas for first-person

¹ Cynthia L. Selfe and Sue Rodi, "An Invention Heuristic for Expressive Writing," College Composition and Communication, 31 (1980), 172.

second-person, or persona poems of a self-reflective nature, although the heuristic as a whole lacks memorability.

Other tagmemic/neo-classic hybrids include Ann Berthoff's "Checklist in the Forms of Relatedness" (Appendix L), in her Forming, Thinking, Writing. Because the questions are more clearly related to Aristotle's than Young, Becker, and Pike's, they carry no matrix of perspectives with them, but the concerns for contrast, variation, distribution, etc., underlie them nevertheless: "Is A the same as B?" "Is A a repetition of B" "Is A a part of B?"¹ The most apparent weakness of this heuristic is that all twelve questions can be answered with yes or no. Having responded with either, the writer may not find anything else to say. Similarly faulty are some of the questions (Appendix M) in Jeff Rackham's matrix-less tagmemic/neo-classic 4C's discovery procedure--Change, Contrast, Consequences, Characterization--in his writing text, From Sight to Insight, i.e., "Is there an element of change?" and "Does any element of the subject involve contrast . . . ?" This failing is particularly ironic because on the following page under the heading "Questioning," Rackham admonishes

¹ Berthoff, Forming, p. 77.

the writer: "The value of information acquired . . . is determined by the type of question you ask. Avoid the question that requires only a yes-or-no answer."¹ The most reductive tagmemic/neo-classic hybrid heuristic is Ray Kytle's, in his Pre-Writing: Strategies for Exploration and Discovery. His "pre-writing by systematic inquiry" offers no matrix and only three questions: "How does it differ from similar objects?" "What is the range of its variations?" and "What is its context?"²

A more comprehensive variation on the tagmemic heuristic is Joseph M. William's eight-cell format (Appendix N), in his text, The New English. Using this matrix, the writer examines a subject from the horizontal perspectives of (1) internal structure and (2) external relationships. The vertical classifications are (1) as a state, (a) by part and (b) by kind; and (2) as a process, (a) by part and (b) by kind. While Williams has eliminated the scientific terminology and reduced the complexity of the original tagmemic invention model, he presents only the empty 2x2x2 framework without any questions to guide the

¹ Rackham, pp. 128, 129.

² Ray Kytle, Pre-Writing: Strategies for Exploration and Discovery (New York: Random House, 1970), p. 81.

writer. He goes on to say, "If you explore any subject in this way before you write, you can be fairly certain that you will have asked most of the important questions."¹ Given the widespread tendency of other inventionists to provide at least basic "starter" questions for writers using tagmemic invention, with or without matrixes, one wonders at Williams' level of optimism.

Questions are absent, too, in the modified tagmemic heuristic that appears in Lauer, Montague, Lunsford, and Emig's Four Worlds of Writing (Appendix O). Gone, as well, are the characteristic terms and matrix. What remains is a series of subject-specific directives--"Note down as many of your attitudes toward your place as you can." "Identify the parts that make up the whole of your place."--grouped under three headings: static view, dynamic view, and relative view.² These are the last vestiges of the original model's particle, wave, and field. Young, Becker, and Pike's tagmemic invention procedure has nearly been refined out of existence in order to correct what had been seen by critics as its faults and failings.

¹ Joseph M. Williams, The New English: Structure/Form/Style (New York: Free Press, 1970), p. 171.

² Janice M. Lauer, Gene Montague, Andrea Lunsford, and Janet Emig, Four Worlds of Writing (New York: Harper and Row, 1981), pp. 25-26.

Other criticisms, however, still remain to be addressed. Charles Yarnoff finds fault with the Young-Becker-Pike model because, as he says, "In all cases the questions begin with 'How?' and 'What?' The 'Why?' does not occur."¹ Susan Wells has lodged the same complaint and faults, too, the strongly empirical bias of the tagmemic model.² Relatedly and more broadly, James Kinney says that, in his opinion,

The main problem with the [tagmemic] heuristic is simply overinflated claims. I refuse to accept the basic premise that the kinds of knowledge it provides constitute total, or in some cases even significant, knowledge about any subject. . . . In short, tagmemic theory provides an elegant little heuristic procedure that can be translated into a somewhat useful tool, but it is simply one among many such procedures available.³

In response to Kinney's criticism, Lee Odell has suggested the possibility that for a more comprehensive heuristic one might combine the tagmemic perspectives with those of Burke's pentad,⁴ another of the "procedures available" to which Kinney had reference.

¹ Charles Yarnoff, "Contemporary Theories of Invention in the Rhetorical Tradition," College English, 41 (1980), 559.

² Wells, p. 474.

³ Kinney, "Tagmemic Rhetoric," pp. 142-43.

⁴ Lee Odell, "Another Look at Tagmemic Theory: A Response to James Kinney," College Composition and Communication, 29 (1978), 149.

Burke's Pentad: Heuristic of Dramatism

The pentad is the product of the cornucopian mind of Kenneth Burke, "a sort of lexicon-poet, an oracle of metatalk, whose imagination spins out, not concrete actions and scenes but abstract categories for discussing them."¹ Although Burke is equally recognized for his knowledge in the fields of philosophy, linguistics, and literary criticism, his overarching rhetorical approach draws heavily upon sociology and psychology, at the same time being, in many ways, an extension of Aristotlean rhetoric and poetics. The five terms of the pentad were first developed by Burke in the process of his inquiry into reasons underlying human behavior, in A Grammar of Motives (1945), and were applied to human action in the same manner as one looks at a scene of dramatic action on a stage; therefore, he called his analytical method dramatism. Applying the pentad to literary criticism as well, Burke explains that his original intent was "to help a critic perceive what was going on in a text that had already been written."² However, to Burke's surprise,

¹ Philip M. Keith, "Burke for the Composition Class," College Composition and Communication, 28 (1977), 348.

² Burke, "Questions and Answers," p. 332.

some of the inventionists saw the pentad as having heuristic capabilities, and by 1978, Burke himself felt that his "concern with matters of literary theory might be of some suggestive value to persons concerned with the teaching of literary composition. . . . Both uses have their place."¹

The pentad's five terms--act, agent, agency, scene, purpose--bear a similarity to Aristotle's Four Ultimate Causes and are related to his topoi, although their function is slightly different.² "Aristotle's list is telling the writer what to say, but the pentad in effect is telling the writer what to ask."³ A family resemblance also exists between the pentad and the hermeneutical "circumstances of statement" applied by medieval theologians to the reconciliation of contradictory sacred texts cited earlier (p. 24). The most apparent recent antecedent of Burke's pentad is the basic rule of thumb used by journalists for covering all of the details of any newsworthy subject: who? what? when? where? why? how? But the pentad

¹ Burke, "Questions and Answers," p. 330.

² Daniel Fogarty, Roots for a New Rhetoric (1959; rpt. New York: Russell and Russell, 1968), p. 63.

³ Burke, "Questions and Answers," p. 332.

restates the journalistic formula in a more revealing way, one that stresses the possibilities for interaction between different elements in this scheme:

[Act]: What is happening?
 Agent: What is causing it to happen?
 Agency: How is it being done?
 Scene: Where and when is it being done?
 Purpose: Why is it happening?¹

The interaction between pentad terms, called ratios, are possible, Burke says, because the five terms are like fingers, "which in their extremities are distant from one another, but merge in the palm of the hand."² The writer can begin with any one of the five questions, exhaust its idea-generating possibilities, and return to the pentad for another to make a fresh start. In addition, the writer can also question from differing perspectives by considering one term in ratio with another. By means of "permutation of pairs, [the writer] has ten questions to ask, ten points from which to repeat a beginning: act-scene, act-agency," and so forth.³ Metaphorically speaking, the writer can stand on the pentadic thumb, for example, and examine each of the other fingers from that

¹ Memering and O'Hare, p. 63.

² Kenneth Burke, A Grammar of Motives (New York: Prentice-Hall, 1945), p. xxi.

³ Fogarty, p. 62.

point of view, as Winterowd demonstrates below. In fact, in the ratios, which may be thought of as the spaces between the fingers, Burke feels "there is an alchemic opportunity," a possibility for creative activity to happen.¹

In addition, not just human action can be considered with the pentad, as Burke first conceived it, but objects, events, and abstract concepts as well. For instance, an apple might be seen as an agency from the perspective of a painter (agent) in terms of painting a still life (act); on the other hand, the owner of a orchard (agent) in the act of cultivation might see an apple as the scene of an infestation of damaging blight. Or the concept of love might be treated as an agency which brings two people together, as a collective act in that relationship, as a purpose for their marrying, or a scene against which the lovers' actions are played out, including all its attendant popular and classical myths as background. Although strictly speaking, only human beings can act as agents --all other entities can only move or exhibit motion-- the creative writer thinking imaginatively can endow anything with human characteristics and make it an agent. Thus, the writer can say, metaphorically, that

¹ Burke, Grammar of Motives, p. xix.

the apple (agent) blushes (act) at the sight of the lovers kissing under its tree (scene).

In response to criticisms of tagmemic invention, Lee Odell has suggested that its categories be combined with Burke's dramatistic pentad for a more comprehensive discovery device (p. 46). If the six tagmemic terms were placed in a grid with the five of the pentad, the result would be a thirty-cell matrix, a clear call for Occam's razor. In contrast to Young, Becker, and Pike's tagmemic invention procedure, Burke's pentad has not been the subject of negative commentary. On the contrary, many pedagogues have praised the pentad's heuristic capabilities for student writers. William Covino has called it a "perspectives machine" that encourages imaginative freeplay "by providing a set of questions that allow . . . continual examination and recombination."¹ Ross Winterowd regards the pentad as "the most widely known and influential set of topics since Aristotle and Cicero. . . . an elegantly simple set of probes [which] can become as complex . . . as the user desires."² The single greatest difference between tagmemic invention and the pentad

¹ Covino, p. 4.

² W. Ross Winterowd, The Contemporary Writer: A Practical Rhetoric (New York: Harcourt Brace Jovanovich, 1975), p. 155.

is the latter's inclusion of purpose, the important why? question. Also, the pentad's five terms are more easily memorable and portable, although an understanding of the ratios may require study and practice on the part of the writer before their creative possibilities can be most fully utilized. However, even the novice creative writing student can gain insight into a subject and generate material for a poem or short story by answering the questions associated with the initial five terms.

A number of recent writing texts have included the pentad in one form or another. Winterowd's second edition of The Contemporary Writer treats the pentad and its ratios extensively for students. The ratios, he says, imply five questions:

What can I learn about the act through considering agent, scene, agency, purpose?
 What can I learn about the agent through considering act, scene, agency, purpose?
 What can I learn about the scene through considering act, agent, agency, purpose?
 What can I learn about the agency through considering act, agent, scene, purpose?
 What can I learn about purpose through considering act, agent, scene, agency?¹

Taking these implications a step further, Winterowd demonstrates how, considered individually, pentad

¹ Winterowd, Contemporary Writer, 2nd ed., pp. 79-80.

terms generate their own ratio questions. For example, agent may be examined in terms of the remaining four:

agent-scene	What does scene reveal about agent(s)?
agent-agency	What does agency reveal about the agent(s)?
agent-act	What does act reveal about the agent(s)?
agent-purpose	What does purpose reveal about the agent(s)? ¹

Multiplied thus, the ratios of the pentad produce twenty different perspectives for the writer. By Lauer's definition (pp. 18-19), expanding the heuristic to such an extent makes it highly generative.

William Irmischer, in his Holt Guide to English, has adapted Burke's pentad as a method for "helping a thought to grow," listing fifteen questions divided among the five terms (Appendix P). Irmischer alters Burke's terms slightly, substituting action for act, actor-agent for agent, and means for agency. To make clear the broad applicability of the heuristic, he notes that an action "can be either physical or mental"; that given any actor-agent, "there is a possibility of both co-agents and counter-agents--friends and enemies, associates and antagonists, supporting forces and counterforces"; and that scene "does not

¹ Winterowd, Contemporary Writer, 2nd ed., p. 74.

mean merely naming the place but describing the conditions, going beyond surface appearances to determine the true circumstances." Reinforcing the central importance of purpose to the pentad, Irmscher emphasizes that

Why is an all-embracing question because it often can be answered only in terms of all the other questions: why in terms of the person, why in terms of the time and place, why in terms of means.¹

While trying to improve on the pentad has not become the cottage industry among inventionists that tinkering with tagmemics has, Ann Berthoff has reshaped Burke's heuristic, in her Forming, Thinking, Writing, into a mnemonic device: HDWDWW? The letters stand for "How does who do what and why?" She tells student writers, "Answering HDWDWW? will give you names for agent, manner, and purpose."² However, two components of the original pentad--when and where--are missing, which may cause the user to overlook considerations in these areas.

Utilizing Burke's concept without actually giving

¹ William F. Irmscher, The Holt Guide to English: A Contemporary Handbook of Rhetoric, Language, and Literature (New York: Holt, Rinehart and Winston, 1972), pp. 28, 30, 32, 35.

² Berthoff, Forming, p. 71.

student writers the pentad heuristic, Clement Stacey, in his Write: Finding Things to Say and Saying Them, provides statements to rewrite and expand, adding particulars of scene, agency, purpose, or whatever element is wanting.¹ Such exercises would seem an admirable way to reinforce the teaching of dramatistic invention, giving student creative writers one or two pieces of the pentadic puzzle and asking them imaginatively to supply the remainder. A similarity should be noted here with the concept of Christensen's Generative Sentence, which will be discussed further in connection with form-oriented heuristics.

Because of its roots in Aristotelian poetics and in literary criticism, the pentad would appear to be, as Burke has suggested, a promising idea generator for creative writers. As with tagmemic invention, beginning creative writing students were introduced to the concept of Burke's heuristic and asked to use it in their work for this study. The device which they received (Appendix Q) was adapted, in part, from William Irmischer's presentation in his Holt Guide to English. Borrowed from Irmischer are the terms actor and means to replace the original agent and agency. The

¹ Clement S. Stacey, Write: Finding Things to Say and Saying Them (Glenview, Ill.: Scott, Foresman, 1974), pp. 52-53.

substitution of terms was made because agent has the restricting implication of one who acts at the behest of another, while actor carries with it, etymologically and figuratively, the energy of the act and comes closer to the dramatistic notion with which Burke began. Agency also proved confusing to student writers and was replaced with means, as a clarification. Some of Irmsher's ideas were also included in the instructions for the use of the Pentad Discovery Device.

Based on student responses, the pentad met Lauer's criteria for being transcendent and flexible (p. 18). The degree of generativeness of the heuristic, again, was a function of the individual student's attitude and abilities. All the creative writing students who used the pentad generated some material which was developed into poems or stories, and many reported producing several pages of notes which, in some cases, led to the writing of more than one creative work. Some praised the invention device for leading them to ideas that they might not otherwise have thought of and for helping them to organize their material so that, before their first drafts, they knew where their work was going, even though it took several revisions to get there. Students remarked on the procedure's ability to stimulate recall; as one said, "It

helped bring my memory into focus. I remembered more than I normally would."

Because of its very nature, the heuristic lends itself to narrative and descriptive responses. Students found themselves with concrete details available for use in their work that might otherwise have been passed over in their normal manner of composing. For that and other reasons mentioned above, many of those who tried it for the first time indicated that they would make use of Burke's pentad again in their writing.

Kenneth Burke has not only put forward the pentad which others have used as a way "to help a writer decide what he might say to produce a text,"¹ but he has also indicated that form is a stimulator of creative ideas. In the chapter on "The Poetic Process," in his Counter-Statement, he examines "technical form as a generative principle" in literature; he says that form in poetry and fiction "is an arousing and fulfilling of desires. A work has form in so far as one part of it leads a reader to anticipate another part, to be gratified by the sequence."² And form can

¹ Burke, "Questions and Answers," p. 332.

² Burke, Counter-Statement, pp. 56, 57, 124.

provide the same anticipation and gratification for the writer.

Generative Structures: Form-Oriented Heuristics

That form can serve as a heuristic, can aid in generating content for student writers, was the justification for teaching by imitation, an approach which dominated instruction in rhetoric beginning in the Renaissance and persisting well into the nineteenth century.¹ It underlies, too, the current use of slot-substitution and pattern practice exercises in the teaching of writing of English as a second language. Nearly every creative writing textbook currently in print spends some of its pages dealing with forms related to each genre. In poetry, the writing of sonnets, villanelles, and sestinas, as well as more exotic structures like haikus and pantoums, is suggested because, as Lewis Turco says, "Many students find that there is no quicker way to improve as writers than through formal experimentation and attempts to solve specific technical problems."² Even experienced

¹ Corbett, "What Is Being Revived?" p. 168.

² Lewis Turco, The Book of Forms: A Handbook of Poetics (New York: E. P. Dutton, 1968), p. 10.

writers return periodically to established forms for the generative powers they possess, despite their attendant restrictions, or perhaps because of them. As Wordsworth wrote, "'t'was pastime to be bound / Within the Sonnet's scant plot of ground."

"Form provides the essential boundaries and structure for the creative act," according to Rollo May.

When you write a poem, you discover that the very necessity of fitting your meaning requires you to search in your imagination for new meanings. . . . Form is not a mere lopping off of meaning that you don't have room to put in your poem; it is an aid to finding new meaning, a stimulus to condensing your meaning, to simplifying and purifying it, and to discovering on a more universal dimension the essence you wish to express [emphasis added].

May adds that "all spontaneity carries with it its own form."¹ And form, in turn, is capable of generating spontaneously creative ideas suitable to it, if form is thought of as a heuristic grain in an oyster shell and not as a straight jacket.

In his examination of heuristics that have evolved from Aristotle's content-oriented topoi, Ross Winterowd says, "Perhaps the best known . . . set of

¹ Rollo May, The Courage to Create (New York: Bantam Books, 1980), pp. 140, 142, 143.

purely form-oriented topics is the set that constitutes what Francis Christensen called 'free modifiers.'¹ Christensen, investigating the stimulating possibilities of form, found that writing is essentially a process of addition and, as a consequence, developed his concept of the Generative Sentence, a cumulative structure which grows through the incorporation of free modifiers. He analyzed the work of a number of masters of the writing craft. "We have been told that the formula for good writing is the concrete noun and active verb," Christensen wrote, but he observed that, to quote novelist John Erskine, "The noun, the verb and the main clause serve merely as the base on which meaning will rise. . . . The modifier is the essential part of any sentence."² Writers with styles as diverse as those of Faulkner and Hemingway, Christensen noted, added to base clauses at three positions--initial, medial, and final--such modifiers as relative and subordinate clauses, absolutes, appositives, and participial and prepositional phrases to create various levels of modification. For example, a Faulknerian sentence shows adjective clusters (AC),

¹ Winterowd, Contemporary Rhetoric, p. 44.

² Francis Christensen, "A Generative Rhetoric of the Sentence," in The Writing Teacher's Sourcebook, Tate and Corbett, p. 355.

prepositional phrases (PP), and adjective series (A+A) as modifiers, and three levels of modification:

- 2 Calico-coated, (AC)
- 2 small-bodied, (AC)
- 3 with delicate legs and pink faces in
which their mismatched eyes rolled
wild and subdued, (PP)
- 1 they huddled,
- 2 gaudy, motionless and alert, (A+A)
- 2 wild as deer, (AC)
- 2 deadly as rattlesnakes, (AC)
- 2 quiet as doves. (AC)¹

Poets, too, "seem to know the value of the cumulative sentence." In analyzing the single sentence that makes up the last four of the five stanzas of Wallace Stevens' "The Motive of Metaphor," Christensen found eight levels of modification constructed with prepositional phrases (PP), appositives or noun clusters (NC), participial phrases or verb clusters (VC), and a relative clause (RC):

- 2 in the same way, (PP)
- 1 you were happy in spring,
- 2 With the half colors of quarter-things, (PP)
- 3 The slightly brighter sky, (NC)
- 3 The melting clouds, (NC)
- 3 The single bird, (NC)
- 3 The obscure moon-- (NC)
- 4 The obscure moon lighting an obscure world Of things that would never be quite expressed, (NC)
- 5 Where you yourself were never quite yourself And did not want nor have to be, (RC)

¹ Christensen, p. 358.

- 6 Desiring the exhilarations of
change: (VC)
- 7 The motive for metaphor, (NC)
- 6 shrinking from The weight of the
primary noon, (VC)
- 7 The ABC of being, (NC)
- 7 the ruddy temper, (NC)
- 7 the hammer of red and blue, (NC)
- 7 the hard sound-- (NC)
- 8 Steel against intimation-- (NC)
- 7 the sharp flash, (NC)
- 7 The vital, arrogant, fatal,
dominant X. (NC)

Looking at the work of recognized poets for their use of cumulative sentences carries with it a bonus for creative writing students; "structural analysis of the sentence[s] reveals the tactics of a difficult poem."¹

As a teacher of writing, Christensen used the principle of the Generative Sentence to help his students create more concretely and specifically through pattern practice (similar to that used in the teaching of writing of English as a second language), accreting modifiers on given base clauses. At the same time, the form was serving as a heuristic to provide material for their writing. Given an initial kernel sentence, creative writing students can find that in generating modifiers for the first sentence, they have begun to build character and setting which can be added to-- writing is a process of addition--to make a poem or

¹ Christensen, pp. 366, 367.

story. For instance, a short declarative sentence selected at random from the newspaper ("The circus fat lady may be Mr. Oleson's sister."), used as the base clause for the first sentence, produced the following opening for a short story:

Seated up on the platform in a chrome kitchen chair decorated with red and yellow crepe paper, the circus fat lady, rouged cheeks like children's balloons, Shirley Temple curls damp with perspiration, may be Mr. Oleson's sister, who left Ft. Wayne the day after neighborhood boys chalked a drawing of a pig on the sidewalk in front of their house. Mr. Oleson has spent two years and nearly five thousand dollars trying to find her. She is all the family he has. . . .

Teaching Christensen's concept of the Generative Sentence not only encourages concrete, specific writing and serves as a heuristic, but it also makes student writers more aware of their creative options by providing them with a stockpile of possible free-modifier structures with which to expand their sentences, where appropriate. Christensen advised, "The constructions to master are the noun and adjective clusters and the absolute . . . The next step is to develop the sense of variety in texture and change of pace that all good narrative demands."¹

Christensen's approach is recommended by James

¹ Christensen, p. 362.

Moffett, in his Teaching the Universe of Discourse; he notes that extensive training in grammar is not necessary for student writers in order for them to understand and utilize it. "If the teacher feels such a need [to have a shared vocabulary of grammatical terms], then let him set aside a class period to name and illustrate these things, supplying a couple hand-out sheets for reference. Merely learning nomenclature does not require a course, a textbook, etc." Moffett also suggests a technique for teaching writing by addition, "a pure game situation when one [student] makes up a short sentence, passes it to a partner to expand in any way that occurs to him, takes the sentence back to expand further, and so on."¹

A large number of exercises related to the heuristic capabilities of form may be found in creative writing texts and sourcebooks. Clement Stacey, for example, cites a form of "instant poetry, invented by Iris M. Tiedt":

write down a noun on the first line, and on the second line write down two adjectives separated by a comma. . . . on the third line write three participles. On line four write down four nouns related to the noun on line one. Try to make the second two nouns somewhat opposite in meaning from the

¹ James Moffett, Teaching the Universe of Discourse (Boston: Houghton Mifflin, 1968), pp. 184, 178.

first two. On the fifth line write three participles which indicate some kind of change in the noun on line one. On the sixth line write two adjectives which continue the idea of change. On the last line write down a noun that is the opposite of the noun on line one.¹

Whether Ms. Tiedt's "instant poetry," or any other form-related exercise, constitutes a portable heuristic for writers depends upon whether students are taught to see the product of the exercise as material for a poem suggested by the words and ideas generated, and not to see the form as an empty structure whose blanks are to be filled in coloring-book fashion as an end in itself.

In summary, as Richard Young has said, "One value of the notion that forms are or can be used to guide thought in the art of composing--whether consciously or intuitively--is that it reminds us of the close and complex relationships between linguistic structure and meaning and between the arts of arrangement, style, and invention."²

¹ Stacey, p. 120.

² Young, p. 36.

Solid Stimuli: Concrete Heuristics

Thusfar, all the heuristics discussed have been of an abstract, conceptual nature. However, just as the apple that struck Issac Newton on the head acted as a stimulant to his discovery of the physics of gravity, so concrete heuristics exist for the creative writer, none of which, fortunately, require the experience of physical pain. Although in Aristotle's original heuristic the term topoi translates as places, it refers not to actual physical locations but to regions of the mind to be explored for generating ideas. In contrast, a number of concrete "places" are available to serve as heuristics for today's creative writing student.

For example, Erasmus' concept of the compilation of a commonplace book as a resource for rhetoricians has its contemporary counterparts for creative writers. Most closely related to it is the practice of journal-keeping, which will be discussed in further detail in Chapter II. Also, pre-packaged commonplaces can be found in most libraries, books such as Z. V. Hooker's Index of Ideas for Writers and Speakers, which contains 14,000 entries arranged according to the Dewey Decimal System, and David Powell's What Can I Write

About?, a listing of 7,000 entries grouped by rhetorical modes with an additional section for creative writing, although any of the others might spark ideas for imaginative work in poetry or fiction as well.¹

Jacqueline Berke, in her Twenty Questions for the Writer, recommends using a dictionary--or any other standard reference work--as a commonplace:

The procedure is simple: thumb through the pages starting with A and move through the alphabet, jotting down whatever terms catch your eye and interest--whatever you respond to. You can be certain that an unconscious process of selection is at work here, guiding you to one or another term that appeals to you and that will therefore provide a good starting point for the invention process.²

Fiction writer Ray Bradbury, in his essay, "How to Keep and Feed a Muse," suggests reading poetry as a heuristic for writing fiction. "Ideas lie everywhere through poetry books, yet how rarely have I heard short story teachers recommending them for browsing. . . . I have had a metaphor jump at me, give me a spin, and run me off to do a story."³

¹ Zebulon Vance Hooker II, Index of Ideas for Writers and Speakers (Chicago: Scott, Foresman, 1965); David Powell, What Can I Write About? (Urbana, Ill.: NCTE, 1981).

² Berke, p. 15.

³ Young, Becker, and Pike, p. 83.

A number of writing texts have been published which are little more than commonplaces. Clement Stacey's Write: Finding Things to Say and Saying Them is such a book, containing exercises, "what if's," and pictures to stimulate the writer's imagination. Similarly, Hart Day Leavitt and David A. Sohn have each compiled a heuristic book of photographs for writers; their jointly authored Stop, Look, and Write! has proved so popular that it has gone through more than twenty printings and two editions.¹ However, the creative writing student need only pick up any book of collected photographs in the library and spend a few minutes leafing through it to begin the same discovery process. Books of art reproductions work equally as well; the number of poems written by established poets in response to art would fill a hefty anthology.

Unlike the invention procedures derived from Aristotle's topoi, concrete heuristics do not presuppose the writer's already having a subject in mind about which to write. "In classical rhetoric," John Gage says, "the writer was assumed to have been given a [subject] by being in a situation which compels the act of writing itself," usually a situation of an

¹ Hart Day Leavitt and David A. Sohn, Stop, Look, and Write!: Effective Writing Through Pictures, rev. ed. (New York: Bantam Books, 1979).

adversary nature.¹ However, as the teaching of rhetoric has evolved into the teaching of writing, the number of such situations of confrontation has diminished. While the creative writing student still may be compelled to write against a class assignment deadline, the circumstances may not always provide the writer with a subject. Concrete heuristics can fill that need, as can some of the discovery techniques that derive from studies of creativity, all of which will be examined in the next chapter.

¹ John T. Gage, "On the Difference Between Invention and Pre-Writing," Freshman English News, 10, No. 2 (1981), 4.

CHAPTER II

CREATIVE PROCESS: HEURISTICS AND PSYCHOLOGY

The moonlight struggles feebly to pass through the grime-dusted, cobweb-festooned window into the sparsely furnished room, which looks like nothing so much as the set for Act I of a road-company version of La Bohème. Slumped in a chair, a bearded figure in flowing tie and beret stares into the flame of a lighted candle stub set in the neck of an empty Cianti bottle on the table before him. His face is impassive, as if he were daydreaming or had taken a heavy dose of laudanum. Suddenly, a tremor passes through his slender body, his sensitive face becomes mobile, madness dances in his eyes, and, even though he is too poor to afford the real thing, the reasonable facsimile of a light bulb appears over his head. "Eureka!" he shouts and picks up a quill pen, dips it into a bottle of purple ink, and begins feverishly to write on the paper in front of him. The faint but unmistakable aroma of sandlewood lingers in the chilly air, the Muse's calling card. Inspiration has come, and a masterpiece is in the making.

This, unfortunately, is how many beginning creative writing students, their fantasies fed by reading Coleridge and other Romantics, picture the creative process--unfortunate because such a concept is not only inaccurate but dangerous as well. A belief in inspiration as the starting point in the process of making a poem or story may prevent students from writing at all while they wait for lightning to strike, or it may lead them to experiment with chemical heuristics, alcohol and other drugs. According to Albert Rothenberg, psychologist and researcher into creative behavior,

Inspiration is neither the invariant starting point of the poetic creative process nor is it necessarily the most critical aspect of poetic creation. It has become important to assert this, not only for scientific reasons, but because erroneous notions about inspiration have led to an almost dangerous situation in contemporary American life. Many young people today have resorted to ingestion of mind-expanding drugs, LSD and marijuana among others, partly on the basis of a rationalization that such drugs enhance creativity. Published examples of poetry and art produced under the influence of these drugs and controlled studies of creative performance do not, it is generally agreed, support this notion.

Because "the psychology of literary creation has pertinence to teaching," according to Rothenberg, "knowledge about psychological processes [involved in

creative writing] seems direly needed."¹ Thus, if the starting point of the creative process is not inspiration, what then, psychologically, is it? Sigmund Freud's view was that it had its beginnings in the writer's unhappiness and inability to accept reality, that is, in "the same unconscious conflicts that lead to neurosis."² One means of escaping the unhappiness of maladjustment is through fantasy. "The motives of fantasies," he wrote, "are unsatisfied wishes, and every single fantasy is the fulfillment of a wish, a correction of unsatisfying reality."³ Freud posited the fantasies of daydreams as the source of the creative writer's work. Such daydreams are formed in three stages: first, a situation of discomfort in the present triggers, second, a recollection of a situation in the past (usually in childhood) in which discomfort was absent, which causes, third, a fantasy to form of a situation in the future when a similar state of contentment will again be achieved. Through

¹ Albert Rothenberg, "Inspiration, Insight and the Creative Process in Poetry," College English, 32 (1970), 173, 172.

² Margaret Gilchrist, The Psychology of Creativity (Melbourne, Australia: Melbourne Univ. Press, 1972), p. 44.

³ Sigmund Freud, "Creative Writers and Daydreaming," in Critical Theory Since Plato, Adams, p. 750.

the process of displacement, the writer dresses the resulting fantasy in the masks and costumes of fictional characters and gives their actions a reality more satisfying, vicariously, than that which the writer inhabits.

That such writers' fantasies inform some imaginative writing has been verified by literary analysts and by writers themselves; Wordsworth's "Ode: Intimations of Immortality" is a nearly perfect case study. However, Freud's wish-fulfillment theory, while it may account for the impetus for and the nature of the subject matter of some works, does not account for the actual process of writing any work. Too, many contemporary psychologists disagree with his idea that creativity is a neurotic response and feel, instead, that it is one of self-actualization, the highest manifestation of well-being.¹

Since Freud's essay, "Creative Writers and Day-dreaming," was published in 1908, interest in creative behavior has developed into a specialized field of study among psychologists, "increasing exponentially since 1950," resulting in a "rapid increase in knowledge about creativity, and [a] flood of formulations.

¹ Gilchrist, p. 44.

. . ."¹ Creative behaviorists have been investigating heuristics and have noticed that creative people intuitively utilized a variety of effective discovery procedures. Researchers have concerned themselves with how heuristics work, psychologically, and how they fit into the creative process. They have found that the mental abilities used in invention are more accessible to conscious control and more orderly than had been supposed. Theoretical models of the creative process have been formulated and tested, and new definition given to creation. In contrast to the Romantic concept, R. G. Collingwood says, "To create something means to make it nontechnically, but yet consciously and voluntarily" [emphasis added].²

The model of the creative process most widely accepted is that put forward by social psychologist Graham Wallas in his The Art of Thought, in 1925. Wallas' theory has been tested and "applied to every field of creativity and imitated many times with minor variation. . . . Catherine Patrick (1935, 1937, 1938), in her numerous studies of poets, artists, and

¹ Frank Barron, Creative Person and Creative Process (New York: Holt, Rinehart and Winston, 1969), pp. 3, 4.

² R. G. Collingwood, "Making and Creating," in Creativity in the Arts, ed. Vincent Tomas (Englewood Cliffs, N.J.: Prentice-Hall, 1964), p. 7.

scientists, confirmed the existence of Wallas' stages."¹ These stages in the creative process are four: preparation, incubation, illumination, and verification. While the model is linear and the stages apparently discrete, they "are not an invariant sequence. Some stages are skipped or the thinker may backtrack to an earlier stage. . . . if the verification confirms that the idea won't work, the thinker may be recycled back to the preparation or incubation stage."²

In opposition to the widely held myth of inspiration as the beginning of the creative process, Wallas' first stage is preparation. This stage may fairly be thought of as including all the writer's life up to the time he or she decides to begin work on a particular creative task. T. S. Eliot included "in the preparation for a poem everything the poet has ever read, learned, or experienced."³ More specifically, it includes collecting information from other sources and retrieving from memory all those facts, ideas, and

¹ Silvano Arieti, Creativity: The Magic Synthesis (New York: Basic Books, 1976), pp. 39-40.

² Gary A. Davis, Creativity Is Forever (Cross Plains, Wis.: Badger Press, 1981), pp. 39-40.

³ Carl Fehrman, Poetic Creation: Inspiration or Craft, trans. Karin Petherick (Minneapolis: Univ. of Minnesota Press, 1980), p. 156.

images which are relative to the work at hand, because "human beings cannot originate new things out of nothing."¹ This is the stage at which heuristics come into play. The use of a discovery procedure generates material for the writer to consider consciously while, at the same time, presenting it to the imagination for manipulation at some level below that of consciousness. "Imagination, creative imagination, is an action of the mind that produces a new idea or insight . . . But the imaginative hopper is fed from and feeds back to the conscious and critical level . . . [because] imagination only regroups sensory material."²

Poet Stephen Spender, writing about his own making of a poem, affirms the need for pulling material up from memory's well: "the imagination itself is an exercise of memory." That which is not already known is not available to be applied to some different situation by the imagination during the creative process.³

¹ Arieti, p. 37.

² R. W. Gerard, "The Biological Basis of Imagination," in The Creative Process, ed. Brewster Ghiselin (Berkeley: Univ. of California Press, 1954), pp. 237-39.

³ Stephen Spender, "The Making of a Poem," in Creativity in the Arts, ed. Vincent Tomas (Englewood Cliffs, N.J.: Prentice-Hall, 1964), p. 44.

Brewster Ghiselin, also a poet and a scholar of creativity, concurs: "A great deal of the work necessary to equip and activate the mind for the spontaneous part of invention must be done consciously and with an effort of will."¹

Following the work of conscious preparation, Wallas' next stage in the creative process is incubation. Like a mother hen sitting on her clutch of eggs, the writer must let some time pass while nature does its work. Even though the writer may have a sense that nothing is happening during this period, may in fact forget about the project altogether, "the unconscious is actively sorting, organizing, and fusing images."² Researchers recognize that incubation produces results, but they cannot explain precisely how or why. Linda Flower offers this hypothesis:

The folklore is that your unconscious mind goes to work and solves the problem while you sleep. A more recent explanation of the process says that before people explore a problem in detail, they often create a rather limited ineffective plan for solving it. Working on a problem, they learn a great deal that doesn't fit into their original plan. What happens in incubation is

¹ Brewster Ghiselin, ed., The Creative Process (Berkeley: Univ. of California Press, 1954), p. 17.

² Olivia Bertagnolli and Jeff Rackham, ed., Creativity and the Writing Process (New York: John Wiley and Sons, 1982), p. 4.

that people simply forget or abandon their old, inadequate plan and then are able to take advantage of all they've learned.¹

While psychologists do not fully understand incubation's workings, the phenomenon has been widely documented. Valéry once wrote, "We know that it happens fairly often that some desired solution comes to us after an interval of relaxed interest in the problem, as it were a reward for the freedom given to the mind."² And Rilke, in his Letters to a Young Poet, advised,

Everything is gestation and then bringing forth. To let each impression and each germ of feeling come to completion wholly in itself, in the dark, in the inexpressible, the unconscious, beyond the reach of one's own intelligence, and await with deep humility the birth-hour of a new clarity: that alone is living the artist's life: in understanding as in creating.³

Incubation is the most elastic of all the stages of the creative process. For some writers, like Rilke,

¹ Linda [S.] Flower, Problem-Solving Strategies for Writing (New York: Harcourt Brace Jovanovich, 1981), p. 78.

² Paul Valéry, "The Course in Poetics: First Lesson," in The Creative Process, Ghiselin, p. 102.

³ Ranier Maria Rilks, "From Letters to a Young Poet," in Creativity and the Writing Process, Bertagnolli and Rackham, p. 139.

it may stretch over many years. But Amy Lowell said that for her "in the case of short poems, the period of subconscious gestation may be a day or an instant, or any time between."¹

Gary A. Davis, a leading theorist in creative behavior, summarizes the incubation stage this way:

The notion is that the thinker stops consciously working on the problem and turns to a new activity. Meanwhile, somewhere in the psyche, the unconscious (or perhaps "fringe conscious" or "preconscious") mind is said to continue grappling with the problem. When a solution is found, it is passed to conscious levels of thought in the form of an unexpected illumination or "eureka!" experience.²

The "eureka!" experience is the third stage in Wallas' creative process, illumination. Rollo May describes it as "the breakthrough of ideas from some depth below the level of awareness."³ Illumination is the most dramatic phase of creating and, therefore, the one which has captured the fancy of those who hold the Romantic view of the poet, or any creative writer. And because illumination brings with it such a rush of satisfaction for the writer, it is the stage most

¹ Amy Lowell, "The Process of Making Poetry," in The Creative Process, Ghiselin, p. 112.

² Davis, p. 9.

³ May, p. 57.

often remembered when recounting the creative process. "Such a feeling might be referred to as inspiration but if that's what it is, it comes as a result of hard work," which is frequently and conveniently forgotten.¹ However, those who are honest with themselves about their creating experience tend to agree with William Morris, who declared, "The talk of inspiration is sheer nonsense; there is no such thing."² Much conscious preparation, some of it involving many years to complete, comes before any "eureka!" According to writer Phyllis McGinley, "There is such a thing as inspiration (lower case), but it is no miracle. It is the reward handed to a writer for hard work and good conduct."³

The case for illumination as the third stage in the creative process is also well-documented. Amy Lowell, looking back on her years of writing poetry recalled,

How carefully and precisely the subconscious mind functions, I have often been a witness to in my own work. An idea will come into my head for no apparent reason; "The Bronze Horse," for instance. I registered the horses as a good subject for a poem; and

¹ Bertagnolli and Rackham, p. 5.

² Fehrman, p. 161.

³ Bertagnolli and Rackham, p. 73.

having registered them, I consciously thought no more about the matter. But what I had really done was to drop a letter in the mailbox. Six months later, the poem--¹ to use my private vocabulary--was "there."

The writer of this study can testify to the accuracy of Wallas' model as well. As has so often happened, the opening paragraph of this chapter came, seemingly unbidden, while the writer was soaking in the bathtub--but after several weeks of research, thinking, and writing notes about the subject.

No muse whispered the secret of gravity in Newton's ear; it came to him as insight comes to all other creative thinkers. Illumination results "only when the metaphorical apple falls on the prepared mind."² Carl Fehrman, in his Poetic Creation: Inspiration or Craft, suggests that those who tell of voices that seem to dictate poems or even entire stories to them have not been visited by the Muse but have, in fact, been listening to themselves, to an interior monologue that all writers carry on as they write.³ The phenomenon is what L. L. Vygotsky called inner speech--internalized, egocentric, non-vocal "talking"

¹ Lowell, p. 111.

² Gerard, p. 255.

³ Fehrman, p. 185.

to oneself.¹ Such writers are neither mad nor divinely inspired but simply receiving their illumination in a flow rather than a flash, which carries them into the fourth stage of Wallas' model.

The fourth stage of the creative process is verification, which is made up of two conscious acts. The first step in verification is to concretize the illumination, to write the draft, sketch the painting, or whatever. As painter Ben Shahn wrote, "The subconscious may greatly shape one's art; undoubtedly it does. But the subconscious cannot create art."² The artist or writer must consciously set to work to give form to the new idea brought to awareness in stage three. Only when it has been made manifest can one take the second step in verification, critical appraisal. "Often, in attempting to verify the idea, the creator comes up with further insights, or even a second illumination."³ But just as often the writer may find a need to go back and repeat all or part of the process, the first passage through serving as the

¹ L. S. Vygotsky, Thought and Language, trans. Eugenia Hanfmann and Gertrude Vakar (Cambridge: M.I.T. Press, 1962), pp. 130-53.

² Ben Shahn, "The Biography of a Painting," in Creativity in the Arts, Tomas, p. 28.

³ Albert Rabil, Jr., "How Does Creativity Happen?" Education Digest, 44, No. 2 (1978), p. 9.

preparation stage for the second. The creative process, then, is subject to conscious control by the writer in two of its four stages, but, as with heuristics, "not by virtue of the fact that he foresees the final result of the activity."¹

To return to Albert Rothenberg, inspiration is not the most important part of the creative process, but the conscious acts of preparation and verification:

Statistically, it is probable that inspired ideas of all types are fairly common and that they have occurred rather frequently in the general population throughout the course of history. However, it has always been that true creators are those unique people who can work out ideas of any sort, inspired or uninspired.²

Just as the creative process has been the subject of extensive research, so too has its more specialized form, the writing process. The Romantic aura surrounding creativity was a result of focusing on the product instead of the process. The study of writing suffered for many years from the same astigmatic approach. Speaking of the influence of psychology on the writing of literature, Kenneth Burke noted

¹ Vincent Tomas, ed., Creativity in the Arts (Englewood Cliffs, N.J.: Prentice-Hall, 1964), p. 99.

² Rothenberg, p. 174.

prophetically, in 1931, that a "tendency to think of processes will most likely supplant the tendency to think in terms of entities . . ."¹ In recent years, writing has come to be treated more generally as a process, and such a shift in thinking was necessary because, according to Barry K. Beyer,

When we conceive of writing as simply a product, we restrict our teaching of writing primarily to grammar, spelling, and style. Although important, these are merely window dressing for ideas. We truly teach writing when we focus on the process of generating, developing, and refining ideas.

The writing process, like the creative process, is linear yet recursive, its stages discrete yet elastic. Writing is now seen to include "mental activities that begin long before writers put pen to paper and continue even after they have finished drafting their ideas."² And it involves "considerable stopping, revising, and backtracking." Those who have studied the composing process--particularly Janet Emig; Young, Becker, and Pike; Ross Winterowd; and Richard Larson--"believe that most consistently productive writers

¹ Burke, Counter-Statement, p. 203.

² Barry K. Beyer, "Making the Pen Mightier," Phi Delta Kappan, Nov. 1982, p. 194.

follow the procedures used by other creative people," as represented by Wallas' model.¹

Writing theorists have their own nomenclature for the composing process. Corresponding to Wallas' first two stages is pre-writing, which

includes all the preparatory efforts from the point of intention-to-write to conscious thinking, planning and associating thoughts with language; it includes, also, a period of incubation, characterized by considerable mental relaxation and freedom from conscious thought on the problem . . .

Pre-writing is followed by articulation, or "production of the text," and post-writing, which "covers the evaluation and editing that often occur as a piece of writing is revised and shaped . . ."² These last two correspond to Wallas' verification stage. Illumination may have sounded too frivolous a concept for writing pedagogues and is not mentioned but apparently takes place in the time-lapse between pre-writing and articulation. The process is repeated for each subsequent draft until the work is finished, or more accurately, abandoned. However, it is never as

¹ Maxine A. Hairston, A Contemporary Rhetoric, 2nd ed. (Boston: Houghton Mifflin, 1978), pp. 16, 15.

² Martha L. King, "Research in Composition: A Need for Theory," Research in the Teaching of English, 12 (1978), 198-99.

straightforwardly linear as it appears in the model but is repeated in miniature within the articulation and post-writing stages as the need arises, making the writing process, like the creative process, appear to the observer complex and highly individual. Because it is in pre-writing that creative writers can make the most fruitful use of heuristics, the first stage of the writing process deserves more extended consideration.

Writing Before Writing: Heuristics
of Self-Discovery

Pre-writing means simply "what the writer does before writing."¹ In a larger sense it may include gathering information from printed sources or talking to others or living with an awareness of oneself and one's world. Ross Winterowd sees the first stage of the writing process as starting even earlier, "at the moment of birth (or at the moment of conception), when the organism begins to gather itself together as a separate entity . . ."² More specifically, pre-writing includes the use of heuristic procedures to draw forth

¹ Kytte, p. vii.

² Winterowd, Contemporary Rhetoric, p. 31.

from the writer the appropriate material accumulated during the writer's lifetime, which means that "writers have to write before writing."¹ So important is such pre-writing activity that Donald Murray says that "at least 70% of the writing process takes place before the completed first draft."²

Pre-writing frequently is considered synonymous with the invention process of classical rhetoric; however, John Gage regards them as two very different processes.³ In classical rhetoric, and in those schools of thought about writing which grew directly out of it, the writer was presumed to have found a subject before beginning the heuristic procedure to generate something to say about it. The theorists of pre-writing make no such assumption. The heuristics of pre-writing are a mode of self-discovery, both of subject and of one's ideas and feelings relating to it. Using these procedures, truly "writers do not find subjects: subjects find them," to quote novelist Elizabeth Bowen.⁴

¹ Murray, "Write Before Writing," p. 170.

² Donald M. Murray, Learning By Teaching: Selected Articles on Writing and Teaching (Montclair, N.J.: Boynton/Cook, 1982), p. 51.

³ Gage, p. 4.

⁴ Murray, A Teacher Teaches Writing, p. 29.

The term pre-writing is most closely connected with the research and methods developed by D. Gordon Rohman and his associates at Michigan State University; Rohman, apparently, was the first to use the term.¹ His approach to pre-writing includes expansion of the powers of creative discovery as well as the use of heuristic procedures. In a research project in the early 1960s, he "sought to isolate the structuring principle of all Pre-Writing activity and then devise exercises to allow students to imitate that principle in their own 'Pre-Writing.'" That structuring principle is the paradox that "writers set out in an apparent ignorance of what they are groping for; yet they recognize it when they find it. In a sense they knew all along but it took some sort of heuristic process to bring it out."² Rohman's three means of developing students' pre-writing capabilities are mediation, journal-keeping, and training in analogy through bisociation, the bringing together of two disparate ideas to form a surprising new one. The last two will be discussed later in this chapter; the first needs only to be examined briefly.

¹ Young, p. 17.

² D. Gordon Rohman, "Pre-Writing: The Stage of Discovery in the Writing Process," College Composition and Communication, 16 (1965), 112, 107.

At the time of Rohman's studies, meditation techniques borrowed from various Eastern religions were coming into vogue, mostly among young people in or on the fringes of the counterculture; the mediation that Rohman used "was designed to be a heuristic model, something which served to unlock discovery." It had as its goal the writers' putting themselves into a scene by focusing mentally on their subject. The intent was to get students to recapture the concrete "thing freshly experienced."¹ Meditation has not been picked up by many other teachers of writing and replicated widely, although James Moffett is a current advocate of meditation as a means "to witness one's own mind, direct one's own mind, and silence one's own mind."² Its seeming trendiness and exoticism may be why meditation has not appealed to more theorists and classroom teachers. Or Rollo May's comments about meditation's conductiveness to creative thought may explain why:

True, [meditation] does further one aspect of creativity . . . "feeling one's self into the universe" . . . But [it] completely omits the element of encounter which is essential for mature creativity. The aspect

¹ Rohman, p. 110.

² James Moffett, "Writing, Inner Speech, and Meditation," College English, 44 (1982), 246.

of struggle, of tension, of constructive stress . . . [is] forgotten . . . I find that if I engage in the customary twenty-minute meditation period before writing, my universe has become too straightened out, too orderly. Then I have nothing to write about.¹

Rohman and the other theorists who share his thinking that writing is a form of self-actualization are what James A. Berlin terms Expressionists. Those whom Berlin calls the New Rhetoricians--Berthoff, Young, Becker, and Pike, et al.--hold that "truth is always truth for someone standing in relation to others in a linguistically circumscribed situation," while the Expressionists take truth to be "the result of a private vision that must be constantly consulted in writing."² Thus, the need to write before writing. Expressionists feel much as did E. M. Forster: "How can I know what I think until I see what I say?" Writing, then, is a means of discovering what writers already know about themselves and their world, "a way of gaining access to the imagination, to memory, to emotion" that might otherwise remain hidden, even from themselves.³ Writing

¹ May, p. 108.

² James A. Berlin, "Contemporary Composition: The Major Pedagogical Theories," College English, 44 (1982), 774, 772.

³ Bertagnolli and Rackham, p. 2.

itself--but a very special pre-writing writing--
becomes a heuristic.

Some of the most distinguished contemporary psychologists have at least implied such a role for writing as heuristic. Lev Vygotsky, A. R. Luria, and Jerome Bruner, for example, have pointed out that higher cognitive functions, such as analysis and synthesis, seem to develop most fully only with the support of verbal language--particularly, it seems, of written language.¹

The very special kind of pre-writing writing referred to above is what Ken Macrorie has called free writing. Macrorie, another of Berlin's Expressionists, introduced the concept of free writing in 1970, in his Telling Writing, presently in its third edition. He, of course, did not invent free writing; intuitively, creative writers and others had long used the technique, but Macrorie saw its value, named it, and incorporated it into a structured pedagogical approach. Others were quick to pick up the technique, and today it is nearly a standard feature of writing texts which have even a tint of expressionist coloring in their philosophic make-up. Memering and O'Hare, for example, present free writing in their Writer's Work, and, not surprisingly, Peter Elbow advocates it

¹ Janet Emig, "Writing as a Mode of Learning," in The Writing Teacher's Sourcebook, Tate and Corbett, p. 69.

in his texts, calling it "the best way to learn--in practice not just in theory--to separate the producing process from the revising process."¹ Recognition of the benefits of free writing has not been confined to the English Department. Iowa State University economist George W. Ladd has written in praise of it as a stimulus to the subconscious and a research tool for scientific minds.² Macrorie's approach has spawned a virtual school of thinking about the teaching of writing, reproducing itself through books for teachers like Free Writing!, a collection of essays with strong emphasis on free writing as a generator of ideas and of the writer's voice.³

Macrorie's instructions to student writers on how to free write have been paraphrased by countless others but have remained unchanged through subsequent editions of Telling Writing:

Write for ten minutes as fast as you can, never stopping to ponder a thought. Put down whatever comes to your mind. If nothing comes, write, "Nothing comes to my mind" until you get started. Or look in front of

¹ Elbow, Writing With Power, p. 14.

² George W. Ladd, "Artistic Research Tools for Scientific Mind," in Prose That Works, ed. Suzanne S. Webb (New York: Harcourt Brace Jovanovich, 1982), p. 179.

³ Joseph Brown et al., Free Writing! A Group Approach (Rochelle Park, N.J.: Hayden, 1977).

you or out the window and begin describing whatever you see. Let yourself wander to any subject, feeling, or idea, but keep writing.

After students have practiced this basic technique, Macrorie suggests a shift to free writing with a focus:

Stay on one subject for fifteen or twenty minutes. . . . But if you find that subject takes your mind off to another related subject, let yourself go to that. The one necessity in such shotgunning is that you keep writing freely and quickly.¹

In the initial learning stage, the only aim of free writing is simply to keep writing. Students are not usually accustomed to such sustained non-product oriented writing, and a natural resistance must be overcome. "The goal of free writing is the process, not the product."² And as simple as the process appears, it requires regular, conscientious practice before its benefits can be realized.

The benefits of free writing are many. Once the writer has become less self-conscious and more comfortable with the technique, free writing can serve as a warm-up exercise, "a way to get past that time just

¹ Ken Macrorie, Telling Writing, 3rd ed. (Rochelle Park, N.J.: Hayden, 1980), p. 18, 22.

² Elbow, Writing With Power, p. 13.

prior to writing when the mind rebels."¹ As John Steinbeck once said, his pre-writing writing was "almost like a pitcher warming up to pitch--getting my mental arm in shape to pitch a good game."² And free writing can be as good as a bulldozer for getting past a writer's block, because when one sits down and writes freely about anything at all, one thing leads to another, and words generate more words. According to poet David Huddle, "that's probably the strongest argument I know for sitting down to the paper and getting on with it rather than going into the other room to pace and think and wait."³ At the opposite end of the scale of writers' problems, when one has too many ideas and emotions pressing for attention, free writing is "a quick outlet so they don't get so much in your way when you are trying to write about something else."⁴ Or free writing can articulate and put into perspective feelings which one may wish to record, set

¹ Jean Pumphrey, "Teaching English Composition as a Creative Art," College English, 34 (1973), 671.

² John Steinbeck, "From Journal of a Novel: The East of Eden Letters," in Creativity and the Writing Process, Bertagnolli and Rackham, p. 147.

³ David Huddle, "Memory's Power," in Creativity and the Writing Process, Bertagnolli and Rackham, p. 107.

⁴ Elbow, Writing With Power, p. 15.

aside, and write about at a later time when the necessary aesthetic distance can be gained.

As was mentioned earlier, free writing, as a heuristic, differs from tagmemic invention and Burke's pentad in that it does not assume the writer already has a subject about which to generate ideas. Another free writing benefit is that it can be used to stimulate possible subjects, and Elbow suggests the following procedure:

Simply do one or two [free writings]. Afterward, look to see what words or passages seem important--attract energy or strength. Here is your cue . . . Or think of a person, place, feeling, object, incident, or transaction that is important to you. Do one or two free writing exercises while trying to hold it in mind. This procedure will suggest a subject and a direction.¹

Once a subject has found the writer, free writing with focus can be used to bring forth additional ideas, images, information for the text. Moving in time to the second stage of the writing process, to produce the first draft, the writer can free write it as well.

Of course [said Gertrude Stein] you have to have a little more control over your writing than that; you have to know what you want to get; but when you know that; let it take you and if it seems to take you off the track

¹ Peter Elbow, Writing Without Teachers (New York: Oxford Univ. Press, 1973), p. 9.

don't hold back, because that is perhaps where instinctively you want to be and if you hold back and try to be always where you have been before, you'll go dry.¹

What distinguishes free writing, what makes it free, what makes it work, is deferred judgment. Expressionists view the functions of the articulation and verification stages of the writing process as sharply distinct in that no conscious evaluation should take place during the production of the text, nor should it during any pre-writing heuristic procedure. As Linda Flower notes, "Writer's block is an obstacle that writers throw in their own path. . . . they commonly do this . . . by having an overly critical Internal Editor."² In free writing, the Internal Editor, a manifestation of the Freudian superego or the critical parent of Transactional Analysis or the internalized third-grade English teacher, is temporarily turned off or circumvented, and conscious judgment is postponed until the writing task, heuristic or draft, has been produced. "The mind needs the relaxation of inner controls . . .," Rollo May says, "for

¹ John Hyde Preston, "A Conversation with Gertrude Stein," in The Creative Process, Ghiselin, p. 165.

² Flower, Problem-Solving, p. 40.

the unaccustomed ideas to emerge."¹ Switching off or going around the Internal Editor is perhaps the most difficult aspect of free writing for students to master, but, with practice, writers can learn to exercise deferred judgment, which is very like "that passionate patience which Keats called Negative Capability."² Poet William Stafford says of his own experience with "this free way of writing,"

. . . receptive, careless of failure, I spin out things on the page. And a wonderful freedom comes. If something occurs to me, it is all right to accept it. It has one justification: it occurs to me. . . . Yet another attitude I find necessary: most of what I write, like most of what I say in casual conversation, will not amount to much.³

However, some of what comes from free writing will have value beyond what could ever be written with the critical brakes on.

Theorists have attempted to discover the rationale for the manner in which free writing works. Richard Young, who says that free writing "is one of the few

¹ May, p. 67.

² Denise Levertov, "Work and Inspiration: Inviting the Muse," in Creativity and the Writing Process, Bertagnolli and Rackham, 1982), p. 90.

³ William Stafford, "A Way of Writing," in Creativity and the Writing Process, Bertagnolli and Rackham, pp. 76, 77.

[heuristic] methods that have undergone rigorous testing in the classroom," speculates that "the grammatical patterns and patterns of arrangement used by every writer serve some of the same purposes as explicit methods of invention."¹ Ann Berthoff is less equivocal: "The relationship between thought and language is dialectical: ideas are conceived by language; language is generated by thought."² Macrorie is not as interested in the how and why as in the way free writing works. From his own classroom observations he has found that free writing

moves [students] into a kind of trance in which nearby distractions fade away and they focus on the act so that their words seem to be writing themselves. In that condition (which scientists have isolated by study of brain waves as most often occurring when a person is drifting into or out of sleep) writers can remember their past experiences more fully and vividly.³

A number of writers have reported experiencing the same phenomenon. Robert Graves, for instance, said of his own composing process, "No poem is worth anything unless it starts from a poetic trance, out of which you can be awakened by interruption as from a

¹ Young, pp. 19, 35.

² Berthoff, Forming, Thinking, Writing, p. 47.

³ Macrorie, p. 288.

dream."¹ In that waking trance which mimics the drifting between sleep and wakefulness, the Internal Editor can be caught off duty and the unconscious tapped. To take the best advantage of "the twilight zone between sleep and the full waking state," Dorothea Brande offered beginning writers advice for harnessing the unconscious with free writing: rise half an hour earlier than usual and, as soon as possible, without speaking to anyone or reading anything, start writing.² And as William Carlos Williams admonished, "Write, write anything . . . it is absolutely essential to the writing of anything that the mind be fluid and release itself."³

Free writing, of all heuristic procedures, is the simplest and most versatile; it "offers the student techniques which can be mastered with relative ease. . . . [and] an explicit, teachable method which does foster creative behavior."⁴ And it satisfies

¹ George Plimpton, ed. Writers at Work: The "Paris Review" Interviews, 4th series (New York: Viking, 1976), p. 62.

² Dorothea Brande, Becoming A Writer (1934; rpt. Los Angeles: J. P. Tarcher, 1981), pp. 73, 72.

³ William Carlos Williams, "How to Write," in Creativity and the Writing Process, Bertagnolli and Rackham, p. 43.

⁴ Young, pp. 18, 21.

Lauer's criteria (pp. 18-19) for being flexible and transcendent, applicable to any subject matter or writing task. In addition to its heuristic capabilities, free writing is also the basic mode of transcription for any written discovery device--the associative, judgment-free way of recording the answers to the questions of more structured procedures like the pentad. For all these reasons, free writing would appear to be a fine heuristic for creative writing students, one which should be introduced before any other and used throughout the term. The application of free writing to the teaching of creative writing will be discussed in further detail in Chapter III.

Closely related to free writing as a heuristic and recording procedure is list-making. Macrorie suggests to student writers that if they find themselves stuck at the pre-writing stage--or the draft or editing stage as well--for a word, phrase, image, idea, they should stop and write down words related to the subject, "quickly as on a grocery list."¹ Noted teacher of fiction writing R. V. Cassill advocates the same discovery technique:

Lists are a sort of pre-syntactical ordering and clustering of things caught up in the

¹ Macrorie, p. 46.

net of our concerns. Emerson told us that "bare" lists of words are enough to set off the imagination and control its direction. . . . Perhaps the true value of [listmaking] is to thwart preconceptions and permit the emergence into conscious of things we didn't know we knew.¹

In that respect, listmaking is very much like free association in psychoanalysis; the patient, in a relaxed state, allows words to flow spontaneously in response to external stimuli, with a suspension of any critical or repressive attitude. The aim of free association, like that of free writing and listmaking, is to defer judgment and allow images and ideas to rise to the level of conscious thought. It is a kind of associative word play that creative writers must learn to cultivate--and come to love--and techniques for doing so will be examined later in this chapter. "Normal unguided association is aimless, pointless, unproductive," says E. M. Jennings. "But to recognize its characteristics is a step toward a deliberate manipulation of the normal process, a manipulation that may lead to fruitful discovery."²

Making lists of words provides an essential ingredient for writers: concrete chaos. According to

¹ Cassill, pp. 45, 48.

² E. M. Jennings, "A Paradigm for Discovery," College Composition and Communication, 19 (1968), 193.

novelist Mary Shelley, invention "does not consist in creating out of void, but of chaos; the material must, in the first place, be afforded . . .," that is, at hand.¹ The mind's own discomfort with chaos begins an ordering; this ordering is a function of the variable connections between words. Linkages among items in a list are based on a context created because each word belongs to a family of related words and fits into a number of concepts or frames of reference.

I. A. Richards describes the unconscious ordering process:

Each possible item, as it comes up for consideration, automatically increases or decreases the chances of incalculably many other items being considered. As it progressively establishes itself, its excluding influence becomes stronger, and so does its pull as regards further choices.²

For the creative writer, Cassill says, "A story begins to form around the items in the list." To write the story, the writer need only begin explaining what the words have to do with each other.³

Not only do lists provide raw material for the writer's imagination; they do the same for the reader.

¹ Berthoff, Forming, Thinking, Writing, p. 64.

² Richards, p. 161.

³ Cassill, p. 45.

Many of Whitman's poems, for example, are aesthetically satisfying because they are catalogs of lists, and many contemporary poets understand the evocative power of lists as well. The same is true in fiction. In Ulysses, the lists "provide endlessly varied comic effects as Joyce piles them up to the point of absurdity and tunes them with surprising effects from realism to improbability." Nabokov has been quoted as saying that in his novel, Lolita, the part "which gave him the most satisfaction was the list of Lolita's classmates."¹ Part of the reader appeal of lists is that they engage reader's imaginations and allow them a part in the creative process. Also, as Winston Weathers says, in his "Rhetoric of the Series," lists of four or more items impart a satisfying emotional sense of plethora, both for the reader and the writer.² Writers, then, who may feel distressed and short of ideas can find in heuristic listmaking not only a supply of material to manipulate in their writing but also a subtle sense of abundance and well-being.

In addition to free writing and listmaking, Ken

¹ Cassill, p. 46.

² Winston Weathers, "The Rhetoric of the Series," in Rhetoric and Composition: A Sourcebook for Teachers, ed. Richard L. Graves (Rochelle Park, N.J.: Hayden, 1976), p. 97.

Macrorie is a strong advocate, too, of journal-keeping, Gordon Rohman's second technique for improving students' pre-writing skills. The keeping of journals and diaries may be as old as written language itself; their conscious heuristic use dates from the commonplace books of the Renaissance. Traditionally, journals have been kept by writers as a repository for ideas which may be of heuristic value at some later date. Thoreau's prodigious journals, for instance, provided him with most of the material for Walden, some of it taken verbatim from the notebooks he kept during his two-year stay in the woods. Equally prolific as a journal-keeper was poet Theodore Roethke, whose "notebooks fill twelve horizontal feet of library space in the University of Washington Manuscript Collection."¹ Katherine Anne Porter has said that she kept journals because "I write a great deal, and the habit of writing helps me to arrange, annotate, stow away conveniently the references I may need later."² Many years may pass before journal entries, some of them apparently long since forgotten, prove of value to their writers. John Steinbeck admitted, "I write

¹ Bertagnolli and Rackham, p. 1.

² Katherine Anne Porter, "Notes on Writing," in The Creative Process, Ghiselin, p. 207.

many thousands of words a day . . . And of those which are written down only a few are ever meant to be seen. In this connection--I can find in notebooks many years old ideas and feelings and even stories I did not know about."¹ Such journal material, though consciously forgotten, has in fact been undergoing a period of incubation, the illumination triggered by the writer's re-reading it.

Creative writing students may be taught to think of daily journal-keeping as being like putting money in the bank, the interest from which may support some piece of writing in the future; however, what they really want, and need, is ready cash for spending right now, and journal-keeping can be a more immediate heuristic as well. Ross Winterowd calls the journal "a significant aid to invention . . . Its usefulness cannot be overestimated." He tells students that "your journal gives you the opportunity of becoming a writer without risk of failure . . ."² As with free writing, keeping a journal requires a suspension of critical judgment about one's writing, and for that reason, Macrorie urges students to free write in their journals. Writing out immediate personal concerns,

¹ Steinbeck, p. 145.

² Winterowd, Contemporary Writer, pp. 77, 78.

examining ideas and feelings not only give the writer experience in embodying thoughts in written prose but also provide continuing occasions for insight. As one of Gordon Rohman's students put it, "I established a discovery of myself for myself . . ."¹ At the same time, journal entries, even ones only a few hours old, can yield a ready stock of ideas for possible development by revision or expansion into stories or poems.

For example, poet Glenn F. Jackson says,

. . . using prose entries from my journal is one of the ways I have of getting into the writing process so that it is frequently successful for me. . . . using a prose version of an experience gives me a ready source of images to work from.²

Working from prose to poetry may strike some students as anti-poetic, but the process is not without considerable precedent. Valéry advised, in his "Poet's Notebook," "If you want to write verse you begin with thoughts, you begin with prose."³ Both Yeats and Robert Lowell are known for having worked in this manner, and Stephen Spender has written a detailed account

¹ Rohman, p. 109.

² Glenn F. Jackson, "The Process as Journey," in Creativity and the Writing Process, Bertagnolli and Rackham, p. 117.

³ Paul Valéry, The Art of Poetry, trans. Denise Folliot (New York: Pantheon, 1958), p. 176.

of the growth of one of his poems from prose journal entries, in his "Making of a Poem."¹

Simply advising students to keep a journal is not sufficient. Suggestions and guidelines vary, but all writing theorists who advocate journal-keeping essentially agree with Memering and O'Hare's directions in The Writer's Work:

1. Write every day. Regular, specific periods of writing are better than fewer and longer sessions. Don't try to cram a week's worth of writing into one night; you'd get the same effect as if you tried to cram a week's worth of jogging into a single session.
2. Try to write in the same place at the same time each day. Don't let anything interfere with your schedule.
3. Write at least one page a day, even on days when you'd rather not. (Especially then.)
4. Write anything you want, anyway you want, but remember that a journal is not a private, intimate document for your eyes alone. An effective journal is a record of your thoughts that others should be able to read.²

In the same vein, R. V. Cassill cautions against allowing journals to "turn into wastebaskets glutted with indifferent and inert trash . . ."³ A writer's journal is neither a schoolgirl diary--"I saw X in the library

¹ Spender, pp. 35-48.

² Memering and O'Hare, p. 32.

³ Cassill, p. 44.

again today! He looked right at me and smiled!! I thought I'd die!!!"--nor a collection of cryptic notations--"Boring day. Nothing on TV. Did homework."

The beginning journal-keeper needs more specific guidance in order to avoid such dead-end entries. Cassill advises writing in the journal "the concrete data of colors, shapes, and the way things work . . . overheard lines of dialogue that characterize and evoke the essence of a person, a situation, a time, a place, a moral climate. . . . incidents from the evening news, from gossip."¹ Such entries are much like the sketches an artist makes in a notebook which later can be used to create a painting in the studio; such data as Cassill suggests is clearly convertible to use in the writing of poetry and fiction. Ann Berthoff directs the student writer to go one step further: "Record your observations and observe your observations. . . . if what you're composing seems to have a will of its own, follow its lead; you may be surprised to see where it takes you."²

A further source of journal material comes from Dorothea Brande, who urged beginning writers to free write first thing in the morning in order to tap the

¹ Cassill, p. 43.

² Berthoff, Forming, Thinking, Writing, p. 13.

unconscious; she also recommends the writer's previous night's dream as a place to start a journal entry.¹

James Kinney likens such entries to "a Jungian dream diary. . . . Requiring nothing more than the recording of dreams each morning, it can be a powerful source of insight."²

Gordon Rohman says, in his studies of pre-writing processes, "The great majority of students came to value their journal above anything else in the course." The third of Rohman's procedures, analogy formation, was also perceived as beneficial. Confessed one student, "To my surprise the analogical approach worked, and I've gained new insights."³ Teaching analogy through bisociation is not, strictly speaking, a heuristic but a form of creativity training, a developing field that uses heuristics of its own, some of which can be helpful to the poet or fiction writer.

¹ Brande, p. 72.

² Kinney, "Classifying Heuristics," p. 355.

³ Rohman, pp. 109, 112.

Creativity Training: Heuristics of Problem-Solving

Can creativity be taught? is no longer a question raised by psychologists studying creative behavior. After more than fifty years of research, the emphasis has shifted to how best to teach what has been learned from studies of creative persons and the processes which they employ intuitively. While the "science of promoting creativity in the individual person is in its initial stages," it is already clear that everyone, no matter what his or her age or background, can benefit from such training.¹ Creativity is "present in almost everyone, and many people have the potential for a high level of creative achievement," according to Margaret Gilchrist, writing in The Psychology of Creativity. "Each individual has a capacity for growth and change, so that the potential for creative achievements is universal, even if such achievement consists only of insights and formulations which are new to the person himself."²

Gary A. Davis, whose work is used in many creativity training programs, concedes that "high levels of

¹ Arieti, p. 17.

² Gilchrist, pp. 10, 43.

creative genius are limited to a gifted few. However, there is absolutely no doubt that everyone can become more creative than he or she presently is." Davis has pioneered a taxonomy of creative development that underlies most such courses or workshops and which teachers of creative writing might consider adapting. AUTA, Davis' four-step approach, is made up of "Awareness of creativity; deeper Understanding of the nature of creativity; the acquisition of Techniques of creative production; and finally a humanistic increase in the Actualization of one's potential."¹ The basic techniques employed in every program of creativity training are brainstorming and synectics, both of which will be looked at further, but, to follow Davis' taxonomy, some discussion is necessary first about what has been discovered concerning the kind of thinking employed during the creative process.

One of the characteristics of creative people that researchers have encountered in all their studies is a facility for divergent thinking, thinking which "does not follow the beaten path of conformity but proceeds toward unusual solutions," thinking which has "flexibility, originality, and fluency."² Edward De Bono,

¹ Davis, pp. x, 18.

² Arieti, p. 17.

who has written widely on the subject, calls this process lateral thinking. "In order to be able to use creativity," he says, "one must rid it of [the] aura of mystique and regard it as a way of using the mind--as a way of handling information. This is what lateral thinking is about." Lateral thinking is the complement of vertical--logical, analytical, critical--thought, such as is used at the verification stage of the creative process. "Vertical thinking develops the ideas generated by lateral thinking."

De Bono explains further:

In vertical thinking one moves forward by sequential steps each of which must be justified. . . . In lateral thinking one may have to be wrong at some stage [although such judgment is deferred] in order to achieve a correct solution . . . one may deliberately seek out irrelevant information; in vertical thinking one selects out only what is relevant. . . . Vertical thinking is used to dig the same hole deeper. Lateral thinking is used to dig a hole in a different place.

De Bono presents several techniques for generating alternatives and stimulating lateral thinking, among them his own reversal method in which "one takes things as they are and turns them round, inside out, upside down, back to front."¹

¹ Edward De Bono, Lateral Thinking: Creativity Step By Step (New York: Harper and Row, 1970),

De Bono, Davis, and the others who have written in support of creativity training for everyone--school children and college students, scientists and businessmen alike--refer to their techniques as ways of finding creative solutions to problems; for them problem-solving becomes synonymous with creative behavior. Such scientific terminology with its technological implications have caused some writing theorists, like Ann Berthoff, to reject the problem-solving approach as inappropriate, even a threat, to the humanities. In the early 1970s, Berthoff and Janice Lauer carried on a running debate about the matter in the pages of College Composition and Communication.¹ However, in recent years, most authors of writing texts have come to feel, like De Bono, that a problem is "simply the difference between what one has and what one wants,"² and that problem-solving is involved, as rhetoric is said to be, with every choice a writer makes. According to Richard Young, problem-solving is

pp. 11, 12-13, 142.

¹ Ann E. Berthoff, "The Problem of Problem Solving"; Janice [M.] Lauer, "Response to Ann E. Berthoff, 'The Problem of Problem Solving'"; Ann E. Berthoff, "Response to Janice Lauer, 'Counter-Statement,'" in Contemporary Rhetoric: A Conceptual Background with Readings, Winterowd, pp. 90-103.

² De Bono, p. 58.

"an important concept in the art of invention. . . . Conceiving of rhetorical invention [as such] relates the discipline to other disciplines and encourages us to draw on relevant work therein."¹ Relating problem-solving more closely to creative writing, Albert Rothenberg notes that "the poet starts by unearthing or formulating problems which are aesthetic and personal simultaneously."² The writing of a poem or story, then, is the solving of those and subsequent problems raised in the composing process.

Linda Flower, in her text, Problem-Solving Strategies for Writing, has totally assimilated creativity training problem-solving into humanistic writing pedagogy:

Writing is a thinking process. To be more specific, it is a problem-solving process. If we were to look at composing as a psychologist might, we would see that it has much in common with other problem-solving processes people use in carrying out a wide range of tasks . . . Getting started is a common problem . . . directly related to how you tackle the task [of writing] . . . Heuristics--that is, effective strategies or discovery procedures--are the heart of problem-solving.³

¹ Young, pp. 25, 27.

² Rothenberg, p. 181.

³ Flower, Problem-Solving, pp. 3, 35, 44.

Flower presents, among others, the problem-solving technique of brainstorming as a heuristic for writers. It also appears in a number of other current writing texts, ranging across the theoretical landscape from the neo-classic highlands of Edward P. J. Corbett's Little Rhetoric through the composition midlands of Ross Winterowd's Contemporary Writer to the expressive lowlands of Peter Elbow's Writing With Power. James Kinney calls brainstorming "a process for stimulating intuitive flashes that comes to the . . . classroom from the executive suite."¹ The technique was devised, in 1939, by Alex F. Osborn, co-founder of Batten, Barton, Durstine, and Osborn, a highly successful New York advertising agency. It is based on the principles that trying to think both creatively and critically, or as De Bono calls it, laterally and vertically (p. 112), at the same time is counterproductive, and that the "need to be right all the time is the biggest bar there is to new ideas."²

Originally developed as a group process, brainstorming involved the oral exchange of solutions to a stated problem. Osborn's only ground rules were these: "1. Criticism is ruled out. 2. Freewheeling is

¹ Kinney, "Classifying Heuristics," p. 354.

² De Bono, p. 108.

welcomed. 3. Quantity is wanted. 4. Combination and improvements are sought."¹ The group members tossed out ideas freely for a designated period, being stimulated by and building or hitch-hiking on one another's suggestions, while one member served as a recording secretary. Judgment was deferred completely until the brainstorming time was up, after which group evaluation might follow, thus separating generative lateral thinking from critical vertical thought in order to insure maximum creativity.

Although brainstorming began as an oral group technique, it is equally applicable as an individual written procedure; student writers can scribble quickly all the ideas that come about the problem at hand. Every idea should be put down, as Elbow says, "no matter how stupid, impractical, or useless it seems. You can't get the good ones and the fruitful interaction among the odd ones unless you welcome the terrible ones. Besides, you don't know which ideas are good or terrible till later."² Flower's rules for brainstorming are similar to those given by Osborn: "keep writing, don't try to censor or perfect as you go, and keep returning to the problem." The suspension of

¹ Davis, p. 60.

² Elbow, Writing With Power, pp. 8-9.

judgment and the speedy notation of ideas make brainstorming a heuristic very much like free writing; however, Flower makes a clear distinction between the two:

Free writing is a form of free association. One idea leads to another which leads to another, like links in a chain. Brainstorming, on the other hand, should be goal-directed thinking. Your ideas radiate out from your central focus like spokes from the hub of a wheel.¹

For creative writing students, simply learning about brainstorming as a heuristic is not enough. They must also learn to see a writing task as a problem to be solved and to ask themselves "starter" questions to get the process underway. Angelo M. Biondi and Nancy A. Koubik state, "A question carefully formulated stimulates the problem solver to seek solutions via divergant or lateral thinking." The simplest starter they suggest is "What would happen if...?" As an adjunct to brainstorming, Alex Osborn, in 1963, developed a series of "73 idea-spurring questions," which Biondi and Koubik have condensed and which form the mnemonic SCAMPER:

Substitute? (What else instead?)

Combine? (A blend? Combine parts?)

¹ Flower, Problem-Solving, p. 73.

Adapt? (What other way might it be used?)
 Modify? (Change meaning? Purpose? Color?
 Sound? Shape? Age?)
 Put to other use? (New ways to use as is?)
 Enlarge or reduce? (Exaggerate? Soften? Mag-
 nify? Minify?)
 Rearrange? (Reverse? Exchange parts? Transpose
 cause and effect?)¹

With SCAMPER in mind, the writer can brainstorm out each of seven spokes, returning, as each line of inquiry is exhausted, to the problem at their hub. Like free writing, brainstorming is a simple, memorable, portable heuristic and would seem useful for creative writing students, if they learn to SCAMPER and ask themselves "What if...?" But unlike free writing and the other heuristics of self-discovery, brainstorming presupposes the writer has a subject already in mind about which to formulate a problem to be solved.

Another procedure which creativity training utilizes is the formation of analogies through bisociation, Gordon Rohman's third technique for improving students' pre-writing skills. The formation of analogy, the

¹ Angelo M. Biondi and Nancy A. Koubik, "Ask... And You Shall Conceive!" Journal of Creative Behavior, 14 (1980), 235-241. Abe Goldstien, instructor of

making of metaphor, is basic to the training of creative writers because an ability to see relationships between disparate entities is the source of any writer's power. As Rohman says, "The creative mind . . . works not primarily by analysis or measurement of observables as machines work but by building images of unity out of what William James called the blooming, buzzing confusion of events."¹ The communication of the writer's own perceptions relies heavily on an analogic construct to bridge the distance between the reader's known and the writer's unknown. The most direct analogic technique is to form simple similes using as or like: "Coming into the little room was like stepping into a rush-hour elevator." More complex is the use of metaphor with an implied like: "The elevator-size room was rush-hour crowded." A metaphor, as Valéry said, "is what happens when one looks in a certain way, just as a sneeze is that happens when one looks at the sun."² And analogy-formation training can provide the writer with heuristic procedures for

Creative Imagination at Drake University, first called this writer's attention to the fact that Biondi and Koubik's categories form a mnemonic.

¹ Rohman, p. 111.

² Valéry, The Art of Poetry, p. 180.

looking at a subject "in a certain way" in order to develop it into a poem or story.

One method of training analogic ability which also has heuristic capabilities is through bisociation, or what Sidney J. Parnes terms forced-relationships, where two seemingly unrelated ideas are forcibly brought together to create a new pleasantly surprising third.¹ Kenneth Burke has called this procedure perspective by incongruity:

Basically, the concept . . . embodies the assumption that certain clusters of terms spontaneously exclude certain other[s]; and these clusters tend to be kept apart, as though in different bins, unless a thinker who is in some respect "perverse" suddenly bridges the gap. For instance, we tend to think of "training" and "incapacity" as mutually exclusive, until we run across Veblen's ironic bridging of the gap with his ironic expression "trained incapacity," to designate a situation where, in being fitted for one thing by the same token a person is made unfit for something else. If such spontaneous, mutually exclusive groupings are a kind of "piety," then a "planned incongruity" that violates assumptions would be a kind of "impiety" that produced a new perspective by joining the "naturally" disjunct. It would jolt our expectations.²

A simple operation for exercising the impiety of perspective by incongruity is suggested by R. V.

¹ Sidney J. Parnes, "Idea-Stimulation Techniques," Journal of Creative Behavior, 10 (1976), 127.

² Kenneth Burke, Dramatism and Development

Cassill, in his Writing Fiction: "Set two or three lists [of words] in arbitrary combination on a single page. What stirring of your imagination toward a story begins when you note possible conflicts or harmonies among these words that you have forced into proximity without any preconceived plan?"¹ Writing out emerging conflicts or harmonies without judging, putting down freely ideas and images that are suggested by the forced-relationships among the words can produce material to be shaped later into a story or poem. Additionally, Edward De Bono's Lateral Thinking is a good sourcebook for similar heuristic operations for forcing relationships and training the creative writing student in bisociation.

The most widely mentioned technique for analogic training with heuristic possibilities is William J. J. Gordon's strategy for shifting perspectives by making the unfamiliar familiar and the accustomed exotic, synectics. Synectics, from the Greek synecticos, means "the joining of apparently unrelated elements."² In his book, Making It Strange, Gordon presents four synectic problem-solving approaches: direct analogy,

(Worcester, Mass.: Clark Univ. Press, 1972), p. 18.

¹ Cassill, p. 48.

² Davis, p. 67.

personal analogy, symbolic analogy, and fantasy analogy. According to Linda Flower, who includes synectics in her writing text, the concept "was developed by a think tank group of inventors, artists, and psychologists who were trying to find creative new solutions to practical problems. . . . By its very nature, the approach leads you to come up with offbeat, impossible ideas in hope of finding one startling new insight."¹

In Gordon's direct analogy, thinkers are asked to compare their problem to something concrete, for instance, to consider how similar problems are solved in nature by plants and animals. As an example of how synectics can be used in creativity training to build a personal heuristic, students in the Creative Imagination class at Drake University were given the problem of looking at their own creative thinking processes, envisioning how their minds work, and objectifying that in some way, using direct analogy. As a participant in the class, this writer produced the following:

Inside my head is an aviary filled with birds of all sizes, colors, and species, each one a bit of memory--words, pictures, feelings. When I think, birds fly up, fluttering and forming patterns. Unfortunately, because the aviary is so small, only a few can fly,

¹ Flower, Problem-Solving, p. 76.

and they quickly settle down again on their usual perches. But when I want to think creatively, I have to get the door of the cage open somehow, to set the birds free. Then they wheel and soar in large numbers and form new patterns, and I make associations and see relationships I've never seen before. The problem is getting the door of the aviary open. If I take whatever creative problem I'm facing and use some [heuristic] method, like "What is the usual way of doing this? What is the opposite?" it acts like a parrot lifting the latch on the door with his beak, and the door swings open wide, setting free the birds.

The objective of the exercise was not only to provide experience in analogy formation but also to give the students greater control over their own creativity by being able to call up the positive image of their own creative apparatus at work if they were stuck.

To continue with Gordon's synectics, in personal analogy, thinkers gain new perspective by imagining themselves as being inside or part of the problem; in symbolic analogy, they liken the problem to an abstract concept; and in fantasy analogy, they "think of fantastic, far-fetched, perhaps 'ideal' solutions which can lead to creative yet practical and workable ideas. Gordon sees this method as a sort of wish-fulfillment."¹ Since, as Allen Tate says, "the sea boils and pigs have wings because in poetry all things are

¹ Davis, p. 68.

possible,"¹ fantasy analogy is likely to be the most congenial to creative writing students, though all are useful.

As an illustration of how synectics might be used by students, if the problem were to write a poem about an apple tree, writers might begin with direct analogy by free writing about how the tree produces its fruit, an analogic correspondence to the poet's producing a poem. Using personal analogy, writers might next imagine themselves as the tree passing through the seasons, putting forth buds, leaves, blossoms, and fruit, moving on through harvest into dormancy, and so on. Using symbolic analogy would provide additional pre-writing material to be manipulated by the imagination during the incubation stage and shaped later, in the articulation stage of the writing process, as writers might compare the apple tree to an abstract concept, perhaps an emotion like love, free writing about how the latter grows, flowers, and comes to fruition. And last, writers, using fantasy analogy where anything goes, could generate images which, added to the material and insights gained from going through the pre-writing process using synectics, might

¹ Allen Tate, "Narcissus as Narcissus," in The Creative Process, Ghiselin, p. 140.

eventually result in a poem like Paul Zimmer's "A Final Affection":

I love the accomplishment of trees,
How they try to restrain great storms
And pacify the very worms that eat them.
Even their deaths seem to be considered.

I fear for trees, loving them so much.
I am nervous about each scar on bark,
Each leaf that browns. I want to
Lie in their crotches and sigh,
Whisper of sun and rain to come.

Sometimes on summer evenings I step
Out of my house to look at trees
Propping darkness up to the silence.
When I die I want to slant up
Through those trunks so slowly
I will see each rib of bark, each whorl;
Up through the canopy, the subtle veins
And lobes touching me with final affection;
Then to hover above and look down
One last time on the rich upliftings,
The circle that loves the sun and moon,
To see at last what held the darkness up.¹

Creativity training, growing out of psychological research into creative behavior, offers creative writing students a number of potential heuristic procedures, all of them non-subject specific and capable of generating useful insights and material for shaping into poems and stories while, at the same time, encouraging the sort of behavior that established poets and fiction writers intuitively engage in. Along with the

¹ Paul Zimmer, "A Final Affection," Chariton Review, 6, No. 1 (1980), 23-24.

heuristics which have grown out of the topoi of classical rhetoric and those of self-discovery, they constitute a veritable smorgasbord of invention methods that may be introduced in the creative writing classroom.

CHAPTER III

TEACHING APPROACHES: HEURISTICS IN THE CLASSROOM

"Texas" Guinan, a colorful and enterprising woman who helped make the 1920s roar, once said, "Life is a feast, and most poor bastards are starving to death." In the same way, the number and variety of heuristic procedures available constitute a feast, but most beginning creative writing students are starving for ways to get started with their poems and stories because they do not know about discovery techniques. The teacher of creative writing has an obligation to spread the banquet before the students and to do so in such a way that they can learn to feed themselves. According to Alberta Turner, "a relationship between students and teachers must be established which will enable students to start on the long process of becoming their own teachers."¹ And Ross Winterowd tells teachers,

¹ Alberta [T.] Turner, ed., Poets Teaching: The Creative Process (New York: Longman, 1980), p. 2.

You can say to a student, "If you're really interested in this subject, think about it." Or you can say, "Here are some specific ways to think about it." Rhetoricians [and others] have developed [heuristic] ways to think about problems, and instructors can make these ways available to students.¹

In addition, teachers of creative writing must write themselves in order to be constantly reminded of what their students are experiencing; they must examine their own writing processes for the heuristics they use intuitively, and try out new ones as well. Only in this way can they build and project a positive attitude toward the discovery devices they teach. Otherwise, if instructors are not convinced of the benefits of heuristics, students will be reluctant to sample the feast and continue to go hungry. As R. V. Cassill says, "I think the teacher must offer possibilities and alternatives . . . "² David Powell agrees: "Probably no teacher can do more than inspire the student with a quality set of rhetorical tools, an open atmosphere, a love of language, and a sense of possibility . . . "³

To return to the fourth criteria for effective

¹ "'Walking Around' Freshman Composition with Ross Winterowd," Shoptalk, 5, No. 2 (1982), 2.

² Cassill, p. xiv.

³ Powell, p. 97.

heuristics for creative writing discussed in the Introduction (p. 19), an open atmosphere, "a safe atmosphere where creativity is encouraged and rewarded," is vital in the creative writing classroom.¹ Only in an open, safe environment can students learn to turn off their Internal Editors and use heuristics uncritically and productively.

Deutler and Machler (1964) tested originality in undergraduate students. They indeed found that such social and personal determinants as a climate of indulgence, safety, friendliness, cooperation, permissiveness, and so on, increased the originality.²

However, this is not to say that teachers need not provide structure, direction, and the pressure of assignments and deadlines. "Experiments also show that moderate stress is necessary for creativity. Too little stress fails to focus the problem; too much stress generates rigidity rather than flexibility and inventiveness."³

What is wanted is a spirit of openness that allows student writers to play with language and ideas. C. J. Ducasse defines play as activity "performed for its

¹ Davis, p. 119.

² Arieti, pp. 8-9.

³ Rabil, p. 9.

own sake," concerned with process rather than product.¹ The writer's play with heuristics Peter Elbow calls "cartwheels of the mind."² A reciprocity exists between the atmosphere of the classroom and the quality of inventive play experienced by students. Just as openness is an invitation to invention, Jim W. Corder says,

Invention is an invitation to openness. It asks of you that you open yourself to the ways other people think, to the knowledge that already exists, to the intricacies and whims of your own being. It asks of you that you, therefore, be tentative a while Invention invites you to be open to a creation filled with copious wonders, trivialities, sorrows, and amazements.³

An atmosphere of playful openness in the classroom is not only supportive of pre-writing invention but of all the other activities relating to learning to write imaginatively. And as beneficial as discovery techniques may be, heuristics approaches to teaching creative writing are intended to supplement other classroom activities, not to supplant them. Heuristics

¹ C. J. Ducasse, "Creative Art, Work, and Play," in Creativity in the Arts, Tomas, p. 71.

² Elbow, Writing With Power, p. 81.

³ Jim W. Corder, "What I Learned at School," in The Writing Teacher's Sourcebook, Tate and Corbett, pp. 168-69.

are not an end in themselves but the first in a series of means to a creative end. Students will still need to be taught the importance of concrete, specific, sensory language; they will still need to read and discuss poetry and fiction by established writers, study prosody, learn genre forms, techniques, and critical skills, and engage in revision; student pieces will still need to be workshopped in what has become standard operating procedure for creative writing classes. Heuristics are just one of many tools apprentice writers must learn to use. As Phillip Lopate has said, "Pound did not write 'The Cantos' by looking at an ambiguous photograph, nor Rilke [write] 'The Duino Elegies' by starting each line with a color."¹

While heuristic procedures do not produce finished poems, short stories, or novels, they do provide writers with strategies for generating words, ideas, images--the raw material to be developed into finished work. Using a written discovery technique can, for example, help student poets find what Richard Hugo called the "real" subject of their poems. As he explained, "A poem can be said to have two subjects, the initiating or triggering subject, which starts the

¹ Phillip Lopate, Being With Children, quoted in Buff Bradley, Growing From Word Play Into Poetry (Palo Alto, Calif.: Learning Handbooks, 1976), p. 56.

poem or 'causes' the poem to be written, and the real or generated subject, which the poem comes to say or mean, and which is generated or discovered in the poem during the writing."¹ The real subject may be generated in the process of examining the triggering subject with a heuristic.

However students may use invention procedures, their use increases the students' chances of becoming better writers. According to Linda Flower,

One of the chief differences between good and poor writers . . . is the repertory of strategies or heuristics on which to draw. Good writers not only have a large repertory of powerful strategies, but they have sufficient awareness of their own process to draw on these alternative techniques as they need them. They guide their own creative process, in other words.²

For that reason, students need to be made aware of the creative and writing processes and a variety of discovery methods. Studies conducted by Ross Winterowd at the University of California indicate that, given a number of alternatives, students "intuitively . . . sought the [heuristic] help they needed, compensating for their tendency to think a certain way," thus making

¹ Richard Hugo, The Triggering Town: Lectures and Essays on Poetry and Writing (New York: W. W. Norton, 1979), p. 4.

² Flower, Problem-Solving Strategies, p. 45.

up for any deficiency in their innate capacities for invention. Winterowd counsels teachers, "If the problem-solving technique is too complicated, then it becomes a problem instead."¹ So procedures that are simple, or can be presented simply, should be introduced early in the course and reinforced throughout the term, although research has shown that even "short term training can make a difference."²

But as Linda Flower and John R. Hayes have found, "It is one thing to teach students a new formula, another to actually change behavior."

. . . a basic fact about teaching heuristics is that people must experience a new thinking technique to learn it. . . . Students will not blithely relinquish their habitual composing techniques, no matter how inefficient, at the sight of a new idea.³

Among the barriers to changing behavior so that heuristics will become a part of their writing processes are student attitudes, especially the previously mentioned erroneous notions about inspiration, as well as

¹ "'Walking Around,'" pp. 4, 2.

² Thomas Lee Hilgers, "Training College Composition Students in the Use of Freewriting and Problem-Solving Heuristics for Rhetorical Invention," Research in the Teaching of English, 14 (1980), 305.

³ Linda S. Flower and John R. Hayes, "Problem-Solving Strategies and the Writing Process," College English, 39 (1977), 461.

as misconceptions about how the poet, or any creative writer, actually works. Many beginning students have trouble accepting systematic approaches because they think, for instance, that poetry is written with the emotions.

It is almost as though they don't really trust the sensual world. Beginning writers who would not hesitate to tell their most mawkish thought, cannot bring themselves to describe the lost lover, or say what happened because they are using writing to avoid emotions rather than confront them. They try to control the situation rather than exploring it.¹

However, heuristics do not deny genuine feelings. The writer can begin the invention process with any of the written procedures presented in this study, examining an emotion in concrete, specific language just as well as a person, an object, or an event. Working through the heuristic can, in fact, help to give the writer the necessary aesthetic distance to "walk around" the subject and to deal objectively, and more effectively, with the feelings involved in an emotionally charged experience.

As to inspiration, students must be shown that, as Abraham H. Maslow has said,

¹ Michael Berryhill, "Teaching Writing," AWP Newsletter, Nov. 1982, p. 1.

Inspirations are a dime a dozen. The difference between the inspiration and the final product . . . is an awful lot of hard work, an awful lot of discipline, an awful lot of training, and awful lot of finger exercises and practices and rehearsals and throwing away first drafts and so on.¹

Students are inclined to feel that pre-writing activities are something "extra" and, therefore, optional, which costs time and energy and yields little in return. They need to understand that none of the words or ideas generated with a heuristic procedure is ever wasted, even if many or even most do not appear in the completed work. The process is like that of a sculptor who starts with a two-ton block of marble in order to create a finished figure weighing only a ton. The marble chipped away is not wasted but necessary because it carried within it the figure waiting to be released. Students must learn what established writers know, how to be prodigal with words on paper in the early stages of the writing process. As Rilke wrote in his Letters to a Young Poet, being a creative writer means "not reckoning and counting." "To be a writer is to throw away a great deal . . .," says John Hersey. I launch many expendable efforts," says William

¹ Abraham H. Maslow, "The Creative Attitude," in Creativity and the Writing Process, Bertagnolli and Rackham, p. 9.

Stafford. "Anything to generate more material so really splendid choices can be made," says Stuart Friebert. And "timidity is a worse enemy of good writing than excess," says John Haines. Valéry described a poet as one who "reconstructs quasi-mechanisms capable of giving back to him the energy they cost him and more . . ."¹

Student attitudes can be changed. AUTA, Gary Davis' taxonomy for promoting creativity (p. 111-12), is a design for changing attitudes and modifying behavior, and suggests a format for presenting heuristic approaches in the classroom. Any teacher of creative writing is, by definition, both a teacher of writing and a teacher of creativity; adapting techniques from creativity training would appear to be logical and beneficial. Davis' first two steps of AUTA are awareness of and understanding of the nature of creativity. This means letting students in on the theoretical basis for heuristics by exposing them to Wallas' model of the creative process and its relationship to the writing process. To do so is sound pedagogy. As Jerome S. Bruner has said, the answer to making education "count in their thinking for the rest of their lives . . .

¹ Rilke, p. 139; Murray, A Writer Teaches, p. 238; Stafford, p. 77; Turner, Poets Teaching, pp. 27, 106; Valéry, Art of Poetry, p. 174.

lies in giving students an understanding of the fundamental structure of whatever subjects we choose to teach."¹ Linda Flower concurs: "It is only when people know the principle or rationale behind a given method that they can transfer it to a new situation."² "Unless we can somehow introduce students to the dynamics of creation," Gordon Rohman says, "we too often simply discourage their hopes of ever writing well at all."³ Students need to realize, as has been said before, that they have conscious control over much of the creative process and that they do not have to wait powerlessly for "the magic flow of ideas," if they understand that what is called inspiration "is always dependent on the mental preparation that went before."⁴

Also, creative writing students need to be made aware of the part ritual plays in writing so they can form their own patterns of behavior which cooperate with the creative process, instead of fighting against it. "The problem of creative writing is essentially

¹ Jerome S. Bruner, The Process of Education (New York: Vantage, 1960), p. 11.

² Linda [S.] Flower, Instructor's Manual to Accompany "Problem-Solving Strategies for Writing" (New York: Harcourt Brace Jovanovich, 1981), p. 5.

³ Rohman, p. 107.

⁴ Flower and Hayes, p. 451.

one of concentration," according to Stephen Spender, "and the supposed eccentricities of poets are usually due to mechanical habits and rituals developed in order to concentrate."¹ Thomas M. Rivers contends, "It is important for students to deal ritually with the solitude of composition. Ritual itself can be seen as a composing process--not of words but of mind and body."² Writing is a solitary business, and students have to see the need for a quiet place and adequate time in which to do it, a hard lesson for busy, gregarious college students to learn. Creativity, writes Rollo May,

requires the capacity for the constructive use of solitude. It requires that we be able to retire from a world that is "too much with us," that we be able to be quiet, that we let solitude work for us and in us. It is characteristic of our time that many people are afraid of solitude: to be alone is a sign one is a social failure, for no one would be alone if he or she could help it. It often occurs to me that people living in our modern, hectic civilization, amid the constant din of radio and TV, subjecting ourselves to every kind of stimulation . . . find it exceedingly difficult to let insights from the unconscious depths break through.³

¹ Spender, p. 35.

² Thomas M. Rivers, "A Catalogue of Invention Components and Applications," College English, 44 (1982), 525.

³ May, p. 72.

In addition to constructive use of solitude, students must include, as part of their rituals, periods of time between the stages of the writing process for incubation to take place because research has shown that frequently "insight comes at a moment of transition between work and relaxation. It comes at a break in periods of voluntary effort."¹ And finally, in discussing the creative and writing processes with students, the recursive nature of both should be made clear. Neither is as cleancut and linear as they appear in the models, and for the creative writer with a prepared mind and an awareness of the processes, invention techniques may be useful at any time, even during the articulation or post-writing (evaluation/editing) stages. Once internalized, heuristics will come into play whenever they are needed.

Appendix R shows a handout used in this study to explain the creative and writing processes to student writers in order to help them gain greater control of their own creating activities. For students just learning to use heuristics, emphasis was placed on the need for keeping the pre-writing procedures distinct from those of the articulation stage, first, so that students might take full advantage of the benefits of

¹ May, p. 66.

incubation and, second, so that their expectations about the raw material generated with written heuristics would be realistic. Invention procedures do not produce first drafts, and students must understand that what they have generated is raw material meant only to feed their imaginations during incubation, before they begin writing their first and subsequent drafts.

Davis's third step in AUTA, the acquisition of techniques of creative production, involves the introduction to students of those heuristics the teacher has selected as suitable for the class. Linda Flower and John Hayes caution, "To make a new heuristic an available option it must be presented as a classroom experience which ensures that the writer actually learns how to use and apply a new technique."¹ Therefore, handouts, exercises, and heuristic-based assignments need to accompany any presentation. Appendixes H and Q are examples of such handouts used in this study; appendixes S, W, and X are sample heuristic-based writing assignments. As previously mentioned, the concept of heuristics should be introduced early in the creative writing course and continually reinforced; however, only one invention procedure should

¹ Flower and Hayes, p. 461.

be taught at a time, after the initial theoretical foundation about creativity has been laid. Discovery techniques may be sequenced throughout the course and paced to meet students' needs. If students come to understand their own creative and writing processes, learn heuristic procedures, and use them, Davis' fourth step in AUTA will follow, actualization of their creative potential.

The first heuristic activity to be introduced, and one already included in many writing courses, is journal-keeping. It can, in fact, precede presentation of the theoretical material on creativity and be listed on the class syllabus at the first meeting as a requirement for the course. The sooner students begin forming the habit of writing daily in their journals, if only for ten or fifteen minutes at first, the better. Journal-keeping may be the best place to begin to instill in students the concept of what Henry James called "splendid waste," the need to be a spendthrift with words.¹ As an example, Stephen Spender, in reviewing his journal, found "About a hundred pages . . . covered with writing, and from this have emerged six poems."²

¹ Henry James, "Preface to The Spoils of Poynton," in The Creative Process, Ghiselin, p. 152.

² Spender, p. 38.

Most textbooks which include directions concerning journal-keeping emphasize the necessity for entries to be substantive enough for another reader--usually the teacher--to gather their meaning, rather than being cryptic or intimately personal. However, telling students their journals may be read by someone else would seem to be giving their Internal Editors just another excuse for working overtime. Creative writers' journals are appropriate and private places for them to collect and explore anything of current interest in any way the writers see fit. Hallie and Whit Burnett, in their Fiction Writer's Handbook, say the journal, "being private, permits us to draw no morals, obey no rules, censure no extravagances. We write for ourselves only and need show no one what we have written."¹ If students are given some guidelines and made to understand to what end and for whose benefit the journal is being kept, no one else--least of all the teacher--need read their entries. Donald Stewart tells students (and, indirectly, teachers), "The work you do in your journal should not be graded . . . The anticipation of grades makes cautious people."²

¹ Hallie Burnett and Whit Burnett, Fiction Writer's Handbook (New York: Barnes and Noble, 1975), p. 86.

² Donald C. Stewart, The Authentic Voice: A Pre-Writing Approach to Student Writing (Dubuque, Ia.: William C. Brown, 1972), p. 80.

A number of journal-keeping guidelines appear in Chapter II (pp. 107-09). To these Stewart adds some practical, ritualistic pointers for the beginner:

First choose a comfortable book. . . . It should be something you feel comfortable writing in, just as your clothes should be something you feel comfortable wearing. . . . Choose a tool you want to write with [such as a colored pen or pencil], not what you have been required to write with.

He cautions journal-keepers, "A whole string of entries done on the same day reads like a whole string of entries done on the same day," and writing just before bed is not always a good idea because "tired minds produce tired writing."¹ Also, when the writer is tired, it is easy to find excuses for not writing at all.

Close on the heels of journal-keeping, students should be introduced to free writing. The two fit well together because the latter is a very natural way to do the former. With no other eyes to pry and no grades at stake, students have a better chance of learning to bypass their Internal Editors by practicing sustained free writing in their journals. In addition to its ability to generate material, exercise in deferring judgment is free writing's greatest contribution to the creative writer's education. The most

¹ Stewart, pp. 78, 80, 81, 82.

versatile of all written heuristic procedures, free writing--like its abbreviated cousin, list-making--is comparatively easy to teach and to learn. And research has shown that "training in freewriting results in an improved written product."¹ Creative writers can use free writing not only at the pre-writing stage but, free writing with focus, to produce first drafts. Robert Crichton, for example, free wrote the first draft of his first novel in the "form and style of a Dick and Jane first reader," of which he says, "All kinds of things were missing but now they were missing from something. . . . I had the bones of a book."²

Measured against Janice Lauer's criteria for effective heuristics (p. 18-19), free writing is transcendent and flexible but is not truly generative by her definition, because it does not systematically "engage the writer in a range of operations . . . analyzing, classifying, defining, rearranging, and dividing." However, Thomas Lee Hilgers says, "Although the comprehensiveness of the freewriting heuristic can be questioned, its simplicity and flexibility make it

¹ Hilgers, p. 304.

² Robert Crichton, "Across the River and into the Prose," in Creativity and the Writing Process, Bertagnolli and Rackham, pp. 158-59.

appealing."¹ Too, any generative deficiency can be compensated for by using free writing as the mode of transcription for more structured discovery procedures like Burke's pentad and Young, Becker, and Pike's tagmemic invention matrix. By the same token, free writing can serve to make such rational, systematic heuristics more "irrational" and the writer's answers to their questions more imaginative.

Once the basic heuristics of journal-keeping and free writing have been put to use by students, the creative writing instructor can present other discovery techniques. For teaching invention procedures, Linda Flower suggests a "sandwich" method of combining the presentation of the principles underlying the heuristic and practical experience in its use. First, she says, present the discovery device and a simple theoretical background; second, follow up with one or more exercises involving hands-on activities; and, finally, reinforce students' understanding by summing up orally what they have learned to do.²

Burke's pentad would seem a logical next step after journal-keeping and free writing since its questions are a relatively straightforward way to direct

¹ Hilgers, p. 294.

² Flower, Instructor's Manual, p. 15.

and focus free writing to produce descriptive and narrative raw material for poems and stories. Appendix Q is the handout used in this study to accompany the presentation of the pentad. Following its initial theoretical introduction, one method for teaching the pentad is to divide students into groups of two or three. Each group is assigned a single poem either from an anthology text, if the class is using one, or from handout sheets, and is asked to find in the work the answers to the pentad questions. After a specified time, groups report their findings to the class for discussion. This is, of course, returning the pentad to the original use for which Burke intended it, and it must be made clear to students that the exercise is only to give them experience in identifying its five elements. This is then followed by a reinforcing exercise in the generative nature of the heuristic, in which students are given sentences to imaginatively expand into short paragraphs, adding details of act, actor(s), scene, means, and purpose, whichever elements are missing in the originals. Both the raw material generated with the pentad and the completed paragraphs are shared with the class for discussion after the exercise has been completed. Exercises of this kind appear in Clement Stacey's Write: Finding Things to Say and Saying Them; however,

classroom teachers may easily devise their own. Finally, a writing assignment based on the pentad provides one of the five elements and asks that students use the discovery device imaginatively to supply the rest in detail before doing a first draft for the poem or story based on the raw material generated.

To move from the simpler to the more complex, the tagmemic invention procedure might be introduced later in the course. Appendix H is a handout used in this study in connection with the initial presentation of the heuristic. In order that students better understand the kind of raw material the matrix questions can produce, a handout was distributed, showing a facsimile of the notes that were generated by a writer who had used the tagmemic discovery device to get started writing, along with the resulting poem (Appendix T). A discussion of the handout traced the process used and the ideas and images as they developed through the answers in the notes to their final appearance, after several drafts, in the poem.

In-class exercises should also be used to reinforce the tagmemic discovery device presentation. For example, students in groups of four or five may be assigned various subjects--an apple, a snowy day, tap dancing--and each group, during a designated time period, jointly answers as quickly and as fully as possible

the matrix questions, with one member acting as recorder. This is, in fact, brainstorming, and students should be told that all judgment is to be deferred--there are no wrong or dumb answers--and hitchhiking on others' answers is encouraged. Linda Flower recommends that, when students are first using brainstorming, the teacher "walk around to the groups and encourage more probing performance by drawing out the implications of someone's ideas . . .," by being a short-time participant in each group.¹ The groups later report to the class as a whole what they have generated. In a follow-up exercise, students can switch to individual free writing on assigned subjects in response to the matrix questions, then share their material with the class. This will help students transfer the skills learned in the group to their own writing processes. Finally, a heuristic-based writing assignment would provide students with a broad subject and ask them to free write their answers to the tagmemic matrix questions before doing the first draft of their work.

Because of its analytical nature and its scientific language, tagmemic invention may sound anti-poetic to beginning creative writers, so care must be

¹ Flower, Instructor's Manual, p. 30.

taken to lighten the tone of the presentation and to couch the instructions for its use in a non-prescriptive manner so that students feel their imaginations will be liberated rather than bound up by the heuristic. Peter Elbow's directions for use of his pump-priming questions discussed in Chapter I (pp. 30-31) provide a good model for the level of tone and diction needed. Despite the sophistication of the tagmemic discovery device, some of the beginning writers who tried it for this study pronounced it helpful. Others found it too complicated and time-consuming. By contrast, a graduate poetry student who tried the procedure was enthusiastic in his praise for its capacity to aid invention. Review of more than thirty pages of his notes showed that he had internalized the procedure and had repeated it in part with each draft (Appendix U). This would seem to indicate that tagmemic invention might be most beneficial if taught to intermediate or advanced creative writing students rather than beginners.

Using the "sandwich" method of theory, exercise, and summary, followed by a heuristic-based writing assignment, any of the discovery techniques mentioned in this study may be presented throughout the creative writing course as students require and time permits. So that beginning writers have in their repertoires

some procedures for finding a subject and not remain dependent upon the instructor to provide one, the concepts of letting a subject find the writer through free writing (pp. 94-95) and that of concrete heuristics need to be explained as well. Students may better understand how something outside themselves can be made to stimulate ideas for creative writing by considering the process used by Italo Calvino in writing The Castle of Crossed Destinies.

What Calvino has done is to create a novel from a series of tales told by a diverse group brought together by outside circumstances, a literary device used by many in the past, notably Boccaccio and Chaucer. However, none of Calvino's storytellers is able to speak; they tell their tales through the arrangement of tarot cards on the table in front of them, supplemented by limited use of mime--facial expressions and hand gestures. The narrator has to use his imagination as each card is laid out in relationship to the others as to what adventures each storyteller has undergone. The book is, in fact, a novel about heuristics. In a note at the end, Calvino tells about using tarot cards as a discovery device to generate the novel. "I began," he says, "by trying to line up tarots at random, to see if I could read a story in them. . . . I realized that tarots were a machine for

constructing stories. . . . [because they are] the portrayal of the collective unconscious."¹

Using manipulable objects, such as tarot, as idea generators is as ancient a heuristic as divination and has recently been updated for use in psychotherapy as a tool of self-discovery. "The tarot is a means of linking our conscious with our subconscious"; however, one need not be trained in the esoteric mysteries of tarot, says psychologist Jan Woudhuysen. "The symbol is universal, but its meaning is personal."² Modern playing cards retain many of the symbolic images derived from their ancestral tarot. The shuffling and dealing out of a pack of tarot or an ordinary deck of cards might be a useful heuristic for stimulating student writers if they are prepared and encouraged to be open to seeing possibilities for character and action in the individual cards and their relationships, to see them dramatistically, perhaps, using Burke's pentad in combination with the concrete objects.

Newspapers and magazines also have heuristic value. Joyce Carol Oates says, "My 'ideas' come to me

¹ Italo Calvino, The Castle of Crossed Destinies, trans. William Weaver (New York: Harcourt Brace Jovanovich, 1977), pp. 126, 128.

² Jan Woudhuysen, Tarot Therapy: A Guide to the Subconscious (Boston: Houghton Mifflin, 1979), pp. 49, 7.

partly out of the world (I scan the newspapers often) and partly out of my own life."¹ Denise Levertov tells of reading descriptions, some illustrated, of country houses for sale in the London Times and imagining their inhabitants, pretending to be one of them, creating setting and characters from her imagination.² S. J. Perelman frequently got his ideas from advertisements and newspaper stories, sometimes sent to him by "kindly readers"; his humorous short fictions often begin with the literal promise of such found material and carry it to its absurd limits.³ Newspapers and magazines can provide subject matter and pictures, following Oates, Levertov, and Perlman's examples, for in-class exercises in finding a subject with concrete heuristics as can books of photographs and art reproductions. Many established writers admit that their writing begins with a strong visual image and little else.

¹ Joyce Carol Oates, "The Making of Fiction," in Creativity and the Writing Process, ed. Bertagnolli and Rackham, p. 69.

² Denise Levertov, "Interweavings: Reflections on the Role of Dream in the Making of Poems," in The Pushcart Prize, VI: Best of the Small Presses, ed. Bill Henderson (Wainscott, NY: Pushcart Press: 1981), p. 259.

³ Plimpton, 2nd series, p. 255.

When Gabriel Garcia Marquez was asked what the starting point of his novels was, he answered, "A completely visual image . . . the starting point of Leaf Storm is an old man taking his grandson to a funeral, in No One Writes to the Colonel, it's an old man waiting, and in One Hundred Years [of Solitude], an old man taking his grandson to the fair to find out what ice is."¹

Appendix S is an example of a concrete heuristic-based writing assignment such as could be used to follow up a presentation on visual discovery devices.

As Jacqueline Berke suggested (p. 67), a dictionary or other reference book can serve, too, as a concrete heuristic to help beginning writers find a subject at the pre-writing stage. Books of poetry may act as a stimulus for fiction writers, as Ray Bradbury suggested, and books of fiction may do the same for poets. Reading itself is a heuristic for some writers. R. V. Cassill confesses,

In my own case I have found for some years that it helps me get started . . . if I pull out a book and read a little bit--two or three paragraphs or a couple of stanzas of poetry. It doesn't matter, apparently, whether what I read has any overt connection with the thing I'm working on. All that matters is that what I read should be good enough to catch my verbal imagination and drag it until it begins to move under its own power. . . . it may be at least an

¹ Murray, "Write Before Writing," p. 176.

imitation of the creative drive my intuition finds in what I read.¹

Because reading can act like a tow truck to the stalled imagination, students should be encouraged to read as well as to write. Most creative writing textbooks currently in use at the college level include some examples of work by recognized writers in the genre under consideration. Frequently, however, such works are focused on only as products to be emulated, which can be daunting for the beginner. Students need help in understanding the processes by which such model products were arrived at and in recognizing the heuristic value to their own work of reading them.

Thus far, the emphasis has been on the teacher's responsibilities in presenting heuristic approaches to creative writing in the classroom. If any instructor were to attempt to present all of the discovery procedures available to his or her class, no time would be left for teaching anything else. Some selectivity must, of necessity, be exercised. Even if only journal-keeping, free writing, and one structured heuristic like the pentad or tagmemic invention were incorporated into the course, students would no longer be without the means to feed themselves at the

¹ Cassill, pp. 39-40.

pre-writing stage. However, even with this limited menu, teachers need help in reinforcing their classroom presentations and exercises. Traditionally, they have gotten such assistance from textbooks. Creative writing texts which include heuristics will be discussed momentarily, but first some mention should be made of a relatively new but quickly growing supplement to classroom activities, CAI, computer-assisted instruction.

Computers and creativity would appear to be polar opposites; however, imaginative programmers have developed software which can be beneficial to the creative writer. A number of poets and fiction writers already consider the personal computer (PC) just another tool of their trade. In fact, PC's with word processing capability have begun to replace electric typewriters for a growing number of writers. The Missouri Review, a prestigious literary journal, has recently surveyed writers of poetry and fiction for the ways that they use computers in their composing processes and is preparing to devote a forthcoming issue to the subject.

In addition to word processing, which allows the writer to type into a computer terminal and to manipulate the words as they appear on a display screen,

like that of a small television set, before the proofed, error-free copy is printed out, two other types of programs are currently available for creative writing students. The first is similar to the form-related exercises in making poetry discussed in Chapter I (pp. 64-65). Stephen Marcus at the University of California at Santa Barbara has developed Compupoem, a program which was recently voted one of the top 100 in "a survey of teachers' favorite educational software."¹ Compupoem "allows students to compose original poems on the computer," by supplying requested parts of speech. It also allows for considerable revising to move the piece beyond the exercise stage and will print out a hard copy of the work when the student has completed the revision.² Software of this kind is bound to be available for a variety of forms in the near future. Or creative writing instructors with training in programming will devise their own.

Perhaps the most exciting heuristic software created thus far is that by Hugh L. Burns. Although he developed his three CAI modules for "stimulating

¹ "Computers and Poetry," The National Writing Project Network Newsletter, 5, No. 1 (1983), 17.

² Joseph Lawlor, ed., Computers in Composition Instruction (Los Alamitos, Calif.: SWRL Research and Development, 1982), pp. 62-63.

rhetorical invention within the freshman composition setting," they are clearly applicable to creative writing as well. Taking advantage of the simulation capabilities of the computer, Burns' programs are "dialogue models of question-answer systems . . . based on Aristotle's topics, Kenneth Burke's pentad, and the Young-Becker-Pike tagmemic matrix." The generative power of CAI exceeds anything a student might approach alone; for example, with the pentad program, over 200 million "avenues" of inquiry are possible. Burns' programs are non-subject specific, user-friendly dialogues; Appendix V is an excerpt from a sample student run of one of the heuristic programs. In a study conducted at the U. S. Air Force Academy, Burns and his colleague, George H. Culp, found that students using systematic computer inquiry, whether the topoi, pentad, or tagmemic program,

differed significantly from a control group with respect to the number of ideas generated, the insightfulness and factuality of the ideas, the surface-cued intellectual processing evident in the sample writings, as well as the overall quality of the inquiry.¹

Hugh Burns calls the computer "the analytical

¹ Hugh L. Burns and George H. Culp, "Stimulating Invention in English Composition Through Computer-Assisted Instruction," Educational Technology, 20, No. 8 (1980), 5-7, 9.

engine that has crept into our humanistic garden" and anticipates that writing classes in the coming years will rely heavily on "terminals somewhere, maybe everywhere . . . as a writer's tool, a tool to help writers to discover, arrange, and style ideas." He says that "the prewriter is wrapped up in the undiscovered self, and the responsibility for solving the invention puzzle is ultimately each student's."¹ However, the computer can help by engaging the student in a heuristic dialogue more extensive than the teacher might have time for or the student might employ alone with a conventional written discovery device.

Although computer-assisted invention is still in the stripling stage, Hugh Burns' software already exists and has been tested; its use can aid the creative writing student in the following ways:

1. A program can ask the question[s].
2. A program can clarify the question[s].
3. Good software can define the dimensions of the question[s].
4. The software can call attention to the [piece of writing's] purpose.
5. It can purposefully distract (for incubation's sake).
6. It can rephrase the question[s].
7. It can create random metaphors.

¹ Hugh [L.] Burns, "Computer-Assisted Prewriting Activities: Harmonics for Invention," in Computers in Composition Instruction, ed. Joseph Lawlor (Los Alamitos, Calif.: SWRL Research and Development, 1982), pp. 19, 20.

8. Invention programs can offer research suggestions [for information the writer needs but does not have].
9. A program can print a copy of the dialogue so a student can later evaluate the answers.¹

Cognizant of Wallas' model of the creative process, Burns says he has built into his programs opportunities for incubation. Also, he has found that "the best answers to the [heuristic's] questions did not occur to [the students] while they were on-line. They were stimulated to think about their subjects from new points of view," incubation coming later after a break from conscious consideration. Burns concludes, "The computer can be used creatively and suggestively in the invention process . . . And what we'll be able to do with word processors . . . will soon overwhelm us."²

Meanwhile, as the Gutenberg Age moves into the Age of Apple II, creative writing teachers must still look to printed handouts and textbooks for assistance in reinforcing classroom discussion and exercises in discovery techniques. Several types of texts are currently available for creative writing classes at the college level. They incorporate four major approaches:

¹ Burns, pp. 22-23.

² Burns, p. 28.

model-, technique-, writer-, and process-oriented. Anthologies like Friebert and Young's Anthology of Contemporary American Poetry and Mary Rohrberger's Story to Anti-Story are totally model-oriented and place pedagogical emphasis on the creative writing product.¹ While this may be adequate for literature courses, it does not fully serve the needs of creative writing students. As Gordon Rohman has said, teachers are mistaken to think that

if we train students how to recognize an example of good [writing], we have given them a basis on which to build their own writing abilities. All we have done, in fact, is to give them standards to judge the goodness and badness of their finished effort [only useful at the post-writing stage]. . . . A knowledge of standards is not enough to produce good writing.²

X. J. Kennedy's Introduction to Poetry and Koch and Farrell's Sleeping on the Wing combine model-orientation with other approaches, as do many other texts. Examples of textbooks which focus on technique almost exclusively are Rust Hill's Writing in General and Techniques of Fiction Writing by Leon Surmelian.³

¹ Stuart Friebert and David Young, eds., The Longman Anthology of Contemporary American Poetry 1950-1980 (New York: Longman, 1983); Mary Rohrberger, ed., Story to Anti-Story (Boston: Houghton Mifflin, 1979).

² Rohman, p. 106.

³ X. J. Kennedy, An Introduction to Poetry, 5th ed.

Writer-oriented textbooks may be further divided into those which are devoted to the psychological education of students and which try to teach them how to think, feel, and behave like writers, and those in which established writers share reflections on their own creative processes. Examples of the former are Dorothea Brande's Becoming a Writer and Sidney Cox's Indirections. A shelf full of the latter have been published in recent years, among them Fifty Contemporary Poets by Alberta Turner, Friebert and Young's Field Guide to Contemporary Poetry and Poetics, and The Poet's Work by Reginald Gibbons.¹ Like the purely model-oriented, writer-oriented texts do not provide students with all the guidance they require to learn to write well themselves.

(Boston: Little, Brown, 1982); Kenneth Koch and Kate Farrell, Sleeping on the Wing: An Anthology of Modern Poetry with Essays on Reading and Writing (New York: Vintage, 1981); Rust Hills, Writing in General and the Short Story in Particular: An Informal Textbook (New York: Bantam, 1977); Leon Surmelian, Techniques of Fiction Writing: Measure and Madness (New York: Doubleday, 1969).

¹ Sidney Cox, Indirections for Those Who Want to Write (1962; rpt. Boston: David R. Godine, 1981); Alberta T. Turner, ed., Fifty Contemporary Poets: The Creative Process (New York: Longman, 1977); Stuart Friebert and David Young, eds., A Field Guide to Contemporary Poetry and Poetics (New York: Longman, 1980); Reginald Gibbons, ed., The Poet's Work: 29 Masters of 20th Century Poetry on the Origins and Practice of Their Art (Boston: Houghton Mifflin, 1979).

The most helpful creative writing textbooks, particularly for the beginner, are those which integrate a balanced mix of all four approaches, including some discussion of process. A few such texts currently in print are Writing Poems by Robert Wallace, Writing Fiction by Janet Burroway, R. V. Cassill's book of the same name, The Intimate Art of Poetry by Ottone Riccio, and Alberta Turner's To Make a Poem.¹ However, none of these texts place emphasis on pre-writing heuristic activities. The teacher seeking reinforcement for classroom instruction in discovery procedures will find only three techniques discussed at any length in current creative writing texts: listmaking, journal-keeping, and free writing. R. V. Cassill includes all three. Wallace recommends keeping a notebook and using "random writing," as he calls it, a phrase borrowed from William Stafford; so does Turner. Burroway and Kennedy mention only journal-keeping. No creative writing textbook is currently available that includes background information about the creative and writing processes and instruction in the wide variety of

¹ Robert Wallace, Writing Poems (Boston: Little, Brown, 1982); Janet Burroway, Writing Fiction: A Guide to Narrative Craft (Boston: Little, Brown, 1982); Ottone M. Riccio, The Intimate Art of Writing Poetry (Englewood Cliffs, N.J.: Prentice-Hall, 1980); Alberta [T.] Turner, To Make a Poem (New York: Longman, 1982).

applicable heuristic procedures described in this study. However, until such time as one is published, instructors can consult sources cited and develop handouts of their own. Adapting theoretical material on heuristics to classroom procedures and a useful creative writing textbook would appear to be the next step for those interested in the problem of helping students generate ideas for their poems and stories.

Conclusion

While it is true, as Theodor Reik said, "Trains of thought run through dark tunnels,"¹ sufficient research has been done in cognitive psychology and creative behavior to allow some light to have penetrated either end of those tunnels. Wallas' model of the creative process demonstrates that the creative writer can consciously control the preparation before the train passes into the darkness of the incubation so that when it emerges into the light of consciousness for verification, its cars are not empty. The frustrating wait for inspiration is no longer necessary for writers experienced in the use of heuristic

¹ Theodor Reik, Listening with the Third Ear, quoted in Young, Becker and Pike, p. 71.

procedures, which can stimulate the imagination by generating raw material for poems and stories.

The ideal heuristic for poets and fiction writers would be simple to learn and use, memorable, portable, and highly generative for every writer in all creative writing situations; unfortunately, no single procedure fulfills all those requirements. More research needs to be done into the special heuristic needs of creative writing students, into the differing needs of writers of poetry and writers of prose fiction, into ways of best adapting those techniques presently being used in other fields, into developing new discovery procedures for imaginative writing, and into effective methods for teaching heuristic approaches. However, until this has been done and the findings made available, any heuristic training that instructors can give students will be beneficial if it starts their creative processes going. And, as Linda Flower and John Hayes have found,

perhaps the most remarkable result of using heuristics is that early in the course students develop a conviction that writing is an important skill they can in fact master. Obviously, such a conviction is not always one hundred per cent warranted, but in replacing the mystique of talent and fear of failing with the possibility of an obtainable goal, [heuristic training] helps

writers draw more fully on the abilities they do have.¹

Heuristics--whether concrete or conceptual, form- or content-related, written or oral, simple or complex--are only useful if writers put them to work. "Reading about strategies in a book is of little value," Flower says, "unless writers can use [them] easily and naturally when the crunch comes and they start to write. That is why it is very important to experience these strategies."² The creative writing classroom is where students can gain that experience, of not one but a full range of discovery techniques which, through continued practice, will become intuitive. And as Ross Winterowd, in The Contemporary Writer, tells students, "Even though we will be taking a rather close look at a variety of heuristics that are 'ready made,' it is perfectly feasible, and often necessary, for you to devise your own."³ But that is only possible if students understand the nature and function of invention procedures and have been exposed to and experienced a number of them. Then students will be able to combine those heuristic activities

¹ Flower and Hayes, p. 461.

² Flower, Instructor's Manual, p. 29.

³ Winterowd, Contemporary Writer, p. 90.

which they have found stimulate their thinking, and create their own ways of getting started, and completing, their creative writing tasks. Truman Capote advises, "The writer ought to have all his colors, all his abilities on the same palette for mingling (and, in suitable instances, simultaneous application)."¹ Teachers can introduce students to the concepts of the creative and writing processes and a full spectrum of discovery techniques, provide opportunities for experiencing them, and keep students using them in their writing with heuristic-based assignments until students have made them their own, to mingle and apply as they need them, long after the creative writing class is over.

¹ Truman Capote, Music for Chameleons (New York: Random House, 1980), p. xvii.

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APPENDIXES

APPENDIX A

Aristotle's Twenty-Eight Topics from Which Enthymemes Might Be Drawn¹

1. Opposites: examining "whether one opposite is predictable of the other," that is, if two things are in a given relationship to each other, whether their opposites are in the same relationship.
2. Inflections: utilizing shifts in word meaning, i.e., "the just is not entirely good, for in that case good would be predictable of anything that happens justly; but to be justly put to death is not desirable."
3. Relative Terms: using reciprocal relationships, i.e., "If selling is not disgraceful for you, neither is buying disgraceful for us."
4. More and Less: "For instance, if not even the gods know anything, hardly can man."
5. Time: relating changes of attitude to a chronology of events.
6. Turning Against One's Opponent His Own Statements.
7. Definition: i.e., "he who thinks [anything] to be the work of the gods necessarily thinks that gods exist."
8. Ambiguous Terms: using "different significations of a word" to the best advantage.
9. Division: i.e., "There are always three motives for wrongdoing; two are excluded from consideration as impossible; as for the third, not even the accusers assert it."
10. Induction: drawing a general conclusion from particular examples.

¹ Aristotle, The Art of Rhetoric, trans. John Henry Freese (New York: G. P. Putnam's Sons, 1926), pp. 297-323.

11. Previous Judgment: resorting to precedent.
12. Enumeration of Parts: pointing out what is true of the parts must be true of the whole as well.
13. Direct Consequences: recognizing "in most human affairs the same thing is accompanied by some bad or good result."
14. Inverted Consequences: i.e., "if . . . you say what is just, men will hate you, if you say what is unjust, the gods will. . . . if you say what is just, the gods will love you, if you say what is unjust, men will."
15. Public Behavior and Private Thought: remembering men "in public chiefly praise what is just and beautiful, and in secret rather wish for what is expedient."
16. Analogy: i.e., "If you consider tall boys men, you must vote that short men are boys."
17. Identity of Antecedents: concluding that identical results proceed from identical causes.
18. Changes of Mind: "the same men do not always choose the same thing before and after [an event], but the contrary."
19. Attributing Causes: "the cause of something which is or has been is something which would generally, or possibly might, be the cause of it."
20. Motives: investigating "the reasons which make men act or not."
21. Incredible Events: "things which are thought to happen but are incredible, because it would never have been thought so, if they had not happened or almost happened."
22. Contradictions: discrediting one's opponent by pointing out conflicts in his data.
23. False Opinion: quashing slander through explanation.
24. Cause and Effect: "If the cause exists, the effect exists . . ."; conversely, nothing can exist without its cause.

25. Choice of Action: "examining whether there was or is another better course than that which is advised, or is being, or has been carried out."
26. Compared Actions: "when something contrary to what has already been done is on the point of being done, . . . examining them together."
27. Opponent's Mistakes: "making use of errors committed."
28. Names: playing on the meaning of a name, i.e., saying of "Draco the legislator that his laws were not those of a man, but of a dragon, so severe were they."

APPENDIX B

Corbett's Twenty-Two Questions
for Finding Something to Say¹

About Physical Objects

1. What are the physical characteristics of the object (shape, dimensions, material, etc.)?
2. What sort of structure does it have?
3. What other object is it similar to?
4. How does it differ from things that resemble it?
5. Who or what produced it?
6. Who uses it? for what?

About Events

1. Exactly what happened? (who? what? when? where? why? how?)
2. What were its causes?
3. What were its consequences?
4. How was the event like or unlike similar events?
5. To what other events was it connected?
6. How might the event have been changed or avoided?

About Abstract Concepts

1. How has the term been defined by others?
2. How do you define the term?
3. What other concepts have been associated with it?
4. In what way has this concept affected the lives of people?
5. How might the concept be changed to work better?

About Propositions

1. What must be established before the reader will believe it?
2. What are the meanings of key words in the proposition?
3. By what kinds of evidence or argument can the proposition be proved or disproved?
4. What counterarguments must be confronted or refuted?
5. What are the practical consequences of the proposition?

¹ Corbett, Little Rhetoric, pp. 42-43.

APPENDIX C

Larson's Questions for Rhetorical Invention¹

- I. "Topics" that Invite Comment
 - A. Writing about Single Items
 - What are its precise physical characteristics (shape, dimensions, composition, etc.)?
 - How does it differ from things that resemble it?
 - What is its "range of variation" (how much can we change it and still identify it as the thing we started with)?
 - Does it call to mind other objects we have observed earlier in our lives? why? in what respect?
 - From what points of view can it be examined?
 - What sort of structure does it have?
 - How do the parts of it work together?
 - How are the parts proportioned in relation to each other?
 - To what structure (class or sequence of items) does it belong?
 - Who or what produced it in this form? Why?
 - Who needs it?
 - Who uses it? for what?
 - What purpose might it serve?
 - How can it be evaluated, for these purposes?
 - B. Writing about Single Completed Events, or Parts of an Ongoing Process
 - Exactly what happened? (Tell the precise sequence: Who? what? when? how? why? Who did what to whom? why? What did what to what? how?)
 - What were the circumstances in which the event occurred? What did they contribute to the happening?
 - How was the event like or unlike similar events?
 - What were its causes?
 - What were its consequences?
 - What does its occurrence imply? What action (if any) is called for?
 - What was affected (indirectly) by it?
 - What, if anything, does it reveal or emphasize about some general condition?

¹ Larson, pp. 152-54.

To what group or class might it be assigned?
 Is it (in general) good or bad? by what standard? How do we arrive at the standard?
 How do we know about it? What is the authority for our information?
 How reliable is the authority? How do we know it to be reliable (or unreliable?)
 How might the event have been changed or avoided?
 To what other events was it connected? how?
 To what kinds of structure (if any) can it be assigned? On what basis?

C. Writing about Abstract Concepts

To what specific items, groups of items, events, or groups of events, does the word or words connect, in your experience or imagination?
 What characteristics must an item or event have before the name of the concept can apply to it?
 How do the referents of that concept differ from the things we name with similar concepts?
 How has the term been used by writers whom you have read? How have they implicitly defined it?
 Does the word have "persuasive" value? Does the use of it in connection with another concept seem to praise or condemn the other concept?

Are you favorably disposed to all things included in the concept? Why or why not?

D. Writing about Collections of Items

What, exactly, do the items have in common?
 If they have features in common, how do they differ?
 How are the items related to each other, if not by common characteristics?
 What is revealed about them by the possibility of grouping them in this way?
 How may the group be divided? What bases for division can be found?
 What correlations, if any, may be found among the various possible sub-groups? Is anything disclosed by the study of these correlations?
 Into what class, if any, can the group as a whole be put?

E. Writing about Groups of Completed Events, Including Processes

What have the events in common?
 If they have features in common, how do they differ?
 How are the events related to each other (if they are not part of a chronological sequence)?

What is revealed by the possibility of grouping them in this way (these ways)?
 What is revealed by the events when taken as a group?
 How can the group be divided? On what bases?
 What possible correlations can be found among the several sub-groups?
 Into what class, if any, can the events taken as a group fit?
 Does the group belong to any other structure than simply a larger group of similar events? (Is it part of a more inclusive chronological sequence? one more piece of evidence that may point toward a conclusion about history? and so on.)
 To what antecedents does the group of events look back? Where can they be found?
 What implications, if any, does the group of events have? Does the group point to a need for some sort of action?

II. "Topics" with "Comments" Already Attached

A. Writing about Propositions

What must be established for the reader before he will believe it?
 Into which sub-propositions, if any, can it be broken down? (What smaller assertions does it contain?)
 What are the meanings of key words in it?
 To what line of reasoning is it apparently a conclusion?
 How can we contrast it with other, similar, propositions? (How can we change it, if at all, and still have roughly the same proposition?)
 To what class (or classes) of propositions does it belong?
 How inclusive (or how limited) is it?
 What is at issue, if one tries to prove the proposition?
 How can it be illustrated?
 How can it be proven (by what kind of evidence)?
 What will or can be said in opposition to it?
 Is it true or false? How do we know? (direct observation, authority, deduction, statistics, other sources?)
 Why might someone disbelieve it?
 What does it assume? (What other propositions does it take for granted?)
 What does it imply? (What follows from it?)
 Does it follow from the proposition that action of some sort must be taken?

What does it reveal (signify, if true)?

If it is a prediction, how probable is it? On what observations of past experience is it based?

If it is a call to action, what are the possibilities that action can be taken? (Is what is called for feasible?) What are the possibilities that the action, if taken, will do what it is supposed to do? (Will the action called for work?)

B. Writing about Questions

Does the question refer to past, present, or future time?

What does the question assume (take for granted)?

In what data might answers be sought?

Why does the question arise?

What, fundamentally, is in doubt? How can it be tested? evaluated?

What propositions might be advanced in answer to it?

Is each proposition true?

If it is true:

What will happen in the future? What will follow from it?

Which of these predictions are possible? probable?

What action should be taken (avoided) in consequence?

APPENDIX D

Berke's Twenty Questions for the Writer¹

1. What does X mean?
2. How can X be described?
3. What are the component parts of X?
4. How is X made or done?
5. How should X be made or done?
6. What is the essential function of X?
7. What are the causes of X?
8. What are the consequences of X?
9. What are the types of X?
10. How does X compare with Y?
11. What is the present status of X?
12. How can X be interpreted?
13. What are the facts about X?
14. How did X happen?
15. What kind of person is X?
16. What is my personal response to X?
17. What is my memory of X?
18. What is the value of X?
19. How can X be summarized?
20. What case can be made for or against X?

¹ Berke, p. 20.

APPENDIX E

Elbow's Questions for Getting
Something On Paper¹

- A. Questions to help you write about someone you have known or worked with.
1. What would ____'s face tell if you knew nothing else?
 2. What would ____'s body tell if you knew nothing else?
 3. What would ____'s posture and gait tell you if you knew nothing else?
 4. What would ____'s manner or style tell if you knew nothing else?
 5. ____'s name is the name of a color. What color?
 6. ____ is an animal. What animal?
 7. ____ is a food. What food?
 8. Who would play ____ in a movie about her?
 9. ____'s brains are not in the head, heart not in the chest, guts not in the belly. Tell where they are.
 10. ____ is two people. Describe them and how they work together or don't work together.
 11. ____ is really a spy. For whom? What assignment?
 12. If you were going to spend a year in close contact with ____, where would you prefer it to be and under what circumstances? What would be the worst place and circumstances?
 13. Imagine that you believe all character and behavior comes from imitating significant "role models" when young. Who and what sorts of people do you suppose ____ imitated?
 14. Imagine you are a kind of Platonist/Pythagorean/Buddhist who believes souls are reincarnated over and over again as they work their way gradually from being a vegetable to being a pure spirit. Where is ____ in this cycle? What previously? What next? (You slip backwards for bad behavior.)
 15. Imagine you are an extreme Freudian who believes that all important behavior grows out of unconscious feelings--usually sexual or aggressive.

¹ Elbow, Writing With Power, pp. 82-93.

Give a quick interpretation of ____'s behavior and functioning.

16. If you were writing the history of the sounds you've heard while being with ____ (excluding words), what would be the three or four most important sounds in that history?
17. Imagine you think ____ is a very good person. Now describe ____.
18. Imagine you think ____ is a very bad person. Now describe ____.
19. What is something that would never happen to ____? Imagine it happening. What would be the outcome?
20. Imagine an important situation when you were with _____. Close your eyes and try to bring the experience back. Now pretend to be ____ and describe the situation.
21. What weather does ____ bring into the room?

B. Questions to help you write about someone you have studied or read about.

1. Describe ____ as an ordinary person.
2. Describe ____ as a unique and special person.
3. Imagine ____ were the opposite sex. Describe the life that ____ would have lived.
4. Describe the life ____ would have lived in a very different era.
5. Make up or guess the most important childhood event in ____'s life.
6. Describe ____'s life if that event hadn't occurred or something entirely different had occurred.
7. Tell a science fiction story with ____ in it.
8. Tell a soap opera plot with ____ in it.
9. What does ____ most need to cry about?
10. Imagine you are very angry and strike _____. How and where do you strike?
11. What is the caress that ____ most needs to get?
12. Give ____ an accurate compliment that ____ probably never hears.
13. Imagine ____'s hair were entirely different from how it is or was. What would it bring out that you hadn't noticed before?
14. What's a secret about ____ that ____ hasn't told anyone?
15. What's something about ____ that even ____ doesn't know?
16. How would ____'s mother or father describe ____?
17. How would ____'s child describe ____?
18. Describe ____ as a good president of the U.S. A bad president. What would be the important

- policies or decisions in both cases?
19. Tell a recurring dream that ____ has.

C. Questions to help you write about someone's life as a whole.

1. Describe ____'s life and character as essentially unchanging. What may look like changes are really ways of staying essentially the same.
2. Describe ____'s life and character as essentially determined by important changes or turning points (even if it looks to most people as though no such changes or turning points occurred).
3. Imagine you believe people are truly free: they somehow choose or cause everything that happens to them. Describe ____'s life and character.
4. Imagine you have the opposite point of view: people are not free, they are determined by events they cannot control. Describe ____'s life and character.
5. Find as many rhythms as you can in ____'s life: events that repeat or recur whether the scale is in moments or years.
6. What events in ____'s life only occurred once?
7. Describe ____ as primarily a product of national, cultural, and ethnic influences.
8. Describe ____ as primarily a product of personal and family influences.
9. Describe ____ as primarily a product of economic and class influences.
10. Describe ____ as essentially the product of conditioning. What behavior was rewarded and what was punished?
11. Describe ____'s character as a solution to past problems.
12. Describe ____'s character as carrying the seeds of future problems.
13. Think of two or three very unlikely professions or occupations for _____. Describe _____ in those professions. (For example, describe Napoleon as a poet.)

D. Questions to help you write a self-evaluation.

1. Who will play you in the movie about this period or enterprise?
2. What was the predominant weather of this whole time? Or what changes occurred in the weather?
3. Think of yourself as having done a wonderful job. What do you notice?

4. Think of yourself as having done a terrible job. What do you notice?
5. Take responsibility for everything that went wrong. You did it all on purpose or because you didn't give a damn or because you were mad. Explain the events.
6. Tell the three most important moments in this period.
7. What did you learn from each of those moments?
8. What qualities in you did this period bring out?
9. What qualities in you remained hidden or unused?
10. Imagine this period as a journey. Where did it take you? Where did it start?
11. Imagine it is only a half journey, you are only halfway there. Where? What is the second half of the journey?
12. Imagine this period as an interruption or detour or setback in some larger journey. What is that larger journey and how does this function as a time-out?
13. If this enterprise was work, describe it as play. Or vice versa.
14. Imagine this enterprise turns out to have very different goals from the ones you expected. Imagine some of these surprising goals.
15. Invent a dream you might have about yourself in this enterprise. Just use what first comes to mind. It doesn't have to make sense.
16. Imagine this whole enterprise was a dream. What is it a dream about? What will wake you up?

E. Questions to help you write about a place.

1. How is your mood affected by being there?
2. Imagine being there for a whole year. How would that make you better? How worse?
3. Imagine you have just seen, in only five minutes, the whole history of this place since the beginning of the world. Briefly tell this history.
4. Imagine your body is the whole world. Where on your body is ____?
5. If someone said "It's a ____ day," what kind of a day would it be?
6. Imagine you have always been blind. Describe your place briefly.
7. Let the place describe you.
8. Your place is an animal. What animal is it?
9. Your place is a person. Who?
10. Name a story, a song, and a movie your place reminds you of.

11. What is the first thing that comes to mind which your place would never remind you of?
12. What other place does your place make you think of?
13. In what weather is your place most itself?
14. Some places have a proper name all to themselves--like "Chicago." Other places only have a general name they must share with similar places--like "bathroom." Give your place the opposite kind of name from the one it has.
15. How does this new name change things? (For example, how would your feelings be different? What things would you notice now? What would you not notice now? Would things happen differently there now?)
16. Find as many of your place's rhythms as you can. (For example, find things that happen there at regular intervals--whether they happen every second, every month, or every thousand years. Or any other sort of rhythm you notice.)
17. Name as many things as you can that only happen there once. Are there any rhythms among any of them?
18. Think of your place as if it were old and near death. Now tell what place it was when it was only a child.
19. Think of your place as if it were a young child or young animal. Now tell what place it will grow up to be.
20. If "____" stands for the regular name of your place, what does the following sentence mean: "If you do that again, I'm going to ____ you"?
21. Imagine your place was the whole universe and you had always lived there. Tell how you and your neighbors explain the beginning of the universe. How do you folks think the universe is going to end?
22. Think of your place as if it is carefully planned in every detail. Now describe it briefly from this point of view.
23. Think of your place as if everything just happened by accident, chance, and luck. Describe it from this point of view.
24. Think of your place as if it is haunted. Tell about it (for example, how it became haunted, what it does to people it doesn't like).
25. Imagine an anti-universe where everything is opposite or backwards from the way we know it. Describe your anti-place in this anti-universe.

- F. Questions to help you write about an object.
1. Think of a particular moment in which this object was meaningful or important to you. Close your eyes and take yourself back into that moment. Bring back the reality of the object and the scene for a few minutes. The time of day. The time of year. The air. The smells. Your feelings.
 2. If you had never seen the object before, what would you notice when you first looked at it?
 3. If you knew it fairly well, what would you notice when you looked at it?
 4. If you knew it better and longer than anyone else--if you knew it closely for a whole lifetime--what would you see when you looked at it?
 5. Tell two or three different ways you might take it apart.
 6. Tell what it's like to take it apart and then to take apart the parts till you get down to its basic ingredients. (Go fast. Don't worry.)
 7. Imagine a different world in which this object was made of completely different ingredients. What would they be? Tell the advantages and disadvantages of this new arrangement.
 8. Tell how this particular object came to exist. (Not this kind of object. That is, if you are talking about a pencil, don't tell how pencils in general came to exist. Tell how this particular pencil came to exist: where it was made; where the wood, lead, and rubber came from; how they came to be put together.)
 9. Pretend it came to exist in a different way and tell what it was like.
 10. Tell the history of this particular object since it first existed.
 11. Tell its history for the last five minutes.
 12. Tell how this kind of object came to exist (for example, pencils in general).
 13. Tell another story of how this kind of object came to exist, but this time make the story a kind of love story too.
 14. Think of as many ways as possible of grouping a whole bunch of these objects. (In the case of pencils, for example, by length, by color, chewed/unchewed, free/paid for, by color of lead, etc., etc.)
 15. Think of a lot of different ways it is actually used.
 16. Tell three ways it might be used, but isn't.
 17. Tell a mystery story of how it came to be used in one of those ways.

18. Tell three ways it could not possibly be used.
19. Tell a science fiction story of how the world changes in such a way that it is used in one of the ways you just called impossible.
20. If this object were an animal, what animal would it be?
21. If it were a person, who would it be?
22. If it could speak, what would it tell you about yourself that you weren't aware of?
23. Tell three things it might stand for or remind you of. (For example, a pencil might stand for a tree, school, or writing.)
24. Imagine you are much richer than you are and think of something it might stand for. Imagine you are much poorer than you are and think of something it might stand for.
25. What might it stand for if you were much older than you are? Much younger?

G. Questions to help you write about a work of art.

1. Pretend you made it. Something important was going on in your life and you poured strong feelings into it. What was going on? What were those feelings?
2. Pretend you made it, but nothing special was going on in your life and you had no strong feelings. Describe what you liked about this thing you created.
3. Pretend you made it and are very dissatisfied. Why are you dissatisfied with it?
4. You made it as a gift for someone you know (a real person in your life). Who? How did she feel about your gift?
5. Imagine this work of art as medicine. What is the disease? What are the symptoms? How does this medicine cure it?
6. Imagine this work of art as poison. It destroys whoever experiences it. Describe the effects of this poison, the course of deterioration.
7. Imagine that everyone on the globe owned this work of art or all infants were repeatedly exposed to it. What would be the effects?
8. What is someone most apt to notice the first time she encounters this work of art?
9. What would you notice about this work of art if you had never encountered any other works in its medium (any other novels, movies, ballets, or whatever)?
10. What tiny detail in this work says more about it than any other?

11. Is this work male or female?
12. What other work of art would it marry?
13. What works of art do they have for children?
14. Imagine this work of art as part of an evolutionary process. What work did it evolve from? What work will it evolve into?
15. This work is the only human artifact transported to Mars, the only evidence they have about humans. What guesses or conclusions would they reach about humans on the basis of this work?
16. Imagine your work of art as evolving into different media (poetry, novels, movies, painting, music, ballet, etc., etc.). Describe two or three of these new works of art. See what these evolutions tell you about the original work.
17. High art/low art: describe ____ as though it were in the opposite category from the one it usually occupies. (For example, describe Paradise Lost as a soap opera.)
18. Anonymous folk art/signed art made by individual artist: describe ____ as though it were in the opposite category from the one it usually occupies. (For example, describe a tribal chant as though it were a Beethoven symphony.)

- H. Questions to help you write about an organization or group of people.
1. What animal is ____?
 2. What are the rhythms in the history of ____? Events or cycles that recur, whether on a scale of decades or days?
 3. What are some of the things that have only happened once to ____?
 4. What are the three most important moments in the history of ____?
 5. ____ is alive, chooses, acts. Describe its behavior as completely conscious, willed, deliberate.
 6. ____ has feelings. What does it feel now? What is the history of its feelings?
 7. If there were two of ____, where would the second be? How would they interact?
 8. Imagine ____ is a machine, like a car or a pinball machine. Describe how it works. (For example, where is the motor? the flipper?)
 9. What is the most important part of the machine? Which part breaks down most?

10. Map _____ onto your body: where are the head, feet, hands, ears, eyes?
11. Imagine all organizations had the same structure or mode of operating that _____ has. What would be the effect on the world?
12. What human qualities does it bring out in members? Which ones does it suppress or fail to use?
13. If in addition to French-kissing there were _____ kissing, what would that kind of kissing be like?
14. Describe _____ as a poison; its effects; its antidote.
15. Describe _____ as a weapon. How do you make it go off? What does it do? Who invented it?
16. Think of _____ in the scheme of evolution. What did it evolve from? What is it evolving toward?
17. What physical shape is _____? Imagine that shape in locomotion: how does it move?
18. Think about _____ as part of an ecological system: What does it depend on? What depends on it? What does it eat? What does it emit? What eats it? What emits it?

I. Suggestions to help you write about a problem or dilemma.

1. The pump needs priming.
2. Defective materials.
3. Too many cooks: a committee designed or executed it.
4. A bribe will do the trick. Bribe whom? With what?
5. The problem is that God is angry. At whom? Why? What did that person do to make God angry?
6. It's a problem of addiction. Who is addicted to what?
7. The problem has been stated wrong. Find two or three ways of stating it differently.
8. The problem comes from bad data. Guess what data are wrong and why.
9. It's a Gordian knot: stop trying to untie it, cut through it with a sword.
10. The problem is a car that won't start in the winter. What are the things you would do?
11. It's a problem of logic; for example, a is to b as c is to d (A:B::C:D).
12. It looks like a problem, but really everything is fine if you only take the right point of view.

13. Assume the problem has no solution. What is the sensible course of action or strategy that follows from this conclusion?
14. It's a problem in numbers. Try performing the following operations on it: addition, subtraction, division, multiplication, percentages, moving a decimal place.
15. It's just something wrong with digestion: someone ate the wrong thing or has diarrhea, constipation, vomiting.
16. It's a problem of people: incompatible temperaments; struggling for dominance; loving each other but unable to admit it; feeling scared but not admitting it.
17. Outdated design.
18. It's a problem of too little money; or rather too much money.
19. It's sabotage.
20. It's a matter of physical sickness. Need for (a) special drug; (b) long recuperation with not much medicine; (c) helping the patient deal with the impossibility of cure.
21. It's mental illness. Needs: (a) shock treatment; (b) talking therapy; (c) group therapy; (d) conditioning therapy; (e) help and support in going through craziness and coming out on the other side; (f) recognition that society is crazy and patient is sane.

J. Questions to help you write about an abstract concept.

1. What color is ____?
2. What shape?
3. Imagine that shape moving around: what is its mode of locomotion?
4. Give the worst, most biased, distorted definition of ____ you can.
5. Imagine this word or phrase did not exist. (Imagine a people with no word for it in their language.)
6. What would be different because the word did not exist?
7. Imagine ____ is a place. Describe it.
8. What animal would make a good insignia for ____?
9. What persons are connected in your mind with ____?
10. If ____ fell in love with something else, what would that something else be? What would they have for children?

11. Design a flag for _____.
12. Think of three or four abstractions that are bigger than _____ or can beat it up; and three or four which are smaller or can be beaten up by _____.
13. Think of _____ as part of an ecological system: What does it depend on? What depends on it? What does it eat? What does it emit? What eats it? What emits it?
14. What are the most memorable sounds associated with _____? Smells?

APPENDIX F

Berthoff's Pocket Guide to the
Logic of Terminologies¹

Appearance:

How does it look? (smell, taste, feel, sound)

Origin:

Where did it come from?

Who made it?

Material:

What's it made of?

Organization, construction, composition:

How is it put together?

Of what is it a part?

Activity, action, behavior:

What does it do?

How does it behave?

Mode of operation:

How does it work?

Causality:

What effect does it have?

Function, purpose:

What's it for?

Use:

Who uses it?

Motive:

To whose advantage is it that it be invented, made,
grown, developed, sold, controlled, etc.?

¹ Berthoff, Forming, p. 153.

APPENDIX G

Young, Becker, and Pike's Tagmemic
Invention Matrix¹

	CONTRAST	VARIATION	DISTRIBUTION
PARTICLE	View the unit as an isolated, static entity. What are its contrastive features, i.e., the features that differentiate it from similar things and serves to identify it?	View the unit as a specific variant form of the concept, i.e., as one among a group of instances that illustrate the concept. What is the <u>range</u> of physical variation of the concept, i.e., how can instances vary without becoming something else?	Views the unit as part of a larger context. How is it appropriately or typically classified? What is its typical position in a temporal sequence? In space, i.e., in a scene or geographical array? In a system of classes?
WAVE	View the unit as a dynamic object or event. What physical features distinguish it from similar objects or events? In particular, what is its nucleus?	View the unit as a dynamic process. How is it changing?	View the unit as a part of a larger, dynamic context. How does it interact with and merge into its environment? Are its borders clear-cut or indeterminate?

¹ Young, Becker, and Pike, p. 127.

	CONTRAST	VARIATION	DISTRIBUTION
FIELD	View the unit as an abstract, multidimensional physical system.	View the unit as a multidimensional physical system.	View the unit as an abstract system within a larger system.
	How are the components organized in relation to one another? More specifically, how are they related by class, in class systems, in temporal sequence, and in space?	How do particular instances of the systems vary?	What is its position in the larger system? What systematic features and components make it a part of the larger system?

APPENDIX H

Tagmemic Discovery Device

Every writer has times when the ideas just won't come by themselves. Here's a way to help them along by looking at your subject in a number of ways to give yourself something to play with in the associating and recombining that is creativity. And play is the key word. Your responses to the questions below can be the first things that come to mind: facts, exaggerations, guesses, or artful lies. Just keep the connections going wherever they lead you.

A little background on how the mind works will help. We recognize anything by three clues: (1) the features that make it different from other things (contrast), (2) the variety of ways it can appear and not lose its identity (variation), and (3) where and when it's usually found (distribution). At the same time, we understand anything by three ways of looking at it: (1) as a single thing, part of a bigger system (particle); (2) as a changing thing, part of a process (wave); and (3) as a system with parts of its own (field). If you set these six ways of knowing in a 3x3 matrix, you have nine ways to look at any subject to generate material for your writing.

In the matrix below are questions to ask yourself about any subject. Answer them as quickly and in as much detail as you can. Put down everything you can think of, any way you can--words, phrases, whatever. Don't stop to decide whether something is important or not. There are no right answers, so go with whatever comes to mind. If you get stuck, go on to the next question and come back later, but try to get something down for all of them. When you finish, your answers should provide you with material to develop into a poem or short story. Above all relax and don't hold back. Everything you need for your work is in your head, waiting to come out.

	CONTRAST	VARIATION	DISTRIBUTION
PARTICLE	What are the features that make _____ different from anything else?	What are some of the variations of _____?	Where and when is _____ usually found?
WAVE	How does _____ act differently than anything else?	What are some of the ways _____ acts?	How does _____ interact with the surroundings and/or with others?
FIELD	How are _____'s parts put together?	How can _____'s parts vary?	What is _____ a part of? How does _____ fit into some larger system?

APPENDIX I

Winterowd's Tagmemic Matrix¹

	CONTRAST	VARIATION	DISTRIBUTION
FEATURES	How do the features contrast with those of other items in the same class?	How much can the features change and yet have the item remain the same?	What are the feature's relations to the whole class?
PROCESS	How does the process contrast with the process of other systems?	How much can the process change without changing the item?	How does the process relate to the whole class?
SYSTEM	How does the system contrast with other systems?	How much can the system change before the item becomes something else?	How does the system function within the larger system of which it is a part?

¹ Winterowd, Contemporary Writer, 2nd ed., p. 99.

APPENDIX J

Kneupper's Revised Tagmemic Matrix¹

	Unit in Contrast	Unit as a System	Unit in a System
S	View the unit	View the unit as	View the unit as
T	wholistically as	composed of sep-	a part in a lar-
A	an undifferenti-	arable component	ger system.
T	ated, isolated	parts.	What are the
I	entity.	What are the	other components
C	What feature(s)	components of	in the larger
	serve to differ-	the unit?	system?
	entiate the unit	How are the com-	How are these
	from other sim-	ponents organ-	components or-
	ilar things?	ized in relation	ganized in rela-
		to each other?	tion to each
		What is the	other?
		structure of the	What is the
		system?	structure of the
			system?

(continued on next page)

¹ Kneupper, p. 165.

	Unit in Contrast	Unit as a System	Unit in a System
P R	View the unit as a dynamic process, object, or event.	View the unit as composed of dynamic separable component parts.	View the unit as a dynamic part of a larger dynamic system.
O	What process of change occurred to create the unit?	How were the parts formed?	How was the larger system created?
C	How is it changing currently?	What will happen to each in the future?	How is it currently changing?
E	What will happen in the future?	Do different parts change at different rates?	What will happen to it in the future?
S	What feature(s) serve to differentiate the unit from similar processes, objects, or events?	What does change in a particular part do to the overall system?	How does the change in the larger system affect the unit?
S		How is the structure of the system changing?	How does change in the unit affect the larger system?
			How is the structure changing?

APPENDIX K

Selfe and Rodi's Matrix and Questions
for Expressive Writing¹

	Self- Definition	Social Definition	Environmental Definition
Past			
Present			
Future			

I. Self-definition

A. Past

1. What was I like five years ago? ten years ago?
2. What things about myself did I like five/ten years ago?
3. What things did I dislike about myself five/ten years ago?
4. What groups did I associate with five/ten years ago?
5. What role did I play in my circle of friends five/ten years ago? Why did I adopt that role?
6. In what ways was I different from the people I knew?
7. Do I often think about my past? In what ways do I think about it? What kind of value do I place on my past?
8. Do I accept myself for what I was in the past?
9. What do I now repudiate about my past?

¹ Selfe and Rodi, pp. 171-74.

B. Present

1. What kind of person am I today?
2. What things do I like about myself?
3. What things about myself am I dissatisfied with?
4. With what group of people do I associate myself? In religion? In age? In politics? In economic status? etc.
5. Do I often think about myself? What value do I place on myself?
6. Do I consider myself a rebel against some aspect of my past? Which one(s)?

C. Future

1. What kind of person will I be in five/ten years? What kind of person would I like to be? Why?
2. What kind of friends do I want to have in five/ten years?
3. What kind of groups do I want to be associated with politically, economically, socially, etc.?
4. What will my goals be five/ten years from now if I continue to develop according to my present goals?
5. Will I accept myself for what I am in five/ten years if I continue to develop according to my present goals?
6. What value will I place on my past in five/ten years if I continue to develop according to my present goals?
7. How honestly will I perceive myself in five/ten years if I continue to develop according to my present goals?

II. Social Definition

A. Past

1. What kind of image did I project in my speaking, in my writing, in my appearance, and in my ways of doing things that might have influenced others or affected their opinion of me?
2. What did others think of me as a child? as an adolescent?
3. What personal characteristics were evident to my friends? to my acquaintances? my family? my enemies?
4. How much of my inner self did others perceive when I was a child? an adolescent? Why?
5. How did I view others when I was a child? an adolescent?

6. Were there people I loved and/or respected greatly when I was a child? an adolescent?
7. Who are those I can say really loved me as a child/adolescent?
8. How did my relationships shape my personality?

B. Present

1. What self-image do I project in my speaking, in my writing, in my appearance, and in my ways of doing things that might affect what others think of me or affect the kinds of relationships I have?
2. How do others think of me? What personal characteristics are evident to my friends? my family? my acquaintances? my enemies?
3. How much of my inner self can others perceive? Why?
4. How would others describe me? Do others see me only as a type? Why?
5. How do I view others? How accurately do I perceive them?
6. Are there people whom I love and for whom I would sacrifice anything I have?
7. Is there anyone who would do anything for me or sacrifice anything for me?
8. Who are those I can say really love me? What effect does their love have on me?
9. Do I respect others? Value others? Why?
10. How do my relationships with others shape my personality?

C. Future

1. How will others perceive me in five/ten years if I continue to develop according to my present goals?
2. How will I perceive others in five/ten years if I continue to develop according to my present goals?
3. Is it possible that I will involve myself in a permanent relationship with another person? How will this relationship affect my career and my personal life?
4. Do I want to be a parent in five/ten years? What part in my life do I want parenting to play? Have I thought about how I will coordinate it with my career and personal life?
5. What self-image will I have in five/ten years if I continue to develop according to my present goals? How will this affect my relationships with others?

6. How will those who love me now view me in five/ten years if I continue to develop according to my present goals? Why?

III. Environmental Definition

A. Past

1. What things or instruments have I used in the past to reach my personal goals? (Instruments can include things like education, money, language, politics, friends, or any tool that people use to achieve their goals.)
2. Was I aware of the problems and limitations that I would need to overcome in attaining my childhood/adolescent goals? Why? Was I realistic in setting my goals?
3. In what ways or areas was I willing to compromise to attain my goals?
4. What were my childhood/adolescent goals?
5. When I could not find enough instruments (or appropriate instruments) to help me attain my early goals, was there somebody I could turn to who would show me a variety of available instruments in one particular area, or who could point out alternative instruments? (Persons of this sort might include parents, counselors, teachers, club leaders, etc.)
6. Which of my future goals did I see as involving a rebellion against the establishment or the situation in which I existed as a child/adolescent?

B. Present

1. What things or instruments do I now use to reach my personal goals? What am I currently doing to reach my social, political, religious, personal goals?
2. Do I see any problems or limitations that are inherent in the goals I am currently setting for myself? Why?
3. Am I realistic in setting current goals?
4. What are my current goals? Do I perceive any of the goals changing? Why?
5. If I cannot find enough instruments to help me attain my goals, is there somebody I know who will help me in circumventing problems or in setting different/more realistic goals?
6. Which of my present goals involves a rebellion against the establishment or the situation in which I presently find myself?

7. In what ways am I willing to compromise to attain my goals? Am I willing to compromise? Why?

C. Future

1. What are my future goals?
2. What instruments will help me reach my future goals? Which of these can I realistically use?
3. Will my political rights, religious rights, social rights, or natural rights be influential in attaining my future goals? How?
4. Are there any limitations or difficulties I will have to overcome in reaching my future goals? How will I get around these?
5. What value do I see in achieving these goals? In five/ten years?
6. Will these goals be realistic in five/ten years?
7. In what ways or areas will I be willing to compromise in attaining these goals?

APPENDIX L

Berthoff's Checklist of the
Forms of Relatedness¹

1. Is A the same as B?
2. Is A above, beyond, behind, next to, inside, ahead of, before, etc., B?
3. Is A the cause of or the effect of B?
4. Is A a repetition or duplication of B?
5. Is A an example of, the same kind of thing as B?
6. Is A comparable in some respects to B?
7. Is A a part of B? Is A made up of B?
8. Is A derived from B?
9. Is A the opposite (antithesis, antonym) of B?
10. Does A complete B?
11. Does A depend on B?
12. Is A necessary to the function of B?

¹ Berthoff, Forming, p. 77.

APPENDIX M

Rackham's 4C's of Observation¹

1. Is there an element of change? Is it the most interesting or important point in the subject?
2. Does any element of the subject involve contrast, conflict, contradiction or opposition? Could the best details be organized around one of these categories?
3. What quality about the subject has led to significant consequences? To whom or to what aspect of the subject are these consequences important? Whose lives are affected?
4. How could this subject be characterized? Which of the elements of characterization seem most consequential? (Physical description? Action? Background? Speech?) Is a full, rounded view of the subject what the reader needs or expects?

¹ Rackham, p. 128.

APPENDIX N

Williams' 2x2x2 Framework¹

		internal structure	external relationships
as a state	by part		
	by kind		
as a process	by phase		
	by kind		

¹ Joseph Williams, p. 171.

APPENDIX O

Exploratory Guide of Lauer et al.¹Static view

- 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.

Dynamic view

- Recall and record the processes (changes, physical movements) that the place has undergone in the past, is experiencing in the present and will probably face in the future.
- Trace your involvement with the place through one day or over a long period of time.
- Think about where your place fits into the larger history of similar places.

Relative view

- Classify your place, locating it in larger groups.
- Examine how your place relates to the other things in those classifications.
- Compare and contrast your place with other places, noting the similarities and differences.
- Let your imagination create analogies for your place (unusual things with which your place can be identified). Explore the bases for such analogies.

¹ Lauer, Montague, Lunsford, and Emig, pp. 25-26.

APPENDIX P

Irmscher's Adaptation of Burke's Pentad¹

ACTION

What happened?
What is happening?
What will happen?
What is it?

ACTOR-AGENT

Who did it?
Who is doing it?
What did it?
What kind of agent is it?

SCENE

Where did it happen?
Where is it happening?
When did it happen?
What is the background?

MEANS

How did he do it?
What means were used?

PURPOSE

Why?

¹ Irmscher, p. 35.

APPENDIX Q

Pentad Discovery Device

Every writer has times when the ideas just won't come by themselves. Here's a way to help them along by looking at your subject in a number of ways to give yourself something to play with in the associating and recombining that is creativity. And play is the key word. Your responses to the questions below can be the first things that come to mind: facts, exaggerations, guesses, artful lies. Just keep the connections going wherever they lead you.

One way to look at anything is to think of it as part of some kind of action, either physical or mental. The five elements always involved are the act, the actor(s), the scene, the means, and the purpose. Once you have any one of these five in mind, you can make up the other four and, in the process, generate material for your writing. In any order, answer the following questions, starting with the element you already have, even if it's only a single word:

- Act: What's happening?
- Actor(s): Who's making it happen? Who's it happening to?
- Scene: Where and when is it happening? What's the background?
- Means: How's it happening and/or what's being used to make it happen?
- Purpose: Why is it happening? What caused it to happen?

If you think this looks like the journalist's rule of thumb to get all the important details for a news story (who?what?when?where?why?how?), you're absolutely right. But you want to go beyond the surface facts and see the connections between them. Answer the questions as fast and in as much detail as you can. Don't stop to worry whether something is important or not. There are no "right" answers, so go with whatever comes to mind. Put down everything you can think of, any way you like--words, phrases, whatever. If you get stuck, go on to the next and come back later, but try to get something down for all of them. When you've finished,

your answers should provide you with material to develop into a poem or short story. Above all, relax and don't hold back. Everything you need for your work is in your head waiting to come out.

Wallas' Model of the Creative Process

(1) PREPARATION (2) INCUBATION (3) ILLUMINATION (4) VERIFICATION

Writing Process

(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(4)	(4)	(4)	
PRE-WRITING	//*		FIRST DRAFT	//			SUBSEQUENT DRAFTS	//	EDITING	//	PROOF-READING
Living with awareness			Written freely				Concern with shaping content, // between each draft		Checking for details, spelling, etc.		Checking for errors made in copying, correcting
Journal-keeping											
Collecting											
Research									Type fair		
Discovery devices									copy.		

APPENDIX R

* // indicates passage of time

APPENDIX S

Heuristic-Based Writing Assignment

In William Carlos Williams' "Pictures from Brueghel" we saw how a poet makes poems by looking at a group of paintings. Get a book of art reproductions from the library and spend a few minutes paging through it until you find a painting that speaks to you, one you like enough that if you were magic, you could step into and walk around in. Spend some quiet time in the picture. Is it warm or cold there? Where is the light coming from? What season or time of day is it? What do you see, hear, smell, taste, feel with your fingers? Scribble a list of people and things you see there and the sensations you feel. Scribble down what's happening, who it's happening to, who's making it happen, why, and how you feel about it. Put all these notes away but keep the picture out where you can see it for a day or two. Then write a poem about your painting. Be concrete and specific so we can experience it, too.

APPENDIX T

Notes Generated Using the
Tagmemic Discovery Device

newspaper photo, dots, black and white, men holding
long snake, giant python

men in gray uniforms, zoo attendants, keepers, names on
pockets, gray cotton work shirts, trousers, wrinkles,
dark/light, all smiling, proud, happy, holding snake
in their arms, hugging, phallic, possessive, mine, have
own section, part, in arms, hands

married men? middle-aged, young, wives at home, own
them? jealous, unfaithful wives, holding on to their
wives, holding on to their power over their wives thru
holding, physically, sexually

zoo, cages, home, family, metal cages, concrete floors,
bars, light and dark, shadows, slanting, on lawn at
zoo, trees, sky, no clouds, special occasion, photo-
grapher taking picture, lined up, side by side, in row,
cleaning cages, feeding animals, at home shower, change
clothes, animal smells, family worries, jealousy, love,
embracing wives, making love, rivalry at work, share
of publicity, succeed at work, promotion, succeed at
love, love of animals, love of wives, love of selves,
own bodies, phallus symbol of self as man, pride,
jealousy, passion

work with animals, wear uniforms, get picture taken,
record event, publicity

proud, envious, tender, caring, possessive, gentle,
physical, emotional

each wants share, cooperate, chooses own way, close
but separate

muscular, manly, smiles, bare teeth like animals,
related to predators

different shades of hair, different lengths, grins,
smiles, moustache, eyebrows, small, large, tall, short,
fat, skinny, slumping, straight

crew, work force, attendants, zoo, park, city, human race, male sex, family, husbands, lovers, animals/humans different? want to be liked, share characteristics, envy, want power of snake, event for them, not snake

python, scales, black, gray, white, smooth, slick, smooth, shiny, glassy, glossy, long, coiling, wiggle, creep, crawl, riggle, tense, relax, twisting, squeezing, choking, slither, killing by wrapping around, holding, hugging, embrace deadly, total possession, victim can't get away, no escape

garter snakes, rattlers, vipers, asps, serpents, temptation, sin, offered apple, sexual temptation

jungles, gardens, Garden of Eden, fields, desert, forest, zoo, museum, trees, rocks, caves, pits

squeezes, coils, not poison, great length, record size, sheds skin, becomes new, reborn, new life, grows

hangs from tree, slither thru grass, wrap around victim, squeezes so hard it can't get away, lover's embrace?

alone except in embrace, sleeps in cage, case, one of species in exhibit, tolerates keepers, being held rather than holding, indifferent to photographer, attendants

scaled skin over flexible skeleton, long, tapers, muscular

pattern of scales, thick middle, narrow tail, longjaws, tiny eyes, tiny brain?

gives over life / keeper, dependency, works both ways, become like each other

Resulting Poem

Giant Python

The zoo attendants line up side by side
to have their picture taken,
each embracing his glossy measure
of gray and black scales.
Each man smiles, bares his teeth,
shares in this record event.
Each, proud of his armful, feels
the pulse and ripple between his hands,
wants to shed his old self
like yesterday's clothes,
leave memory to wrinkle and dry,
and embrace the object of his love
so passionately no other will ever hold her.

APPENDIX U

Process of Using the Tagmemic
Discovery Device

Writer PJH, a graduate student, began with a general subject, the Staten Island ferry, and jotted down quickly answers to the Tagmemic Discovery Device questions, arranging the resulting raw material in nine categories corresponding to the cells in the matrix. Although he was aware of the stages of Wallas' model of the creative process, he did not allow any time for incubation; eager to work with the ideas he had generated with the heuristic, he attempted an abortive poem of about thirty lines, which he found unsatisfactory and put aside, along with his other notes.

Two days later, the writer re-read his notes and used the matrix categories to develop a structure for what he now conceived to be a longer three-part poem which he intended to write. Having internalized the heuristic, he set up a relational organization for the poem with a child persona as particle, a trip on the ferry as wave, and New York harbor as field. From the raw material generated at the first sitting, the writer selected those details which were suitable to the new structure and arranged them in the appropriate sections. The original one page of notes stimulated by the heuristic grew into five pages. These were put away for further incubation.

About two weeks later, the writer returned to his notes and consciously sought out analogies for entities already recorded and explored the dualities present in the ideas and images generated earlier. He looked for over-arching connections that would serve as a field against which he might work out the narrative line through the wave and particle details. At this sitting, the notes doubled from five to ten pages.

After two more weeks of incubation, the notes were again reviewed, and the writer began his first draft, writing about seventy lines based on the raw material previously generated. The next day, he did more invention work on-site, riding the ferry and listing

additional particle and field details. He reflected later that the over-all organization for the poem which he had built with the aid of the first responses to the heuristic questions now helped him in the selection of additional details for the poem. Several hours after his information-gathering excursion, he returned to his first draft and added more than eighty lines to the poem.

Three days later, the writer re-read the draft and spent several hours editing, shaping, and sharpening the 155 lines, which he then set aside for another two weeks. At that time, he reviewed his initial notes, beginning with the use of the Tagmemic Discovery Device. He re-read the draft of the poem and wrote an additional 103 lines. Over the following weeks, he continued to edit and rearrange line breaks. The resulting poem was about 300 lines in length when he finished.

The writer was pleased with the generative capabilities of the Tagmemic Discovery Device. Prior to using the heuristic, he had never engaged in any systematic pre-writing invention note-taking or organizing; his previous poems had usually been only 15-25 lines in length. He indicated that he was glad to have had a technique for getting started with the longer poem which he had felt he wanted to write. Although at the outset he had experienced some slight reluctance to using the discovery procedure, he recalled that he had quickly become excited by the raw material it had helped him produce. He does not now feel that the heuristic approach is mechanical or anti-poetic and will consciously use the discovery device again for longer poems in the future, feeling he has internalized the process sufficiently to use it from memory for shorter works.

APPENDIX V

Excerpts from Heuristic Computer Dialogue¹

In the following computer-prompted dialogue between a senior enrolled in [a] literature seminar and the Aristotle TOPOI program, Peggy explores Thomas Pynchon's The Crying of Lot 49 and his use of the entropy concept. We join her after a few introductory remarks--directions and such. Peggy's remarks are underlined.

NOW I NEED TO FIND OUT WHAT YOU ARE WRITING ABOUT.
SO WOULD YOU PLEASE TYPE IN YOUR SUBJECT. I AM
LOOKING FOR ONE TO THREE WORDS.

ENTROPY IN MAXWELL'S DEMON

HOLY ELECTRONICS! THAT'S WEIRD, I USED TO DATE A
COMPUTER INTERESTED IN ENTROPY IN MAXWELL'S
DEMON.

* * * * *

WHAT OBJECTS DO YOU ASSOCIATE WITH ENTROPY IN
MAXWELL'S DEMON? HOW MIGHT THEY BE INCLUDED IN
YOUR THEME?

EXPLAIN!

IF I SAY "BLACK," YOU SAY "WHITE."

IF I SAY "HEADACHE," YOU SAY "ASPIRIN."

NOW PEGGY, IF I SAY ENTROPY IN MAXWELL'S DEMON,
WHAT DO YOU SAY?

WHAT DO YOU SAY NOW?

THE IMAGE OF THE PERPETUAL MOTION MACHINE COMES
TO MIND--MAKING SOMETHING OUT OF NOTHING.

BY GEORGE, PEGGY, GOOD ONE. WRITE A LITTLE MORE
PLEASE.

¹ Burns, pp. 23-27.

ARRRRGGGGG

FANTASTIC. ANYTHING ELSE?

HELP!

OKAY.

* * * * *

WHAT IS THE MOST LIKELY PLACE FOR ENTROPY IN
MAXWELL'S DEMON TO EXIST?

WHAT DO YOU MEAN?

WHERE SHOULD I GO TO SEE ENTROPY IN MAXWELL'S
DEMON? CAN I GO INSIDE? CAN I GO OUTSIDE? WHY
OR WHY NOT?

YOUR TURN, PEGGY.

OH MAN

AHHHH, SHORT AND SWEET. NOW TELL ME WHY.

IN OTHER WORDS, ELABORATE A LITTLE.

I GUESS THAT THIS REALLY DOES BROADEN THE WHOLE
QUESTION. THE WHOLE . . . BASIS FOR THE ABILITY
FOR THE DEMON TO WORK WOULD LIE IN THE PERSON
. . . WHO WOULD BE TRYING TO "COMMUNICATE" TO THE
DEMON. THIS WOULD . . . THEREFORE MEAN THAT WHO-
EVER WAS THE "SENSITIVE" WOULD ALREADY, TO AN EX-
TENT, BE UNDER THE DEVIL'S CONTROL. NOW I'M
REALLY CONFUSED.

* * * * *

STOP!

YOU EXPLORED 4 QUESTIONS OUT OF THE 11 I ASKED.
THAT'S 36.3636 PERCENT. LET ME REMIND YOU THAT
YOU ARE STILL IN THE FIRST STAGES OF THE CREATIVE
PROCESS. THESE IDEAS MUST SIMMER NOW. ALSO, I
HOPE YOU CAN CREATE SOME OF YOUR OWN "TOPIC" QUES-
TIONS. I WON'T ALWAYS BE AROUND TO HELP.

HOPE YOUR PAPER IS TERRIFIC!

GOOD BYE & GOOD LUCK!

APPENDIX W

Heuristic-Based Writing Assignment

Look around where you live for two or three objects that hold particular memories and associations for you. Make a list of the observable facts about each object. Then scribble down all the details you can remember about how you came to have the objects, or any memories attached to them--the feelings, the people, the day, whatever. Use your discovery device to help you gather the information. Put your notes away but leave the objects out where you'll see them grouped together. What are they like other than themselves? Make notes as ideas occur to you about any similarities you see among them or to other things. After a day or two, make a poem about the objects and memories. Play with the words so there is some connection among them. Use at least one metaphor, more if you like. Help us to see what's happening in the poem.

APPENDIX X

Heuristic-Based Writing Assignment

Think of a time in your childhood when you had something surprising happen to you. You may have felt excited, frightened, delighted, sad, angry, or whatever. Try to feel those feelings again. Scribble down what you saw, heard, smelled, etc. Use your discovery device questions to free write with focus about your experience. List quickly more details than you would ever expect to need for your finished work. Put your notes away for a day or two. Then make a poem about your experience as seen through your own child-eyes. Use at least one metaphor. Help us to see and feel the experience, too.