

UPDATING CLASSICAL MNEMONICS FOR THE MODERN CLASSROOM: “THE CAPER STAR METHOD”

William E. Engel
University of the South
SEWANEE, TENNESSEE, U.S.A.

Abstract

Many types of mnemonic devices historically have helped students, teachers, and all manner of professionals recall, retrieve, and work with information (such as the bones in the hand, or—more classically--the key points of a speech). Recalling information, however, is only the first part of the usefulness of such schemes. The other part, as classroom applications bear out, involves the generation of new ideas. Proposed here is an interdisciplinary model of mnemonics that is generative and constructivist, enabling the reformulation of accumulated data in innovative ways and the conceptualization of novel approaches to the ideas behind the data.

KEY WORDS: mnemonics, organizational schemes, innovative learning, constructivist teaching

THE ART OF MEMORY

In a treatise on educating children, Plutarch wrote about the importance of memory training: “Above all, the memory of children should be trained and exercised: for this is, as it were, a storehouse of learning; and it is for this reason that the mythologists have made Memory the mother of the Muses, thereby intimating by an allegory that there is nothing in this world like memory for creating and fostering [Plutarch, 1986]. With memory understood as a storehouse, educators from earliest times developed a variety of systems and ingenious schemes for supplying, managing, and organizing the contents. Cicero referred to *memoria*, the fourth part of rhetoric, as “the firm grasp of matter and words” and outlined mnemotechnical rules to make the task of organizing and reciting a discourse easier [Cicero, 1976].

BASIC MNEMONICS

The history of the Memory Arts is long and venerable. In what amounts to bookkeeping tablets of ancient Sumeria we have cuneiform evidence of mnemonic groupings used to record the storage and distribution of vast amounts of grain, wine, and other commodities. Once the Arts of Memory were institutionalized, they were used primarily in connection with oratory, law, and commerce. Although some delighted in performing deft feats of mental gymnastics that such a system facilitated, the Memory Arts traditionally have been associated with profound, even sacred, topics no less than mundane affairs.

Rhetorical training texts and treatises on general knowledge from Cicero to Descartes regularly included schemes and methods for condensing the things one wanted to remember into symbols or images, which then were placed, in sequence, around a table, room, theatre, mansion, or city, so that, eventually, they can be retrieved, reconstituted, and applied as the occasion demanded [Yates, 1978].

Survivals of this spatially oriented technique still mark our language when we say “in the first place” and “passing on to the next point.” The handbooks sought to reinforce one’s capacity readily and creatively to visualize abstract matters rendered concretely. The same holds true today regarding

“organizational” and “encoded mnemonics” [Bellezza, 1987]. Before background images (“organizational mnemonics”) can be brought into play, the student needs to come up with useful and distinct trigger symbols or letter cues (“encoded mnemonics”) that can be disposed sequentially.

Basically, an artificial memory system involves choosing a site with distinct places, which may be impressed easily upon the mind. What can be done with the most common sort of memory plan, “a spacious house divided into a number of rooms,” can equally well be done in connection with “public buildings, a long journey, the ramparts of a city, or even pictures” [Quintilian, 1979]. Classical uses of the memory arts were aimed at juridical and political oratory; these arts were revived in medieval times for the study of rhetoric and grammar; the Dominicans used them to order and recall the Bible and commentaries; and, later, during the counter-reformation, Jesuits used them to organize and teach the truths of the natural sciences and religion. Perhaps the most frequent use of mnemonics today is in the medical profession where thousands of word strings have been collected in books for students, nurses, and doctors [Khan, 2003]. And yet, more than ever before, there is a need for a revival of old-school mnemonics because of the unprecedented reliance on electronic devices by the current generation that has grown up with “go-everywhere gadgets and services that exist specially to remember things so that we don’t have to: Backberrys, phones, thumb drives, Gmail” [Thompson, 2007].

BRIEF HISTORY

The main method associated with mnemotechnical practices is attributed to Simonides of Ceos. The story goes that one night at a banquet the ceiling collapsed killing everyone inside. The bodies were so mangled that the mourners could not identify the remains of their relatives until Simonides, who earlier that evening had sung a hymn in praise of the demi-deities Castor and Pollux, remembered where each person had been sitting. Simonides was called away just prior to the catastrophe by two mysterious strangers who, tradition has it; vanished once he was safely outside [Yates, 1966].

Classical origins

In the *locus classicus* of the memory arts, a handbook attributed to Cicero, we are told: “We shall need to study with special care the backgrounds we have adopted so that they may cling lastingly in our memory, for the images, like letters, are effaced when we make no use of them, but the backgrounds, like wax tablets, should abide. And that we may by no chance err in the number of backgrounds; each fifth background should be marked. For example, if in the fifth we should set a golden hand, and in the tenth some acquaintance whose first name is Decimus, it will be easy to station like marks in each successive fifth background [Cicero, 1981]. Five was an important number in mnemotechnics, not only because the fingers on one’s hand lent itself as an ideal background image [FIGURES 1 and 2], but also because of practical considerations—five was considered the limit of what one could hold in mind before moving on to the next sequence. There were also five parts of rhetoric as systematized by Aristotle, whose authority held sway well into the seventeenth century, and as codified by Cicero.

Renaissance Humanism

Mnemonic organizational schemes came in many varieties during the Latin Middle Ages and, later, were deemed especially useful for working one’s way through an involved poem, such as *The Divine Comedy*, in that they supplied ready-made points of access. Beyond being merely an aid to steady comprehension of what one read, however, at least by the sixteenth-century, schematic charts of Dante’s *Inferno* and *Paradiso* provided convenient sites within an artificial memory theatre that one then could use to for other purposes [FIGURES 3 and 4]. Once one grasps the main structure, it is easy to fill it in for more far-reaching applications, limited only by the extent of one’s own inventiveness.

Generative mnemonic schemes

Moving beyond its role merely as a storehouse, generative aspects of the memory arts were highlighted by scholars like Raymond Lull. He designed mnemonic charts for considering all angles of an issue so as to arrive at otherwise unthought-of possibilities [Kircher, 1669]. This medieval system, consisting of diagrams and accompanying letters for easier exposition, was revived by the Jesuit polymath Athanasius Kircher [FIGURES 5 and 6]. His “combinatory art” gave its users a heuristic paradigm for conceptualizing and expounding virtually any topic. In FIGURE 6, the middle section uses

symbolic devices, neatly arranged in a pattern of three by three for easier recall before transferring them to the various quadrants, designed to spur analytical thinking on a variety of topics. The four outer boxes concern, respectively: absolute principles, respective principles, new predicates, and a register of declining questions. This mnemonic system works as well today as it did centuries ago.

THE CAPER STAR

Adaptations of rudimentary memory systems are easy for students to grasp, both as pertains to holding important information in mind, and also for accessing and using it in the creation of original works—whether essays, oral reports, exam responses, or even new approaches to old problems reconceptualized by virtue of this technique [Engel, 2001]. In the last five years, working with students at a liberal arts college, I have adapted and honed aspects of classical mnemotechnics primarily for use in literature and composition courses. Following Cicero, the plan of five main places has been honored. In the interest of simplicity, however, rather than plying students with vast structures and long itineraries (practices, incidentally, criticized by Quintilian as being too complicated), the background mnemonic selected for this series of innovative classroom experiments is the five-pointed star [Quintilian, 1979].

Since spirited leaps of imagination are required for these interactive projects conducing to the gathering of information that can help students make connections they might not otherwise consider, they have been dubbed “capers.” The star is an ideal background-mnemonic because it yields five distinct and sequential places upon which one can situate encoded mnemonics. Moreover, to help direct attention to salient features and different categories of thought, these five places have been given specific objectives, which make up the points on the “caper star” [FIGURE 7].

WHAT IT IS AND HOW IT IS USED

At the center of the diagram is the designated passage, the main point of focus, which takes one into the work at hand and then, once one is inside rummaging around, back out again into the world-- bringing new knowledge and insights to share and transmit, to reflect on and then create something original. The points of the star are: (1) a checklist (or synopsis) of what is going in the selected passage, as well as a general idea of what leads up to and follows from it; (2) characters and their relations one to the other, as well as anything noteworthy about the relationship between the characters and the author or the work and the audience; (3) a closer look at any significant words or terms with an eye toward seeing how they might link up to others elsewhere in the work being studied; (4) questions raised from within the text, as well as those one thereby is provoked to ask, starting small and simple and particular, and getting successively bigger, more complex, and universal; (5) how the passage relates to you and your concerns; how you reckon with it in the light of your biases, intellectual predispositions, and current store of knowledge; as well as any universal and timeless issues implicitly raised. Finally, taking all of these components together, how do these five things relate to one another to yield a rich harvest of thought and spur further investigation—even to the point of conceptualizing how the inquiry itself might be recast entirely?

This five-fold approach covers the most fundamental and time-honored categories of thought. Corresponding to the five points on the caper star, they are: (1) the rational process of cause and effect (“x” happened which led to “y” and then “z”); (2) the often irrational nature of human interactions (as Socrates put it: “knowing the better, but doing the worse”); (3) taking stock of the extent to which language is a medium for conveying both sense and transmitting the values of a given culture, (4) the various faces of interrogation (the truism that every news-story must consider and seek to answer: “who? what? where? when? how? and, if possible, why”); and (5) the self-conscious reflection on one’s own point of view (“what we believe to be true is what keeps us from discovering the truth”).

CASE STUDIES: APPLYING THE CAPER STAR METHOD

Close scrutiny of a handful of caper stars, each concerning different topics and demonstrating different applications of the paradigm, will provide a better sense of both the most fundamental applications of this method and also what can follow, generatively, from seriously engaging this heuristic method for making sense of a work of literature. It should be emphasized that, far from being a confining

rubric, the very nature of the five elements to be considered encourage open-ended exploration using categories of thought that extend rather than foreclose possibilities.

Introduction to Shakespeare

In an Introductory Literature and Composition course involving an intensive study of four plays by Shakespeare, each student was assigned one act for which she or he was responsible to report to the class. The first-level goal was to identify an exemplary passage (14-20 lines), selected either for its pivotal role in the play's action, or because of what it can bring out about the ethos of that particular play, or because it offered a way to analyze a larger topic (whether in its Renaissance context or its more universal appeal). Students needed to take into account both their rationale for selection and why they deemed this passage suitable to serve as the core of their presentation.

The second-level goal was to recite from memory the passage in the context of their report to the class. Some students used artificial memory devices, such as rebuses and visual cues to aid in their recollection of the passage, as in this monologue where Hotspur boldly declares his resolve to vanquish Prince Henry in Henry IV, Part One (4.1) [FIGURE 8]). As it happens this student, in using a breast (to recall the phrase beginning "against the bosom"), instinctively put into practice the advice of rhetors and mnemonists of old who advocated using outlandish, grotesque, and even vulgar images to stir the recollection of a repositied image [Fulwood, 1562]. The third-level goal was to teach the assigned act to the class in fifteen minutes using the caper star, thus obviating the need for written notes, which provided a viable way to organize their presentations. The passages formed the center of the caper star, which they had filled in prior to coming to class and which would be handed in with their write-ups.

The fourth-level goal, then, was to compose an original essay (5-7 pages), anchored in their memorized passage that analytically and discursively summed up the substance of their oral presentations. As a fifth-level goal (much like the top point on the caper star calling for self-reflection), in their papers students were expected to comment critically on what was accomplished during the presentation, as well as something they learned about the lines as a result of having presented them publicly. The entire essay was expected to propose and follow a coherent trajectory, taking into account the sustained critique and evaluation of one's own performance, considering, for example, what was done well and what might have been done differently knowing what she or he now knows about the topic. Most importantly, students were encouraged to articulate explicitly what kinds of ideas they were able to formulate as a result of having done all of this work preparing to present the material to their peers, and to speculate further about what they might want to know and to suggest ways they would go about getting it. This last component enabled students to look beyond the scope of the project as such, and to consider future areas of inquiry that this exercise equipped them to undertake. Serving initially as a way to find one's way into the play, the caper star then allowed the student to chart out her presentation, which, in turn, supplied the basis for the written component of this project.

One exemplary caper star addressed Benedick's monologue in Much Ado About Nothing (3.2) when he is set up to "overhear" his friends relating how Beatrice is hopelessly in love with him as part of their ruse to make him court her; meanwhile her friends are doing the same to Beatrice regarding Benedick [FIGURE 9]. The student got to the heart of the matter with her third question (top-left point): "What will Benedick and Beatrice think when they learn what their friends have done?" Using this as a springboard, her paper went on to explore situational ethics with respect to evaluating the prefigured end of one's deception. Two other exemplary caper stars, which illustrate clearly how this method allows for full and cogent explication of the text, come from Henry IV, Part One [FIGURES 10 and 11]. In the first, in which Worcester gently berates Hotspur for his impatience with their ally in the rebellion, the Welsh patriot Owen Glendower, the student did an especially fine job grouping the words of the speech into virtues and vices thus showing at glance the rhetorical structure of the passage. Her image under the heading of "questions," also succinctly collapsed a lot of information into a telling illustration: while being counseled by his elders, might that rash "Northern youth," Hotspur, actually be thinking "these guys are idiots"? This in turn led her to consider the larger, general principle at stake in this passage (top of the caper star): "It's always hard to have someone try to give you constructive criticism, but it's important to recognize when we're in the wrong." In the next example [FIGURE 11], the student gets to the heart of the issue: "Does Hotspur have the traits he faults the king for?" In the process, with the first part of the caper star ("checklist"), she does a fine job outlining what Shakespeare gives as valid reasons to depose a monarch who crosses the line from just rule into tyranny. It was this that formed the basis for her write-up, in terms

of what she wanted to learn more about because she was thinking about majoring in political science. Her work in this class, by virtue of isolating sections that both mattered to her while enabling her to fulfill the terms of this assignment, demonstrated the extent to which caper star exercises can bridge disciplines by taking into account various areas of traditional intellectual inquiry.

Milton's "Paradise Lost"

In an upper-division literature class primarily on Paradise Lost recommended for all English majors (Milton figures significantly on the Comprehensive Examinations which come in the students' final semester), it was pedagogically sound to give students a "study-sheet" that paved the way into their caper. The caper, as in the introductory class described above, became the basis for the student's oral presentation conducting, in this case, to a 10 to 20-page write-up (using secondary sources to substantiate a detailed and nuanced reading of the passage). Students were assigned about 500 lines from one of the twelve books of the poem, and then asked to isolate 15-25 lines that would form the central part of their caper star, which they were to recite aloud and gloss critically in class. This study guide was something of caper star in its own right, with five parts--the fifth part being a traditional caper star.

In the interest of space, rather than reproduce a completed study guide illustrating a student's exemplary responses, just the directives are given: "(1) Situate your passage with respect to the stated 'Argument of the Book' [Milton's editor prefaced each book with a synopsis, ostensibly written by Milton himself]. Does it deliver? What else is going on? (2) Illustrate or outline what happens, whether in terms of the flow of the narrative, events depicted, or the situation upon which the poet muses. Identify what aspect of the 'story-line' is advanced or recoiled or elaborated. (3) List and explicate at least three exemplary images or epic similes in your assigned passage (at least one must come from your memorized lines) and justify why those three. (4) What features of style, what subjects, what themes make this passage unmistakably the work of John Milton? (5) Render a caper star of your selected passage and, at the bottom, indicate what struck you about this passage. What lingers still? What requires further contemplation? What resonates? This could well be the opening to your PAPER.

Measuring Results

The long-term instructional objectives of the Milton assignment were measured, among other ways, by virtue of an essay section on the final examination: "Recalling and making use of your own capered passage (making sure to give book and line references), as well as the two invocations you have memorized, assess what is meant by Milton's stated purpose 'to justify the ways of God to men.' Consider whether and the extent to which he achieves his goal. To what end? At some point in your analysis, refer critically to the following terms: sufficient, degree, disobedience, and mortal." Students were expected to be able to draw on the material they had secured in the storehouse of their memory, and to do something original with it that was a leap beyond their previous encounter with passage.

While it cannot be proven definitively that caper stars are superior to any other given interactive approach to teaching, one incidental study does indicate that they do improve students' scores on standardized in-class essay assignments. Our college recently adopted a holistic assessment instrument for evaluating consistency of instruction in all introductory writing-intensive courses. Every teacher selects a passage from a text assigned to student's in his or her course that term, and students write original, one-hour, essays as a way for the college to assess whether and the extent to which students are mastering the skills of critical reading and persuasive writing. Each essay is expected "to put forward a specific, strategic thesis and to develop that thesis through close analysis of charged details in the passage" The essays are assessed, using a standardized 0-6 scale with very specific criteria accounting for each number-equivalent, both by the assigning teacher and at least one other in the department. Scores within and across departments then are recorded, analyzed, and assessed. In my own classes, in 2007, but not in 2006, students were advised to draw on their knowledge of the caper star in preparation for this exercise. The class average in 2007 was 4.9, while in 2006 it was 3.3 (using the American "A to F" scale, this is comparable to a difference between roughly an A- and a C+). Other than recourse to the caper star, all other factors remained the same for the classes assessed from one year to the next, and it can be assumed that the level of instruction remained consistent. The marked increase is significant, even if in a study that was not intended to be conducted from the outset.

FURTHER USES, APPLICATIONS, AND EXTENSIONS

Once the caper star method is second nature to students, they are in a position to expand the inquiry, use more sophisticated analytical methods, and glimpse the bigger picture at stake. While this approach was designed to facilitate the teaching of literature, it has many other applications and uses.

Building on the caper star: Triangulation

In a writing-intensive introductory literature course, the first paper required that students “triangulate” three poems. They capered out each poem in its own right and then looked for, discovered, and forged links and connections while on the lookout for salient features and significant relations between and among the different works. Such an exercise, which serves well as a diagnostic assignment, enables the teacher to assess at what level of writing the student comes into his class.

Triangulation can be undertaken in increasing complexity. For one assignment students were divided into three groups and, after capering out three poems, were asked to triangulate them (each group had a different set of poems). Once this was completed the class reconvened and triangulating the triangulations. The result was that students gained a deep understanding of the three poems they originally had been assigned, a solid working knowledge of nine poems, and a sense of how they all lined up one to the other (a pattern recalling Kircher’s three-by-three boxes of knowledge [FIGURE 6]).

Capering Beyond Works Of Literature

So much of the work required of students (and indeed a principal way we relate to objects of experience in the world) is discursive. The caper star caters to and also moves beyond the narrative horizon that tends to hem in and delimit intellectual inquiry. The larger question posed by the caper star method is: how best to get a handle on an unfamiliar work? This article advocates breaking it down into manageable parts and, by using emblematic diagrams and symbolic tags, capering it out—perhaps moving on then to triangulation. In addition to the schematic diagrams, students wrote narrative descriptions of their findings and assessed the implications of what was discovered as a result of disposing the information to be analyzed in this way (thus reflecting on the liberties as well as the limitations of this procedure). It is easy to see how this transfers beyond literary studies. You might consider using this heuristic paradigm in your own teaching according to any of a number of topics.

For example you might take as your “passage” a class of elements in the Period Table; which is, in itself, a vast Memory Grid. Your passage—the main way into your topic—could be any one of the eighteen standard groups of the Table. Do this with any three and you are set to learn even more from what comes out of the “triangulation.” One student did this with the “Noble Gases”—the last column on the Periodic Table, with incisive results particularly as regards her focus on “words.” She was able to discern and analyze some intriguing connections based on the etymologies of these nearly inert gases. You might take as your focus a mathematical expression, such as the Riemann zeta function or “constants” in mathematics, such as “e,” “i,” or “ π ”—again, lending themselves to triangulation.

You might select a work of art or a portion of it, such a Van Gogh’s “Bedroom at Arles”—perhaps triangulating three objects depicted in that room, or even looking at two other paintings in the light of this one. One student did this with Edvard Munch’s “The Scream” (1893), one of the pieces in a series titled The Frieze of Life. By virtue of the caper star point concerned with “characters,” she focused on the figures in the background and the bridge with respect to the conflict of the inner and outer worlds. You could designate your topic to be a piece of music or a part of a larger work, such as the transposition at the end of Tchaikovsky’s 1812 Overture, a nocturne by Chopin, a series of leitmotifs in Wagner’s Ring Cycle, or Kanye West’s latest hip-hop song. One student looked at “C Major,” considering the formation of “key signature” in the West, triangulating its use in important works past and present [FIGURE 12].

You might work with a data-table from a study in sociology, psychology, or political science; a treaty or diplomatic accord (say, Treaty of Versailles, Geneva Conventions, or Stockholm Accord—perhaps triangulated any such three). One student did this for “The Emancipation Proclamation” and used her resulting caper star as the outline for a term paper in an American Government class. As she previously had been assigned to caper out a passage from Milton’s address to Parliament concerning The Tenure of Kings and Magistrates, she felt comfortable transferring this approach to another class. Her work demonstrated that having capered Milton’s speech gave her the key for analytically interpreting Lincoln’s famous proclamation in its own right and in its wider oratorical, political, and historical contexts.

Other possibilities for the caper star method include a specific enzyme; an economic principle or formula; the chemical integrity of a crystal; a certain plant's or predator's role in a given eco-system, and so on. Such a practice enables students and professionals alike to discover even more from a topic, specific problem, or discipline with which they are in some way already familiar. The Caper Star approach equips them to consolidate that knowledge so they will be poised to learn even more about it. In this respect mnemonics are both a storehouse for and a generator of important information.

Using the caper star in conceptual thinking

One final conceptual application needs to be considered, because it moves beyond specific texts to explore and to discern the connections between and among corresponding types of inquiry. After all, the academic disciplines, as they have come down to us, represent an implicit taxonomy that favors analytical reasoning and discursive practices. Thus there are historical as well as practical reasons that Milton is taught in departments of literature, though his prose works are as likely to appear on the syllabus of a political science course. With this in mind, the caper star method gives us a way to lay out and reconsider the principal areas of study in the human sciences.

If we follow the caper star clockwise, starting with "checklist" and signifying just the facts as they are presented, we have ready at hand a way to begin rethinking the types of inquiry proper to certain areas of thought [FIGURE 7]. On the first of the five points then, "checklist," let us hang journalism, objective accounts, and the raw data of scientific research. On the second, concerning "characters" and their relations, let us place psychology, sociology, anthropology, and politics. The third, at the bottom left, concerning "words," let us imagine linguistics, philology, rhetoric, and dialectic. The fourth point, "questions," accommodates philosophy broadly speaking, and the generating of topics and concepts, as well as modes of inquiry, whether inductive or deductive, proper to law and medical research. And finally, the top point, concerning "U" (a tag which stands for "you" as well as the first letter of "universal"), let us place ethics, religion, theology, and practices conducive to reflection and self realization—any means of understanding your place in the world and your stake in the matter under consideration. As the crossing lines of the five-pointed star indicate, all points are interrelated. As for the center, whatever one wants to place there can be illuminated by the five categories broadly conceived as just outlined.

CONCLUSION: CAPERS AND THE CONSTRUCTIVIST CLASSROOM

Capers make it possible for students to project where they want to go once they have seen the larger picture by virtue of having pieced together the component parts in ways that make sense to them. The judicious use of mnemonics not only strengthens natural memory (to reiterate an age-old claim among proponents of the memory arts) and leads to greater comprehension of material, but also—and which is more laudable still—gives one the means and inclination to apply in the world the larger lessons one has encountered in books. While the case studies discussed apply to works of literature, the caper star clearly lends itself to being transferred to virtually any discipline. Insofar as the innovation in education proposed here is based on ancient principles, it is, in the true sense of the term, revolutionary. The root word means to turn back or to turn over, hence the more radical implication of over-turning a dominant, or persistent, paradigm, whether in science, political life, or education. It is time that we turned back to, and recycled, views on education pertaining to the Memory Arts, a philosophy and a technology of learning which takes into account and which respects differences among students' needs and abilities. In so doing, mnemonics dance hand in hand with constructivist theories of learning.

Caper stars are geared to generate knowledge. A checklist of features associated with constructivist classrooms reveals at a glance the extent to which this is the case [Brooks, 1993]. The characteristics of presenting curriculum whole to part, with an emphasis on big concepts and relying on primary sources, corresponds on the caper star to the selection of the passage. The attribute of teachers generally behaving in an interactive manner, mediating the environment for students (as opposed to the traditional view inclining toward the didactic dissemination of information to students), aptly describes the teacher's role during group capering and triangulation exercises. Indeed, group work is a principal feature of the constructivist classroom. Among the chief things revealed from a completed caper star is the constructivist attribute of a teacher seeking the student's point of view, the better to understand his or her present conceptions. This enables the planning of subsequent lessons, rather than seeking, as in the traditional classroom, to correct answers so as to validate student learning. The premium placed on

encouraging and honoring students' questions, as opposed to the traditional view that strict adherence to fixed curriculum should be highly valued, corresponds to the forth star-point, "questions." Overall then, viewing students as thinkers with emerging theories about the world (which is central to the constructivist approach), sums up well the true spirit and application of the caper star.

FIGURES

- FIGURE 1 Hand mnemonic, lettered subdivisions; Raymond Lull, Ars demonstrativa (14th century).
- FIGURE 2 Hand Mnemonic, with five key images; Peter Iselberg, broadside sheet (c.1620).
- FIGURE 3 Inferno as Memory Scheme; Rossellius, Artificiosae Memoriae (Venice, 1579).
- FIGURE 4 Paradiso as Memory Scheme; Rossellius, Artificiosae Memoriae (Venice, 1579).
- FIGURE 5 Combinatory Wheel; Kircher, Artis Magnae Sciendi (Amsterdam, 1669).
- FIGURE 6 Five-part generative mnemonic; Kircher, Artis Magnae Sciendi (Amsterdam, 1669).
- FIGURE 7 Caper Star Basics © William E. Engel.
- FIGURE 8 Rebus-mnemonic for recalling Hotspur's Speech, Henry IV, Part One (4.1)
- FIGURE 9 Caper Star investigating Benedick's monologue, Much Ado About Nothing (2.3)
- FIGURE 10 Caper Star investigating Worcester's advice to Hotspur, Henry IV, Part One (3.1)
- FIGURE 11 Caper Star investigating Hotspur's reasons for rebelling, Henry IV, Part One (4.3)
- FIGURE 12 Caper Star investigating "C Major" musical key signature

REFERENCES

Bellezza, Francis, "Mnemonic Devices and Memory Schema," Imagery and Related Mnemonic Processes, ed. Mark A. MacDaniel and Michael Pressley (Springer, 1987), pp. 34-55.

Brooks, Jacqueline Grennon and Martin G. Brooks, In Search of Understanding: The Case for Constructivist Classrooms (Association for Supervision and Curriculum Development, 1993).

Cicero, De Inventione, trans. H. M. Hubbell (Harvard University Press, 1949; rpt. 1976).

Cicero [attributed], Ad Herennium, trans. Harry Caplan (Harvard University Press, 1954; rpt. 1981).

Engel, William, Education & Anarchy (University Press of America, 2001).

Fulwood, William, Castel of Memorie (London, 1562).

Khan, Kalid, Mnemonics for Medical Students (Hodder Arnold, 2003).

Plutarch, Moralia, trans. Frank Cole Babbitt (Harvard University Press 1927; rpt. 1986).

Kircher, Athanasius, Artis Magnae Sciendi (Amsterdam, 1669).

Quintilian, Institutio Oratoria, trans. H. E. Butler (Harvard University Press, 1922; rpt. 1979).

Thompson, Clive, "Your Outboard Brain Knows All," Wired (October, 2007), p.66.

Yates, Frances A., The Art of Memory (1966; rpt. Penguin Books, 1978).

FIGURE 3 & 4

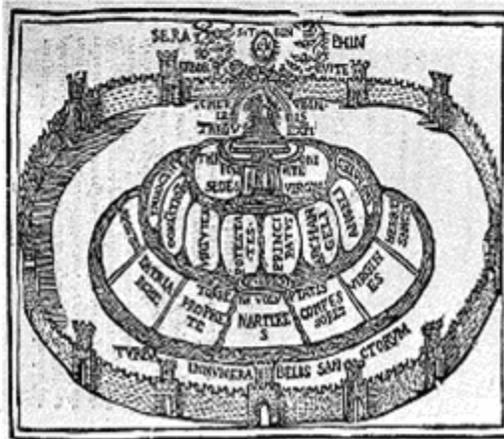
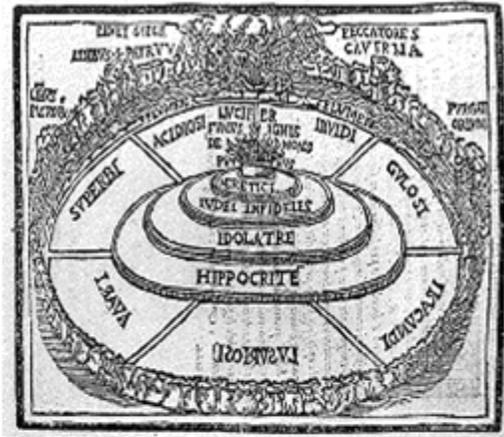


FIGURE 5 & 6

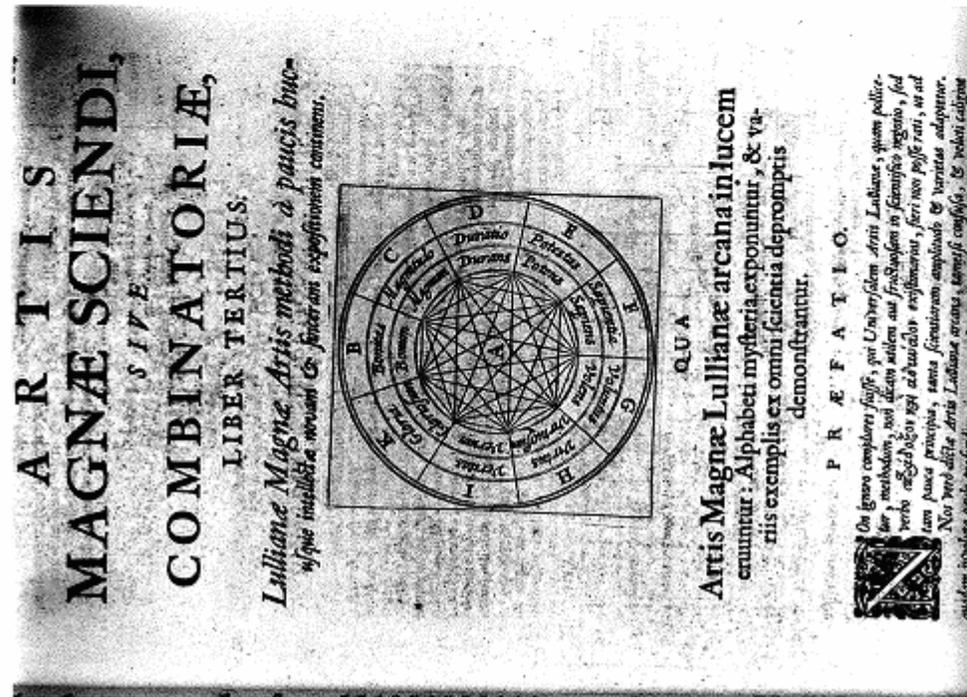
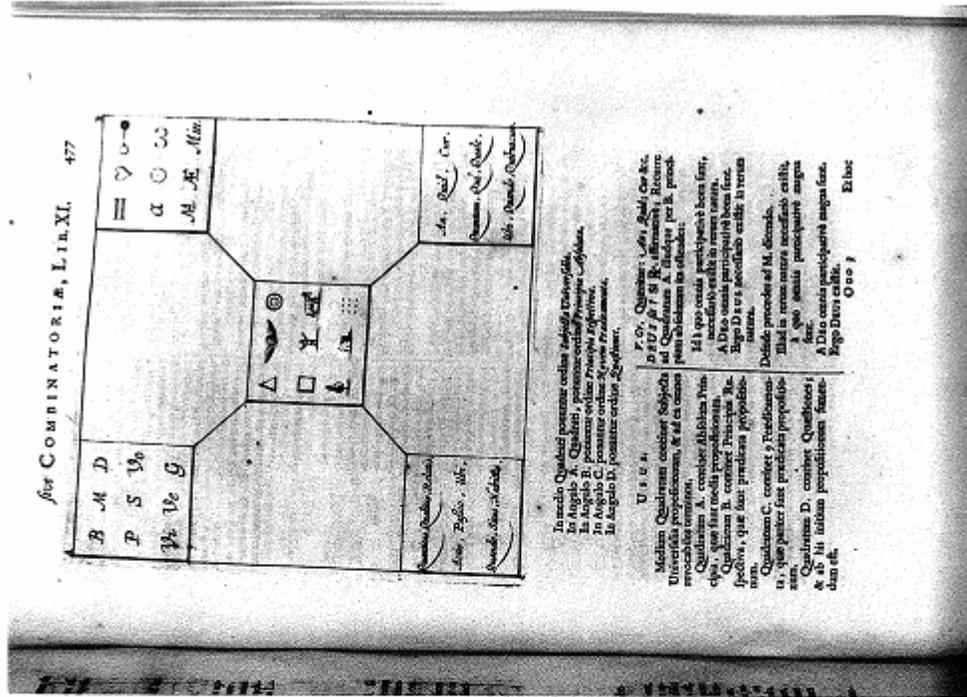
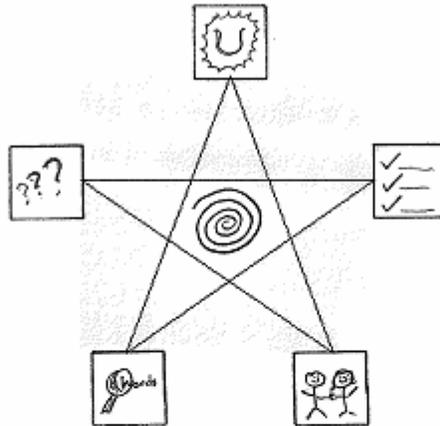


FIGURE 7

"Caper Star" Basics
© William Engel, 2007

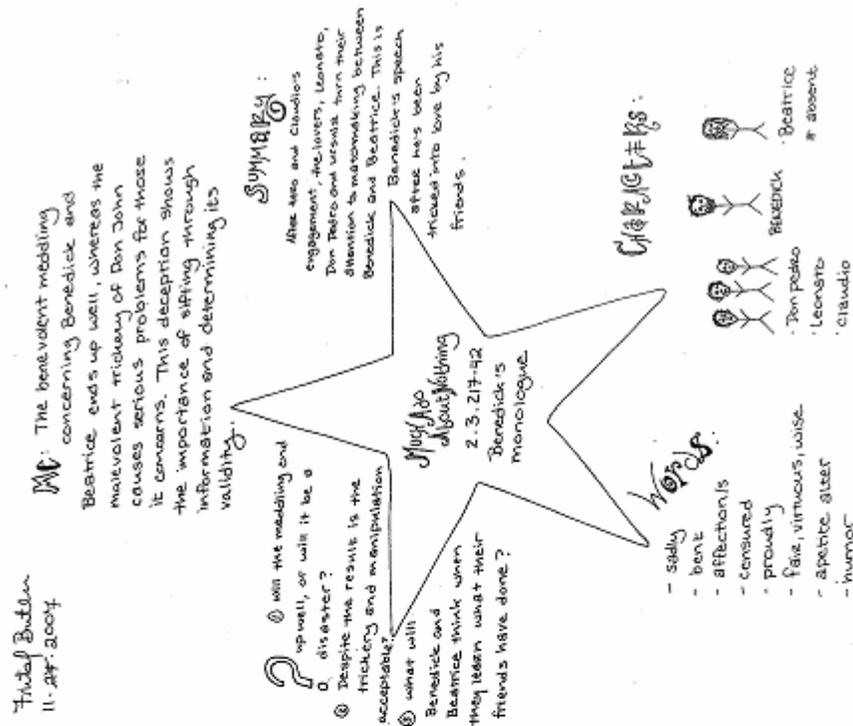
The minimum of what is required; any order you like that helps you plan your critical analysis or conceptualize how to imagine the issue or problem at hand:



5 main points (with the preliminary and conclusion, 7 elements to consider)

- 1) CHECKLIST – synopsis; what’s going on; what happens; main narrative movement
- 2) CHARACTERS (or speaker) -- relations between characters (and audience)
- 3) WORDS -- take a closer look at key words whether familiar or strange
- 4) QUESTIONS -- small to large; particular to general; precise to universal
3 types of response depending on question posed: direct – contingent – evaluative
Verbs of cognition (know), verbs of affect (feel), verbs of conviction (believe)
- 5) YOU – how it relates to YOU, and your concerns & human experience; HOW YOU RELATE TO IT. What you know, what you feel, what you believe & WHY
- 6) THE PASSAGE—what it is initially that takes you into the text...and out again; a way into the work, and out again, that provokes you to bring something “to presence”
- 7) INTER-RELATEDNESS--of all the components sorted out; what brings it all together

FIGURE 8 & 9



[disgusted]
No More, No More! Worse than the sun in March, this praise doth ourself agree.
(a.w-gyus)

[proud]
Let them come.
*They come like sacrifices in their trims, -
And to the fire-eyed maid of smoky war (all hot and bleeding) will we offer them.

The mailed Mars shall on his alters sit up to the ears in Blood.

[excited]
I am on fire to bear this rich reprisal is so high, and yet not ears.
Come, let me taste my horse, who is to bear me like a thunderbolt against the bosom of the Prince of Wales.

[indifferent]
*Harry to Harry shall, but horse to horse, meet, and ne'er part till one drop down a horse.

O that Glendower were come!

