THE UNIVERSITY OF TENNESSEE KNOXVILLE

The Journal of the Assembly for Expanded Perspectives on Learning

1995

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Recommended Citation

Calendrillo, Linda T. (1995) "Mental Imagery, Psychology, and Rhetoric: An Examination of Recurring Problems," *The Journal of the Assembly for Expanded Perspectives on Learning*: Vol. 1 , Article 12.

Available at: https://trace.tennessee.edu/jaepl/vol1/iss1/12

Mental Imagery, Psychology, and Rhetoric: An Examination of Recurring Problems

Mental Imagery, Psychology, and Rhetoric:
An Examination of Recurring Problems

Linda T. Calendrillo

A s writing specialists we often cross into psychology to inform our composing theories and practices. However, mental imagery in our field is not fully recognized as an area of inquiry from which to draw our theories. This is a mistake for those of us interested in enhancing our thinking about writing from the fullest possible range of disciplines. But this neglect is not surprising. Research into mental imagery is fraught with debate over its nature and the legitimacy of studying it. Indeed, by examining the parallels between the contemporary debate in psychology and the classical rhetorical debate surrounding the use of the mnemonic image, I show that the marginalizing of mental imagery in rhetorical theory and pedagogy is an old phenomenon.

In this article I look at the conceptual problems psychologists face as they describe, test, and apply mental imagery to show that we can trace similar problems in rhetorical history. I look at the contemporary debate between the pictorialists—those who believe mental images are like photographs in the mind—and the descriptionalists—those who hold that mental images represent ideas or sentences in the mind (Finke, 1989; Pinker & Kosslyn, 1983; Tye, 1984).

Let me summarize the problems that psychologists discuss when they describe empirical difficulties in experimenting with mental imagery. Ronald Finke (1989) in *Principles of Mental Images* isolates what he sees as two basic problems in studying mental imagery. Finke says mental images are first, subjective and second, elusive. Their subjectivity comes from their idiosyncratic nature (different individuals will image a bird differently), and so researchers have difficulty testing mental images (they cannot insure that the images they are comparing are in fact comparable, which leads researchers to fear inaccurate results). The mental images are also elusive (one person's bird may last longer as a mental representation than the next person's, and when the subject tries to regain the bird image, she or he may find a different bird or no bird at all). These difficulties make imagery research, Finke says, controversial.

These concerns resemble the classical disagreement on the viability of mental imagery as a mnemonic device. This debate hinges on the utility of the *loci mnemonic*, an imagery-based mnemonic art consisting of a series of mental images an individual imposes on memory to enhance the recall of information. The individual forms unusual and violent images and stores them in a sequence of previously selected holding places in the mind. For example, to remember five

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names, a person might image each individual with various bruises in a separate room in the person's home. This strategy for layering images, called the *loci mnemonic*, was embraced by Cicero (1948) in *De Oratore* as a longstanding and highly regarded mnemonic, but was rejected by Quintilian (1922) in his *Institutio Oratoria* a century later. Though the loci strategy was taught and used consistently through the Middle Ages, Quintilian's attack on it made its presence circumspect. Quintilian's argument against the *loci mnemonic* included some of the same strictures that Finke pinpoints as inhibiting mental imagery research today. Although Quintilian provided a clear description and analysis of the imaging strategy, he declared it overly complicated and unteachable, saying, in fact, "My precepts...will be of a simpler kind" (p. 227). We are given to understand that since the loci method was difficult to recreate, to track, and, as Quintilian believed, to teach, its value was suspect. At best, it was appropriate for remembering long lists of names but otherwise an incumbrance. Indeed, because it relied on a solitary learner, the loci did not lend itself to the rote memorizing that Quintilian favored. In part, the medieval use of alphabet books, commonplace books listing prescribed images for each corresponding letter, reflected a retreat from independent images. This same disregard of the loci as unteachable was repeated by Geoffrey of Vinsauf (1971) in the early thirteenth century when he said, "Tully [Cicero] relies on a theory of exotic images, which it is well to remember; but he is teaching himself and is, as it were, the sole devotee of his subtle system which is of a subtlety unique to himself" (p. 105).

Quintilian (1922) also foreshadowed the debate on the nature of the image that is argued by the pictorialists and descriptionalists. As a descriptionalist, Quintilian believed that images were simply metaphoric representations of ideas and language which he did not believe could be adequately visualized. Quintilian, in analyzing the *loci mnemonic*, worried that words would be lost or confused as images replaced them in individuals' mind. He argued against using the loci strategy to help remember texts: "How can such an art grasp a whole series of connected words?" (p. 225). In fact, he saw the method as a hindrance to a rhetor: "Will not the flow of our speech inevitably be impeded by the double task imposed on our memory?" (p. 227). This double task is translating words into images and then retranslating them back into words. Quintilian feared that the rhetor would be unable to translate some words, a decidedly descriptionalist perspective. He also feared that the images when recalled later for linguistic transcription would not accurately match the words that triggered the image. Quintilian's position, which valued the verbal over the visual, ignored Cicero's contention that images were more vivid and more easily recalled than words.

Research methodologies today create difficulty for those examining mental imagery, by muddying research results and complicating discussions. When testing memory strategies, psychologists often investigate the classical directive to use bizarre or violent images to enhance recall (Rollins, 1989; Riefer, 1992). This particular component of the classical imagery mnemonic (*Rhetorica ad Herennium*, 1954) has been studied broadly in psychology, perhaps in part because it allows for a relatively straightforward empirical design that measures whether or not exotic images are recalled more easily than neutral images (Riefer, 1992). To establish this empirical design, researchers need only give

directions for storing images that differ in their description of the nature of the image (one group gets bizarre/violent, while the other does not). Researchers have tested this principle with uneven results (Richardson, 1987; Rollins, 1989). In memory research that examines the *loci mnemonic*, this empirical design also recurs, with often inconclusive or contradictory results.

Studying violent images may in itself be problematic in contemporary Western culture. If subjects used for these tests are desensitized to unusual images in the films they watch or the news they see, the classical prescription for those images may not be effective for them. I make this suggestion in part based on the work of John Richardson, a psychologist who questions the research methods used in memory work. In his 1987 critique "Social Class Limitations on the Efficacy of Imagery Mnemonic Instructions," Richardson suggests that the socio-economic backgrounds of the typical research subjects (college students) skew the results of that research. These subjects, he argues, are empowered by social class and believe themselves capable of performing well on such tests, are empowered to learn, and consequently may use learned strategies more effectively than those from less privileged backgrounds. Richardson's critique of memory testing can apply to the bizarreness tests. Would Riefer and Rouder's study (1992) have yielded the same results had their subjects not been University of California-Irvine students? Richardson encourages us to doubt the ability to generalize from these and the results of other studies.

Major shifts in the treatment of the image, I believe, began in Western culture during the Middle Ages. We again see something of a fringe science when imagery was relegated to the status of memory enhancer to help Christians adhere to virtue and avoid vice (Carruthers, 1990; Yates, 1966). To claim that imagery was used during this extended period to teach illiterate people religious principles is an oversimplification, but a useful one. The architecture of the times used statuary extensively to represent virtue and condemn vice, especially in its cathedrals. Relics that were valued as talismans of goodness and power were housed in containers that recreated the artifact in some fashion. A fragment of St. Louis's jaw, for example, is enclosed in a gold bust in Paris's Cathedral of Notre Dame. Symbolizing the relic this way reminds viewers of its strength and its material wealth and of the value of living virtuously. The notion that illiteracy necessitated the iconography of the Christian faith may be partially responsible for the devaluing of the mental image in a literate culture. If words are preferred as efficient codes of thought and if images are tied to lower class illiterate cultures, then valuing images reveals social class and ignores literacy as a status symbol.

In contemporary thinking, mental imagery, even when discussed by those who support its validity, is often described in preliterate terms as well. For example, Finke (1990), in *Creative Imagery: Discoveries and Inventions in Visualization*, endorses using mental imagery as a "preinventive form," an almost primitive term which Finke uses to identify "the products of combinational play of visualization" (p. 3), wherein individuals form, combine, and manipulate images in ways we might call a prose invention strategy. This view of the mental image is also reflected in Flower and Hayes's (1984) "Images, Plans, and Prose," in which non-verbal imagery is listed as a preconscious form of cognition along with structural relationships and procedural knowledge. In a chapter of his book

called "Imagery on the Bounds of Cognition," Mark Rollins (1989) tells us that "a theory of mental imagery can elucidate a range of issues from animal cognition to artistic creation" (p. 132). Though Rollins' statement does not intend to disparage mental imagery, I am struck by the marginalizing language he chooses. Mental imagery as a mode of thinking is something done by dogs and artists; medievally, thinking in images was something done by the uneducated, and only those on the fringe of our field seem to be studying or endorsing its use.

When we begin to look at where in composition studies the use of mental imagery is most often cited, we see continued neglect. Mental imagery is used by some cognitive psychologists in a range of applications: to solve problems, think creatively, and enhance memory; in psychotherapy mental imaging is used to reduce stress and combat phobias; and in athletic training to improve physical performance. Yet, currently mental imagery is not seriously considered by most mainstream composition theorists as a viable component of the process. It is an area of concern within NCTE's Assembly for Expanded Perspectives on Learning (AEPL), established in large part by Alice Brand and Richard Graves. This concern is further endorsed in Brand and Grave's *Presence of Mind*, which includes essays on mental imagery. But apart from its inclusion in the work of AEPL, what little work is being done in mental imagery is in technical writing. Though this application represents a beginning, it unwittingly reinforces some of the same marginalizing of mnemonic imagery strategies of the ancient Roman rhetoricians. In an article, "Using Visual Mnemonics to Make Instructions Easier to Remember," in the *Journal of Technical Writing and Communication*, for instance, Hirst (1990) endorses visual mnemonics but does so in a way that contradicts both the principles of the classical *loci mnemonic* and contemporary psychological thinking. However, this treatment is in keeping with the spirit of medieval imagery.

Though Hirst cites the work of contemporary imagery psychologists and memory researchers, along with the classical mnemonic imagery strategy discussed in the *Rhetorica ad Herennium*, his strategies contradict these sources. Hirst instructs those who write technical instructions to use cartoon images to enhance their readers' recall of information. These cartoon images toy with the physical properties of objects, thereby exaggerating cartoons even more. For example, to create an image for tuning an engine, the cartoon might show a man drawn much smaller than a car engine handling an enormous and angry spark plug. (This same strategy was used by the Pentagon in the 1950s when it enlisted Will Eisner's talents to prepare comic books for soldiers to train them in auto mechanics.)

Hirst's use of mental imaging falls short of both classical and contemporary strategies. First, one essential element of the classical mnemonic is the idiosyncratic nature of the image; for the image to be recalled, persons storing the image must create their own image. According to the author of the *Rhetorica Ad Herennium* (1954):

> Often in fact when we declare that one form resembles another, we fail to receive universal assent, because things seem different to different persons. The same is true with respect to images: one that

is well-defined to us appears relatively inconspicuous to others.
Everybody, therefore, should in equipping himself with images suit
his own convenience. (p. 223)

Hirst's treatment of images echoes the medieval creation of stock images and
reinforces the historical marginalizing of the image.

Although Hirst's treatment of the image does not coincide with the classical
mnemonic system, his modern, technical version does mimic a strategy used in
constructing "emblem" books of the early Renaissance (Freeman, 1970; Lechner,
1962; Thompson, 1924). These books used a text to exemplify a woodcut that
visually represented a virtue or vice, teaching a lesson both visually and
verbally. Problems arose, however, in producing emblem books due to new and
often faulty technology. The woodcuts that the emblematic texts were meant to
gloss were difficult and expensive to produce; therefore, it became routine for
printers to use whatever woodcut they had on hand. Rather than create text and
image, authors of emblem books chose to write texts to match the available
woodcuts. This practice resulted in a kind of seventeenth-century clip art, wherein
often inappropriate images were used as a gloss on texts. The image became
secondary to the text, functioning as an ornament rather than as the subject of the
lesson and the means by which the lesson was effectively learned. This
standardization of the image relegated it to a secondary status, mirroring again
its position as less valuable than verbal representations.

Today, the difference between emblem books and mental imagery echoes the
polarization between pictorialists and descriptionalists by refocusing attention
on their competing status. Which is predominant? Which has more validity, more
integrity? Are mental images real pictures (Platonic embodiments of the thing
itself) or are the pictures simply metaphors, constructed from visually powerful
terms to articulate ideas? Can researchers develop tests that measure whether
subjects are translating visual images into external pictures, or translating
picture images into words, or combining these two operations in some way? Can
we answer the philosophical question of which comes first, the image or the word?
(Finke, 1989; Rollins, 1989).

In contemporary writing pedagogy we must be aware of the complexities
implicit in the use of mental imagery and of the problematic history that sur-
rounds it. But more important, we need to consider how mental imagery can help
writer create texts, how mental imagery reinforces the way writers arrange texts,
and most difficult perhaps, how readers of texts use mental imagery to enhance
their understanding of, their enjoyment of, and their use of those texts. The ways
in which we discuss mental imagery in our discipline should not further divide
us into those who fit the mainstream and those who are peripheral to it.

And although we need to study the psychological processes in mental
imagery, we need to remind ourselves that this work is not without limitations.
Not only must we consider the cultural interferences Richardson warns us of, but
we also need to be aware of the mechanization of the mental image. Prominent
cognitive psychologist, Geoffrey Loftus (1989), alludes to these limitations when
he says, "Computer simulations are seducing us away from doing real creative
thinking in the behavioral sciences" (as cited in Finke, p. 145). Even today we

fall into the trap that beset the late emblem authors. Current psychological work in mental imagery constructs computer simulations. It attempts to pinpoint the relationship between mental and physical images and discusses them in technical vocabulary that mimics the mechanical. Even Kosslyn and Shwartz's (1977) model of mental images, which arises from a pictorialist view, describes mental images as having scanning, zooming, and rotating computer-like properties. Though we cannot deny this view of imaging, we must not be seduced by it, away from the creative thinking we need to make mental imagery a valuable part of composition theory and practice. ◌

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