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Cover Page Footnote

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For a long time we have known that mental imagery plays a significant role in the thought and writing processes of creative writers. In the *Writers at Work* series and similar publications, writers sometimes reflect on ways in which compelling images serve to generate ideas. They report that even a simple mental picture, occurring at the inception of a writing session, can then diversify and develop into complex plots, characters, and settings. John Hawkes, for instance, described some of the mental images that inspired his various writings:

In each case what appealed to me was a landscape or world, and in each case I began with something immediately and intensely visual—a room, a few figures, an object, something prompted by the initial idea and then literally seen, like the visual images that come to us just before sleep. (10)

It is easy to guess how and why mental images should figure as centrally to composing for creative writers as they do. After all, such images in the writer's thoughts of rooms, people, or landscapes are often mirrored by the images they include in the texts themselves. But it is not so easy to see how or why such mental images might play a significant role for writers using forms other than creative writing. Why should they? Most non-creative texts, abstract rather than concrete, typically contain few images.¹

In a study of mental images and non-creative writing, I attempted to answer this question by taking "thought samples" designed to capture mental images as participants wrote an assigned essay. I also conducted interviews with those participants who relied heavily on mental images as they wrote. In the portion of the study presented here, I highlight several examples of mental images used by writers and their varied rhetorical functions. I have also included examples of mental imagery from other retrospective or concurrent self-report accounts of writers in other studies and from the informal self-reports in interviews with creative writers because all these accounts not only provide close glimpses of actual mental imagery, but also suggest their rhetorical functions.

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¹ For lack of a better term, I will call this large category "non-creative writing" in this essay. By non-creative writing, I include such pieces as the expository essay written by my participants, the academic writing samples from all disciplines that my participants brought to interviews, along with the variety of forms found in studies I cite such as technical or expressive writing. In other words, I am looking at the large category of work that is not creative writing.

Other Self-Report Snapshots of Mental Imagery and Its Role in Writing

In choosing to gather exemplary data through self-reports in my study, I was partly following the general approach of Linda Flower and John R. Hayes who, in their studies of cognitive processes in writing in the early to mid-1980s, produced some compelling and informative snapshots of writers' ways of working. Setting aside all the now-standard critiques of their work (the reductionist nature of their model, the lack of a social dimension, the limitations of protocols, and all the rest), what I found most interesting in their studies were the mental images that appeared from time to time in the snippets of protocol transcripts. In one piece, in particular, "Images, Plans, and Prose," Flower and Hayes focus on mental imagery, proposing what they call a "mental representation thesis" to explain how mental images are one of an entire array of internal representations for knowledge that are then subsequently translated into conventional prose. Ultimately, they explain: "Concepts—the power and glory of verbal thought and the hallmarks of precise analytical prose—are themselves abstractions, often mentally represented by generalized prototypes . . . by images, by buried metaphors, or by schemas" (142). For them, the verbal representations are far more significant than the imagistic. However, they found enough evidence of mental imagery in their protocols at least to note their presence. In part of one protocol, for example, we see a brief reference to what is called a "party schema," that is, information about social gatherings that appears to be "stored" as imagery:

- (1) Rhetorical question or introduction.
- (2) I'm thinking—where can I go to find all of these people happy together?
- (3) My fields are partying they brought over all these people.
- (4) Quote—unquote—Kentucky Lady—etcetera—now
- (5) I feel blank.
- (6) Who's the strongest—person in the world [mumble].
- (7) The question is who is the strongest person in the world.
- (8) Competition—remarks—your policeman—he holds up—cars with one hand.
- (9) But cars are so big—but cars are—but cars don't wiggle.
- (10) My job—no.
- (11) I disagree [mumble].
- (12) But cars don't wiggle—but cars don't wiggle. (127-28)

In this example, the writer does seem to be proceeding digressively by fits and starts, sifting through fleeting images of parties ("My fields are partying..."; "Kentucky Lady"), though the images never wind up appearing later in the writer's actual text. In a subsequent piece of the same protocol, the writer continues to play with the images associated with colorful drink names ("Kentucky Lady," and others). Such mental imagery can also be found scattered throughout other Flower and Hayes protocol excerpts in other articles, though they do not call attention to them. For Flower and Hayes, mental imagery, then, appears to play a limited role in writers' processes and to serve a largely generative function, acting simply as one of a variety of mental representations to aid invention. Yet this particular piece of protocol provides a close glimpse of mental imagery at work in writing.

A more recent view of mental imagery and writing from psychology can be found in Mark Sadoski and Allan Paivio's *Imagery and Text* in which they note multiple experiments conducted throughout the 1990s in which participants were

asked to write briefly the definitions of abstract and concrete words. In the post-sample self reports of all the participants, writers reported far more mental imagery in writing when the topic was to define something concrete (instead of something abstract). In addition, the texts of concrete definitions were significantly longer, thus suggesting that copious mental imagery may encourage greater writing fluency and output. Sadoski and Paivio treat the abstract and the concrete as distinctly different categories, unlike George Lakoff and Mark Johnson, who theorize that abstract concepts have an underlying experiential base. In my study, too, many writers, explaining “how they learn,” an abstract concept, saw mental images exemplifying the abstract concept, whether they used a concrete example in their essays or not. Sadoski and Paivio also theorize a dual coding system of the verbal and the visual, unlike Flower and Hayes who envision multiple codes. Perhaps for that reason, they envision a far more central role for mental imagery in writing than do Flower and Hayes who see it as somewhat peripheral. In fact, Sadoski and Paivio speculate that mental imagery must play a variety of rhetorical roles, including, for example, shaping the writer’s persona and conception of audience and producing rhetorical constructions from which all sorts of stylistic choices may be made. Their conjecture is that writers may continuously draw on visually coded material in their long-term memory throughout any writing task.

Other indications of the rhetorical role of mental images occur in, for example, Kristie S. Fleckenstein’s work in which she found that high levels of engagement in writers were correlated with both their scores as high imagers on a standard instrument for measuring images and a greater amount of imagery actually present in their texts. Demetrice A. Worley, in her study, trained technical writing students extensively in using visual imagery and found that the training improved their writing in a variety of ways, including encouraging them to use more detailed information, to see situations from a variety of viewpoints, and to play out varied scenarios in which different causes lead to different effects. Both these studies were carried out in the 1990s, preceding what has become a general renaissance of interest in “visual rhetoric.” For decades, as Linda T. Calendrillo has pointed out, mental images were as marginal in our field as they were in psychology and classical rhetoric. Flower and Hayes probably spoke for most compositionists in saying: “The [verbal arena] is where most of the work gets done; it is the *sine qua non* to *written* verbal knowledge; and it is the level at which education does the most good” (124).

Historically, most scholars agree that interest in the visual and writing/rhetoric waxes and wanes with developments in the visual in adjacent fields (i.e., computer technology in the last decade; scientific discoveries in the way the human eye works during the Enlightenment). Currently, we are seeing evidence of this renaissance in the appearance of not only new collections of research (*Language and Image in the Reading-Writing Classroom*), but also a variety of textbooks (*Visual Communication*; *Visual Literacy*; *Seeing and Writing*).

Outside the fields of rhetoric/composition and psychology, creative writers have often provided informal retrospective accounts of the workings of mental imagery when they reflect on their writing. Not only do they frequently refer to the importance of mental images, but they also suggest specific rhetorical functions that such images may perform. For example, at the outset, writers may become engaged by compelling generative images that seem to hold the kernel of an entire story. Tennessee Williams once reflected:

The process by which the idea for a play comes to me has always been something I really couldn't pinpoint. A play just seems to materialize; like an apparition, it gets clearer and clearer and clearer. It's very vague at first, as in the case of *Streetcar*, which came after *Menagerie*. I simply had the vision of a woman in her late youth. She was sitting in a chair all alone by a window with the moonlight streaming in on her desolate face, and she'd been stood up by the man she planned to marry. (84-85)

This mental image seems to guide not just the development of his main character, but to suggest the entire melancholy mood of the play, its set of faded grandeur and decay, and the pivotal scene in which the faded youth of Blanche was exposed in harsh light. For E. L. Doctorow, such inspiration is a combination of image and intense emotion. He once commented:

Well, it can be anything. It can be a voice, an image; it can be a deep moment of personal desperation. For instance, with *Ragtime* I was so desperate to write something, I was facing the wall of my study in my house in New Rochelle and so I started to write about the wall. . . . Then I wrote about the house that was attached to the wall. It was built in 1906, you see, so I thought about the era and what Broadview Avenue looked like then; trolley cars ran along the avenue down at the bottom of the hill; people wore white clothes in the summer to stay cool. Teddy Roosevelt was President. One thing led to another and that's the way the book began, through desperation to those few images. (305-6)

This inspirational mental image, like that of Williams, seems to encapsulate the novel, which, as its title *Ragtime* suggests, is more than a story but rather an invocation of an entire era. Other creative writers mention mental images that not only generate ideas but also structure and order them. For instance, Stephen Spender, in another anecdotal account, described how a mental image could suggest text structure to him: "Often a very vivid memory, usually visual . . . suggests that it could be realized in concentrated, written language, in a form which is adumbrated dimly, not yet clear. . . to be discovered" (70). William Goyen compared creating structure in writing to the visual pattern of a quilt: "That seems to be what my writing job is: to discover this relationship of parts. . . . In a beautiful quilt it looks like the medallions really grow out of one another" (197-98). Other mental images seem to serve less global rhetorical functions. Characters, for example, may come alive through visual and auditory imagery. Elie Wiesel said of his character Moshe the Madman: "I try to see him . . . I move him around. I hear his voice, and I see his eyes. I am burned by his madness" (235). These few representative accounts (and there are many more) suggest that mental images may take a variety of shapes and play a variety of rhetorical roles in writing, both creative and non-creative. But, as yet, we have only a few fragmentary descriptions of them.

Capturing Mental Images in My Study

Overall, my study was designed to determine how common mental images were during a non-creative writing task, to gather examples of them and their rhetorical functions, and to see what relationship, if any, imaging had to the texts

that were emerging in response to my assigned task. To gather this information, I asked 148 undergraduate writers to write on the topic of how they learned best. The writers were a mix of upper and lower division students from majors in business, science, social sciences, the technical fields, and the humanities whose writing abilities varied from weak to strong. During a forty-five minute writing session, writers were interrupted three times and asked to fill out a brief “thought sample” questionnaire in which they reported on their last few seconds of thought, along with reflecting on how their thought may have been related to what they were writing. They also marked an “X” at the spot in their texts where they were interrupted. Thus, I was able to compare the thought they reported on their questionnaire with the ideas in the actual text they were writing at that point. After their thoughts were reported, participants resumed writing. At the end of the 45-minute session, they also reflected on their entire experience of writing the essay in a post-sample questionnaire.

In choosing this method, I modeled my questionnaire on thought sample instruments sometimes used for mental image research in psychology (Anderson; Genest and Turk; Klinger). In some naturalistic studies of mental imagery, participants are interrupted periodically throughout their normal daily activities and prompted to fill out a thought sample questionnaire. Unlike think aloud protocols—better known from the Flower and Hayes studies of cognitive processes in writing—which are an ongoing report of all thoughts for an extended period of time, thought sampling is a periodic and random report of one brief thought. Protocol reports are said to distort natural thought by elongating it, whereas thought samples, which are only minimally intrusive, are said to preserve the natural brevity of thought. Indeed, most thoughts tend to last on average only five seconds (Anderson 168). Thus, as a method, thought sampling is generally considered to be less intrusive and more accurate than protocols. In my study, brief open questions asking writers to report the last few seconds of thought were combined with other questions, such as whether they were thinking in mostly words, mostly images, or both, and with questions designed to identify dimensions of images such as their level of detail or vagueness. Participants were trained ahead of time to report mental images using established training techniques (Klinger) in which they practiced filling out thought sample questionnaires. I described the purpose of the study and explained what verbal thought and imagistic thought were. Their essays were also holistically rated so that I could examine any connections between mental imagery and writing ability. Once I statistically analyzed the data from the questionnaires, I then interviewed eleven of the participants who used mental images extensively in order to learn more about the role of mental images in their ways of working. During the interviews, participants commented on their thought sample responses and the writing session itself, described their ways of writing using other samples of writing, and provided general histories of their use of mental imagery as writers.

Mental Images in the Writing of My Participants

Overall, mental images were reported by writers in strikingly large numbers of thought samples. Out of a total of 444 thought samples, in approximately a fourth of them, writers reported thoughts in “mostly images,” with another half of them “both words and images,” and another fourth, “mostly words.” So clearly their processes were, as Flower and Hayes once said, “not a logical, fully explicit,

or even necessarily verbal journey” (129). Since I was able to compare the thought reported in the thought sample with the “X” each participant had marked in his or her essay, I was able to determine which mental images also appeared in their actual texts. Slightly over half (55.9 percent) of mental images reported in thought samples appeared in their texts. Most often, writers (who were asked to write about how they learn best) referred briefly to specific learning experiences (a class, or a trip, etc.) without making explicit the internal imagery accompanying these thoughts. However, an additional 41.8 percent of mental images reported in thought samples never appeared in the text at all. For example, one student who was making a point about Socrates was visualizing him when interrupted by a thought sample, but never mentioned him at all in her text. Thus there is an astonishing amount of imagistic activity that we would be unlikely to predict based on what actually appears in final texts. Selections from some of the students I interviewed, which follow, give a fuller account of the mental images they saw while writing and the rhetorical functions they served.

Gena: Searching Through a Succession of Mental Images

Many writers reported that mental images were ongoing, as might be expected from research on the role of imaging in the natural “flow of thought” (Klinger; Pope). Images occurred in procession, seeming to shift as thoughts shifted. Thus, a mental image reported in a thought sample might be associated with a thought just passing or one just developing. For example, one writer explained an image in his thought sample: “I was thinking of Europe because I had just written that one way my courses had helped me view things differently was through my six month trip to Europe last year.” In his text he then further developed this idea by using an incident from the trip.

Gena, an art history major and a creative writer, told me that she was always aware of the visual, often noting and storing strong visual impressions. She said: “I look at something, and something will snap. I think, ‘How could I paint that?’. . . . I always take a camera with me.” While writing, even non-creative writing, she sees a procession of mental images: “I tend to float from picture to picture as I’m writing.” Not all these images are used in the final draft, but instead seem to be part of an imagistic process she often referred to as “searching.” As she described it: “A lot of the images don’t get to paper because it keeps changing. . . . I’m searching for just exactly what I want.” The mental images she sees are often vague and general until she senses she has found what she is looking for. At that point, they become very distinct and detailed. She explained: “I think once it’s not needed anymore, it goes away.” In one of Gena’s thought samples, she was stopped while explaining what it is like to learn a foreign language. She wrote:

Learning Chinese, especially the characters, is a lot like learning the alphabet if one thinks about it, (**STOP**) a lot of memorization and practice, just like the practice it took to learn to ride my bike or to draw.

In both her thought sample and interview, she revealed that she was seeing images of not only bikes, drawings, and the alphabet, but also several other mental images in quick succession, such as one in which she was learning to tie her shoelaces. Her process of “searching” or “groping for an idea,” as she called it, meant searching through all the mental images that floated around in her thoughts.

Ethan: Caught at a Transition Between Mental Images

Sometimes writers were caught at transitions between topics, entertaining two mental images simultaneously, with the upcoming image gradually displacing the previous one. Ethan, for example, a student I interviewed who was an English and philosophy major, was stopped in his essay just before he was about to begin explaining his job. He wrote:

One year later, I was hired as an intern in the county attorney's office. My job is to organize the witnesses for all cases (we prosecute all criminal cases in Hennepin County) and make sure they know when they are supposed to testify. Additionally, I go down to the actual court cases and watch those witnesses testify.

(STOP)

In his thought sample he reported holding two detailed images in mind. In the first he said he was recalling an idea he once learned in a philosophy class while visualizing the actual classroom, with this mental image connected to a point he made previously. The second mental image was connected with experiences on the job, the topic he developed next. Like Gena, Ethan seems propelled forward from idea to idea by a stream of images: when the mental image changes, the idea changes.

In cases like these, mental images newly forming or just passing tend to be less detailed and less focused than those in which a writer is currently engaged. Overall, in approximately two-thirds of the thought samples, writers reported some degree of detail in their thoughts. In contrast, in nearly one-third, thoughts were "somewhat" or "very" vague. Writers I spoke to were aware of these differences in image resolution. Thus, while one writer struggled to flesh out the meaning of a teasingly fragmented and vague outdoor scene, another became engrossed in seeing and remembering all the minute details of a dance class. Even the same mental image tends to vary in its degree of detail over the course of a writing task. According to writers like Gena and Ethan, this procession of mental images moves continuously throughout a writing task and seems to provide them with a sense of continuity among the different ideas.

Bette: Managing Simultaneous Mental Images While Writing

While writers like Gena and Ethan described their mental images as sequential, other writers reported multiple images that appeared simultaneously as they worked. Bits and pieces of images coalesced into jumbled visual configurations from which writers then selected. Bette, for example, was interrupted while explaining how time is calculated in geological terms. In her text she wrote:

When you're dealing with events that took place millions of years ago, you don't get exact dates, so you think in terms of what happened before or after what. So instead of thinking of the dinosaurs as existing 60 million years ago, I think of them existing in the Jurassic period which is shortly after Triassic when mammals were first coming around **(STOP)** and quite a bit after the Devonian when animals first came up on land.

At the time of interruption, she was seeing detailed mental images, as she

said on the thought sample questionnaire, “a double image in my mind.” She reported:

I was thinking of the fish in the Devonian period coming up on land starting to get little feet. I was trying to remember exactly how long—how many periods existed—between the Devonian and the Triassic. I had a double image in my mind. One of the geologic timetables, one of Mesozoic and Paleozoic trees and creatures coming out of the water to the land.

During her interview, she explained that the timetable was a replica of a graph she remembered from her geology class that she was using to be able to recall the different geological eras. Such internalizing of images that were once external in order to recall information later was a strategy often reported by writers in my study. The other mental image she was seeing simultaneously against this geological graph backdrop was a cartoon-like picture of creatures coming onto land from water. In fact, the only textual trace of all this visual activity was her statement in her text (where the STOP marks her interruption): “when animals first came up on land.” Strong writers like Bette told me such profuse images were stimulating, while weaker writers, in contrast, often reported that they were confused and distracted by a flood of images that did not always relate to the idea at hand.

David: Struggling with Simultaneous Mental Images

David, a physiology major, told me he had always disliked writing; his problems with grammar and spelling were, in fact, so severe that he once failed an English class in high school. And, indeed, his essay was scored holistically as being in the “weak” writer range. In addition to his mechanical problems, he planned and revised little and had trouble generating and organizing material. But he was also a visual thinker with such a keen eye for detail that he could sketch a dollar bill from memory. While writing, he described his mental images as “like a video; it keeps going.” He used these mental images to help him cope with his spelling problems, he said, by seeing general shapes of words and hearing them sounded out. But sometimes these images were distracting for him. In fact, in his essay he was interrupted while writing this passage:

When writing I’m a very poor speller. It might be that I mispronounce my words. I can see when they do not look right because I’m good with patterns. I was writing a paper the other day and could not find the proper spelling for ‘scathed.’ I have trouble (STOP) keeping my b’s and d’s straight when I’m this tired.

In his thought sample (at the STOP) he reported his mental image as “Going through dictionary, making a phone call to a friend, remembering phone conversation.” So he was not only seeing all these scenes simultaneously, but also hearing bits of remembered conversation, though there is no evidence in his text of all this visual and auditory activity. For stronger writers, like Bette, the profuse mental imagery seems to propel her writing forward. However, David, a weaker writer, told me he sometimes had a hard time controlling the flashing images. For him, the mental images were both a help and a hindrance, sometimes assisting him in spelling correctly and, at other times, distracting him and adding to a sense of cognitive overload that made his spelling even worse. In fact, when

I compared the 148 participants' overall use of mental imagery in describing their essays' theses with how their essays scored holistically (on a six point scale) as strong (5-6), typical (3-4), or weak (1-2). I found writers of weak essays far more likely to report their thesis as connected with a mental image. Twice as many writers of strong essays reported they saw their thesis as a mental image than as words, whereas five times as many weak writers reported their thesis as a mental image rather than as words. Thus, writers of weak essays may face additional difficulties in learning to control their mental imagery, along with the rest of their writing processes.

Ellen: Entertaining Successive and Simultaneous Mental Images for Her Own Amusement

Many writers spoke of their mental images as vital to creating interest in their writing, whether it was dramatizing what they had to say or just injecting some humor or playfulness into an otherwise dour task, particularly assigned academic writing, which for many of my participants was inherently boring. Ellen was an English major who was not a creative writer but who loved to read literature, had a vivid imagination, and was having difficulty adjusting to the demands of the academy. She had tried including colorful quotations and humor in her papers in order to enliven them. As she told me: "It's hard to just write the standard thing. I try to put some life into it." Yet her efforts generally went unrewarded.

When she described her writing process, she said: "Everything is in terms of images and feelings. I'm not even remotely logical." Indeed, the way she described structuring papers seemed to verify what she told me. She first selects quotations from her readings, types them on strips of paper, cuts them out, and sorts them into a pattern—both seeing and hearing the words as she organizes her paper. At one thought sample interruption, she was stopped while still taking notes for her essay. Listing classes in which she had done cross-learning, she wrote: "Theory of the Novel—too far above my (STOP) present limited capacities—calculus above all—my utter nemesis." In her thought sample (at the STOP) she reported:

I was going to write that the class 'Theory of the Novel' was too far above my present capacities. I was thinking of examples of classes that didn't apply to my personal experience—and looming hugely above the others like a big black thundercloud, I saw 'CALCULUS' written in huge block letters.

When comparing the thought sample and text, the only trace of her complex mental image to appear in it is the word "above." The black thundercloud of block letters she saw is only referred to in the text as "my utter nemesis." In her interview she added that much of her dislike of calculus was because it was so rule-bound; its theorems seemed "written in stone." So it is not surprising that "huge block letters" appeared in the mental image she reported.

Ellen and other writers in my study who enjoyed their mental imagery found it not just a way to get interested in what was for them otherwise boring writing tasks, but a way to play, to express their creativity, and to experience strong feelings—and, if allowed, to enliven their writing. As some psychological research suggests (Wilson and Barber 340), "high imagers" or "fantasy prone individuals" seek out and enjoy the strong emotions and even bodily reactions associated with

their mental imagery. Ellen, in particular, seems to fit this profile, even more than Gena, Ethan, and Bette who also found mental imagery stimulating.

Conclusions and Implications

The examples I have included from my study demonstrate how pervasive mental imagery can be for some writers. Gena, Ethan, Bette, David, and Ellen all experience a procession and a profusion of mental images as they write. The rhetorical functions these images serve for them vary, including generating ideas, providing a sense of continuity, serving as a memory aid to recall information or simply to spell words correctly, and stimulating interest and engagement. Other writers in my study (not included here) used mental imagery to choose a voice, adjust to audience, develop innovative text structures, and arrive at a thesis for their essays. In previous work, we also see descriptive glimpses of mental imagery in the work of Flower and Hayes and in the various interviews in which creative writers reflect on their processes. And we see evidence of the rhetorical functions of mental imagery in the work of Sadoski and Paivio, Fleckenstein, Worley, and others. My work reinforces past studies by providing further descriptions and suggesting a similar variety of rhetorical functions. However, unlike Flower and Hayes who think mental imagery operates only tangentially, in my study, I show how pervasive mental images can be in writing, occurring overall in three-quarters of the thought samples taken from writers and appearing in such profusion in a single thought sample. In the interviews, the writers themselves also affirmed how much mental imagery figured into their writing processes as they reflected in the essay, the thought samples, and their ways of working.

Future research might elaborate on these findings in several ways. Thought samples provided a close general look at underlying processes, yet often the samples could only hint at sequences of mental imagery and at possible interactions between image and word and between mental image and text. Further studies might make finer distinctions. Different kinds of writers might also provide additional information. The writers I worked with were undergraduate students who were well trained to provide accurate thought sample responses and who were surprisingly articulate and reflective about their processes. Still, a similar study conducted with more experienced writers who were even more aware of internal processes might yield additional information. Or a study using creative writers, perhaps doing both creative writing and non-creative writing, might explain more about the similarities and differences of these processes. Writers in visual areas such as art, architecture, and engineering, who appear in my study to use more mental images than most writers, would also provide a more specialized set of participants.

Finally, our practices of teaching and assessing writing might change to reflect the pervasiveness and importance of mental imagery for many writers. The role of mental imagery is rarely mentioned in the majority of writing textbooks used in composition classes, even those geared for visual fields such as art, architecture, and engineering. Worley's study, in which she trained engineering students to use mental imagery intentionally, shows the value of making imagery explicit and of opening up the notion of writing processes to include mental imagery. In English studies, it would be particularly helpful to develop such intentional training for our many creative writers and literature enthusiasts, like Gena and Ethan, or students like Ellen who seem to write visually. In writing assessment,

too, the majority of studies rarely mention the role of mental imagery, though underlying assessment is the concern for helping weaker writers improve. Fleckenstein's work suggests that weaker writers might become more engaged by working with mental imagery. And, in my study, writers like David were shown to struggle to control mental imagery, in his case using it beneficially to help with spelling but also feeling overwhelmed with its profusion amidst his already confusing internal processes. The results of my study bear out the observation of Marilyn Cooper and Michael Holzman (284-85) that for all we have learned so far, the real figurative scripts used by writers have still not yet been fully described. ☺

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