

## AFTERWORD

# REFLECTION: WHAT CAN COGNITIVE RHETORIC OFFER US?

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As this volume richly illustrates, the intersection of writing and cognition has been a site of fresh discovery, contention, and changing paradigms. Unlike some areas of inquiry shaped by strong disciplinary conventions and methodologies, writing studies are often stimulated by the situated challenges posed by real writers and diverse contexts. Consider the challenges raised in this volume, from working with a disability or transferring knowledge across genres, to understanding the value of “practice” or actually teaching metacognition. A second feature of research at this crossroad has been its highly eclectic and interdisciplinary nature, using (and championing) diverse methods, explanatory metaphors and analogies, from the perspectives as apparently inimical as critical theory and neurobiology. Is crossover work a strength or a mistake? We have not always agreed.

Given these situated challenges and the sometimes competing responses that turn up at the intersection of writing and cognition, I want to focus on two contributions *cognitive rhetoric* can make. One is the way its distinctive *cognitive* perspective on the activity of writing can give writers themselves a unique level of data-based access to the complexity of their own performance, merging inquiry with learning. At the same time, cognitive rhetoric’s *rhetorical* perspective encourages us to see the meaning of “writing and cognition” as a contested historical construction—one which reflects the reception, in English and composition studies, of unfamiliar psychological paradigms from modeling and statistics in argument, to the new use of fMRI data. As with any disciplinary shift, this is partly a story of growth in understanding and a matter of “acceptance.” Change may mean moving beyond unsophisticated ways of reading arguments outside one’s discourse or it may be the outcome of perceived competition among those discourses for significance in the field. So this volume also offers us a social/cultural picture of an evolving field, as Dylan Dryer and David Russell (this volume) put it, at 35 years of age.

## THE RHETORIC OF INQUIRY IN WRITING AND COGNITION

The intersection of writing and cognition is a place where multiple research frameworks talk with and at each other, each bringing its own assumptive base, loaded concepts, and methods. This can, of course, pose a challenge to communication across such differences. The Hayes-Flower *model* of the composing process first proposed in 1980, expanded and revised through 2012, is a good example (Flower & Hayes, 1981; Hayes, 2012; Hayes & Flower, 1980). In cognitive psychology a model, when instantiated in a detailed computer program, offers a way to test an information processing hypothesis about what people did (or in other cases to show how to do it better). However, in the context of larger ill-defined problems such as writing or design, a model typically functions as a hypothesis designed to guide exploration. So the Hayes-Flower model—as a data-based, working hypothesis about critical dimensions of this cognitive process—was a launching pad for inquiry—into various questions. Its framework allowed for a productive use of disciplinary difference. A comparison (based on the name of the first author) also shows a difference in emphasis when a paper was directed to readers in educational psychology versus readers in rhetoric and composition, particularly in the choice to elaborate models or to uncover the role of strategic choice. (cf. the 1980 and the 1981 papers cited above, or two later studies on revision: Flower, Hayes, Carey, Schriver, & Stratman [1986] and Hayes, Flower, Schriver, Stratman, & Carey [1987]).

The generation of studies this working hypothesis launched started with building richer accounts of planning and revision which soon posed their own questions. If, for instance, planning was the rich, multi-modal process these early studies suggested, would more experienced writers do it differently, with a different repertoire of strategies (a standard expert/novice question in educational psychology) (Flower, Schriver, Carey, Haas, & Hayes, 1992)? And when these revealing differences did turn up, one wondered: was a novice performance a question of merely don't or can't? Maybe expert performance on college tasks, for instance, depended primarily on genre knowledge, or acculturation to academic discourse, or perhaps on processes below the level of consciousness? So subsequent studies tried to tease this out, by offering writers gentle prompts to use “expert” moves seen in the earlier studies (e.g., to consider the possibility that a reader might disagree). I should emphasize that exploratory research also regularly reveals things you never thought to ask. As I will turn to later, this particular sequence of digging deeper opened up a new line of inquiry into the process and pedagogy of collaborative planning.

Working from a psychological paradigm in which a model is a tool for in-

quiry produced some interesting consequences for interpretation in composition studies. In the discourse of modeling, this framework, its visual diagram of *planning, translating, revising*, represented broad, but distinguishable categories of cognition, embedded, most importantly, in a highly recursive process—that invited investigation. But for some readers it was easy to conflate these complex theoretical spaces with the familiar stage model of prewrite/write/rewrite or with the popular “classroom process” (freewriting, peer review, etc.) criticized by Arthur Applebee (1986) in “Problems in Process Approaches” as a set of teacher-sequenced, obligatory activities oblivious to goals in writing (pp. 95-96). Perhaps more problematic for the reception of a “model,” were the assumptions triggered by an empirical paradigm itself. For some readers rooted in a humanist tradition, such research was viewed through the history of empiricism, inseparable from a positivistic stance to knowledge shrunken to what statistics could describe—and a threat to the study of English. Cognitive and educational researchers on the other hand were working out of a different interpretative frame in which protocol data was “only data” awaiting interpretation that meets evidentiary demands. Statistical significance was merely another form of argument—a test in which the difference you observed may or may not reveal “truth,” but at  $p < 0.05$  it was not random or likely to have occurred in more than five times in a hundred. The paradigm one brings to reading such research can clearly dictate strikingly different interpretations (Flower, 1997). (A small example: in informal surveys with my rhetoric students on reading articles with data, they report typically skipping over the tables with numbers.)

Another social consequence of this intersection of disciplinary voices will be the politics of paradigm shifts. In 1980, English was undergoing a seismic shift, as writing discovered its theoretical roots in classical and contemporary rhetoric and composition was being liberated from the pedestrian practice of the freshman “theme.” Cognitive rhetoric contributed to this energy with a new focus on the writer as a thinker. In the process model noted above, social context was acknowledged but not explored, subsumed in the standard psychological concept of the task environment. However, as the popularity of the metaphor “turn” implies, there is a certain trendiness in some scholarly circles in which a new idea must dominate or dismiss another perspective to prove its significance. Following the impressive rise of cultural criticism in literature, the “social turn” in composition journals put a good deal of energy into constructing a simplified binary conceptualization of writing as being a “social process” *rather than* a cognitive one (which was often represented in terms of a reductive, usually positivistic body of assumptions).

The irony of course, is that there is no such cognitive/social split in people, much less in the act of writing. The split lies first in our necessarily chosen

vantage point and focal interest (writers in action, or broader social forces, or genre conventions, etc.). Given the differing paradigms that necessarily attend each focus, reading such research will also require some effort to understand one another. A second source of this divide is the very real difficulty of studying how social, cultural, and cognitive forces actually do interact, in the acts of writing, learning and teaching, communicating, or social knowledge making. Research does tend to find strength in narrowness and the interactions we theorize are hard to study. Yet this is one of the great challenges many of the authors in this volume are trying to meet in innovative ways.

My particular contribution to this volume's border crossing will draw in part from those studies that led me to study collaborative planning as an explicitly rhetorical form of problem solving. Observing writers themselves interpreting and responding to the context *they* envisioned, offered a way to study what I described as the construction of *negotiated* meaning, and propose a more integrated social/cognitive theory of writing (Flower, 1994). As a part of the broad inquiry this volume documents, the stance of cognitive rhetoric I will turn to offers a way to understand this social, intellectual, and affective process in a way that highlights the strategic thinking and agency of writers themselves.

## THE (META)COGNITION OF INQUIRY

It is often helpful to approach cognitive rhetoric as a capital D Discourse, in James Gee's (1989) sense of the term. Entering and drawing on a given Discourse entails us in a distinctive set of "*saying (writing)-doing-being-valuing believing combinations*" (Gee, 1989, p. 6). For instance, the notion of *task representation* from problem-solving research in cognitive psychology adds a powerful new dimension to how we think about the act of writing. Unlike the concept of *assignment* (which we are given) or a *genre* (whose established conventions a text tries to fit), this "saying (writing) . . . believing combination" imports assumptions and guides perception, thinking, and investigation down a particular path. It leads us, for instance, to envision an agent with a task to do in a context he or she must interpret, which in turn foregrounds the work of representation and construction, the work, in effect, of making up that task. Here assignments or genres are merely cues, that the writer as agent may or may not attend to, understand, or instantiate in the same way as the assigner or a different writer would. Perhaps more important are the assumptions this Discourse engages. We can expect for example, that because this representation is a *construction*—with its distinctive though often unacknowledged network of features, goals, priorities—it will lead to some marked differences in performance, including expert/novice or insider/outsider ones, as people carry out the task they have given themselves to do.

As a distinctive Discourse we can enter, cognitive rhetoric then prompts us to think of writing in terms of actions more than text, to think of writers in terms of a repertoire of strategies, habits or moves tied to age, experience, ability, or intention, and to see the writer as an agent, even with all the constraints of context. Choosing the writer or individual minds as one's focal point can of course be controversial when it evokes the literary legacy of romantic individualism or the dichotomies of the "social turn," both of which offer a somewhat impoverished Discourse for understanding interactions. Gee would argue that to understand one's own Discourse, one needs to know others, to be bi- or multi-discursive. Such flexibility allows us in order to read cognitive rhetoric or social constructionism, for instance, for their relative power as explanatory accounts or as ways to support complex human experience.

Rhetoric has traditionally stood at this individual/social intersection. With rhetoric as its root noun, cognitive rhetoric places us in the larger Discourse of classical and contemporary rhetoric, signaling a critical departure from individualistic, romantic paradigms. Even with its own split focus on text analysis versus performance, its writer/rhetor is always embedded in a social, historical context, engaged in a dialogic performance shaped by Aristotle's "available arguments" and tradition. Unlike the Discourses that foreground these social realities, the methods of cognitive rhetoric offer a distinctive (though not the only) way to study social context, conventions, or interactions *in action*—by tracking how they are interpreted and responded to by actual writers and learners.

Another way to account for what cognitive rhetoric can offer is to view the performance of writing as a social-cognitive-cultural activity, as Yrjo Engeström and other activity theorists would define it. Whereas discourse theory reflects the descriptive agenda of language studies, activity analysis identifies itself first as a research tool. Engeström (1996) has represented "the basic structure of an activity system" with two superimposed triangles in which its foundational trio—a Subject, Object (or Outcome), and a Community—exist in interaction with another trio of forces: Rules, Mediating Tools, and the Division of Labor (p. 67). Recognizing the influence of mediational means, for instance, has been a powerful addition to thinking about writing (e.g., about the shaping influence of computers vs typewriters, of generalized genre expectations vs. report templates, or of practices such as peer review). The "meaning" of Engeström's little diagram, however, does not lie in a theoretical elaboration of its key terms, but in its rather daunting implication: that to understand an activity system as a "system," you need to recognize—to investigate—each of these key elements. Moreover, the model asserts, important aspects of a social-cognitive-cultural activity are likely to be in conflict with one another. In his figure, Engeström uses a zig zag line to trace "contradictions" within the system. The question in any

given study (of a health care center or a traffic court) is just where those internal contradictions lie, since the points of disturbance in a given system are the sites where innovation and “expansive transformation” of an activity itself are likely to occur (Engeström, 1999, p. 27).

Analyzing writing as an activity, cognitive rhetoric suggests that six critical components (writer/performance+outcome/community, in conjunction with rules/tools/power) not only interact in ways we may not see, but that significant aspects of this activity are probably working in contradiction. For instance, the mediational tools a writer can call on may not be aligned with the institutional or disciplinary demands she faces. The genre expectations of knowledge display that an economics student mastered for college papers will misfire when her readers are paying for a consulting report. In fact, the most striking finding in the planning studies noted above was the constant role conflict played in this process and how discovering those points of contradiction and conflict often opened up a place for transformative understanding. So by analyzing writing as a social cognitive activity, cognitive rhetoric can uncover patterns of thinking and strategic choices that have a traceable effect on performance (from how a task is represented to how a new mediational tool such as argument mapping is actually used). It reveals not only sites of conflict but problematic hidden logics on which a writer may be operating. And it offers a set of methods for inquiry suited to multiple forms of inquiry, to which I would like to now turn.

## COGNITIVE INQUIRY AS AN EDUCATIONAL PRACTICE

Perhaps one of the most unusual things cognitive rhetoric affords is its direct transfer into teaching and learning—as both practical advice and a practice of inquiry. It is not surprising of course that studies of cognition as problem-solving, designed around expert/novice comparisons could be directly applicable. My own enthusiasm for cognitive research was initially sparked by the work John R. Hayes was doing with designers, revealing the thinking behind what was often treated as an art based on un-transferrable talent; research he then transferred into his very popular psychology course on Problem Solving in multiple domains. At the time my problem was how to develop a new writing program for CMU’s MBA students. Given their math and engineering backgrounds, the reigning current-traditional focus on style and genre, much less the use of expressive writing (emerging then in composition) was unlikely to earn credibility in this fast track environment. It was with this jointly motivated curiosity about what effective writers were actually doing that Dick Hayes and I began our exploratory collaboration.

From a psychological point of view, one of the most interesting outcomes of

this early research was that 1980 model of the composing process. From a rhetorical perspective, it was the discovery of the fascinating things both experts and novices did and why the difference mattered. Sometimes the teaching potential only slowly dawned on us. For instance, it was becoming clear that experienced writers used planning to develop a larger, interconnected set of broader rhetorical goals, which they often tested by simulating a reader's possible response. And they actively considered alternative textual conventions, e.g., "Do I want to argue this point here, or maybe just use a suggestive example?" (Flower et al., 1992). This raised the question about novices: is their performance a matter of "can't or don't"? The series of sophomores who came to my office for the study generously bought into the fiction that our computer would actually write the paper for them, if they just planned out loud, in response to a series of questions, ranging from, "What is the point of this paper?" and "How are you going to show that?" to "Well, what if someone said, 'I don't believe that'" or "Could you imagine a different type of introduction." In short, they were invited to do the sort of rhetorical thinking we saw in experts. And in fact they could do sophisticated things—when prompted.

However, the penny actually dropped when these "subjects" (fulfilling their subject pool requirement), asked me if their roommates could come and do the study too. We had chosen students from Dick Hayes' course so we could ask them to plan around a real paper that was due, on a topic where they all had comparable topic knowledge. Yet, this rather lengthy and demanding planning session had turned out to be so helpful they were recommending it as way to write the paper. They were telling us that our prompts were in fact an effective performance enhancing tool. And we had the good sense to listen and translate them into the formal pedagogical practice of "collaborative planning" in which writers were actively prompted by partners to talk out (in many cases, figure out) their "key point, purpose, audience response, and use of textual conventions" for a paper at hand. And the tapes of these sessions—focused on this most demanding part of planning—turned out to be a rich source of data for us and the students (Flower, 1994, pp. 128-191).

This sequence of planning studies illustrates some different ways cognitive rhetoric supports pedagogy. In my own effort to teach problem solving strategies for writing, each new set of studies led to an expanded edition of a textbook I wrote (Flower, 1993). In my classes I noted that explaining and giving a name to a thinking strategy, in the way textbooks do, did indeed give many students a new sense of power and conscious choice over moves they may have even done without recognizing their value. However, other students who had little experience planning around a rhetorical purpose, needed that experience, in this case of responding to the live prompts of a planning partner. By, in essence, modeling the strategy to themselves they could reach that ah ha moment in learning.

These two accounts of using collaborative planning illustrate a traditional educational practice: teaching the results of our research to students. Yet perhaps one of cognitive rhetoric's most distinctive contributions is to a pedagogy in which students take over the reins of inquiry to develop their own strategic knowledge. Because much of the research in cognitive rhetoric works at the level of conscious attention, even if that awareness is fleeting or barely articulated, it has developed a set of methods that lets writers treat themselves as "subjects" in their own inquiry. When, for instance, students re-examine what happened in their own protocols, taped collaborative planning sessions, or reflections, they can not only compare local rhetorical choices to broader intentions or their own strategies to expert/novice patterns, they can read textual choices in the context of their plan and/or a partner's response to it. When writers can do a data-based retrospective analysis using prepared, research-style questions or pursuing serendipitous discoveries, they often uncover the hidden logic behind what they did or didn't do.

For want of a better name, we could call this methodical metacognition. As part of a course on the Cognition of Reading and Writing, students work with a small Student Research Guide that translates methods developed in formal research projects into (inexpensive) inquiry tools. Offering models for collecting, representing and analyzing data, it helps students use think-aloud protocols, collaborative planning episodes, retrospective reports, rhetorical reading, in-process probing, and critical incident self-interviews. Responding to the theory and predictions from their scholarly reading (e.g., from Bakhtin, Vygotsky and activity theory, to linguistic research on comprehension, to schema theory to writing studies), students then use these process-tracing methods to glimpse first-hand what both readers and writers may in fact be doing. For instance, how do the writers they observe deal with conflicts in their own plans, or how are readers (in a line by line rhetorical reading) actually interpreting one of the student's own texts? (A typically eye-opening experience.) More significant however, is the data they collect over the course of the term on their own extended process of producing an important piece of writing for some other class, internship, or project. Their study typically starts with self-interviews reviewing the germination of an idea or recent conversations with a teacher, mentor or friend, supported by notes, rhetorical/interpretive readings of the assignment, or comments, which lead to think aloud data or critical incidents interviews on selected episodes of planning, writing, or revision. Their final paper is an analysis of their own planning/writing/revision process, combining concepts from theory and research with their own data and self-analysis. The goal is "a strategic portrait" of their own experience.

The analytical methods of cognitive rhetoric, as it is important to emphasize, are themselves mediating tools in the sense activity theory describes. Standing

between the social/cultural/cognitive process of a mind at work in its shifting contexts and their representation of it, these tools shape what a writer will see and will surely miss. Just like the theories students read and the discourse they are entering, these methods name and shed light on certain parts of this process. At the same time, they transform learning by supporting a distinctive kind of metacognition—one that is built on data-based reflection. And as students study themselves, the focus of their inquiry goes beyond questions that motivate published research, into posing questions that reflect their own needs, conflicts, self-discoveries, or the exigence this work posed for them. Moreover, when you (as a teacher/researcher) have the opportunity to compare your reading of such data with what the analyzing “subject” discovers, you recognize not only the powerful insights metacognitive analysis offers, but the advantage of combining both sorts of interpretation (Flower, 1994, pp. 236-291).

To briefly illustrate the kinds of learning this sort of data-based metacognition can elicit, consider some examples from two final Strategic Portrait papers that include data from the various methods students tried. Rain, drawing on a joint degree in architecture and linguistics, choose to track the construction of an important section of her master’s thesis. Her provocative thesis starts simply enough: The technical/descriptive conventions of architectural proposal writing—which are designed to help readers *visualize* a building in space—are indeed used by professionals, as this excerpt of data from Rain’s in-process probe of a professional architect reading a proposal illustrates.

Paragraph Number	Here the analyst’s notes paraphrase & quote from the think aloud reading tape with her commentary in brackets*
¶1	The building is made of concrete and steel “although I don’t <i>know</i> that” [Reader acknowledges that he is conjecturing, that this has not been stated.]
¶3	“Okay so now we’re putting it in context, the building is on Madison Avenue, now we know that” [Reader is . . . “building” a knowledge base of the building.]
¶3	[For the first time, reader says “yes” in response to Q about whether he can mentally visualize the building at this point, and then proceeds to describe the building’s form.]

\* Note: *In place of a full transcription*, the Student Research Guide *suggested representing taped data with this combination of selected quotes, paraphrases, and commentary linked to cues for finding the section again.*

Rain however, wants argue for what she sees as a controversial alternative to this traditional discourse—for a proposal design that is adapted to real users, the non-technical readers and clients. The following data, excerpted from her

early collaborative planning session shows her developing the precision of that goal (in response here to her partner, V's, prompts, such as, "So what's your key point?" Or "How might X respond?").

Counter	Speaker	Here the Speaker (Rain or V) is in quotes and the analyst's paraphrase or commentary in brackets.
1:09	R	"present a piece of text describing the building . . . how can writers describe architecture <i>best</i> "
1:35	R/V	[I'm wondering whether to write a "theory-based guide" for readers or writers.] V: "It's kind of the same thing in the sense that the guide for the readers is going to be ultimately what guides the writers."
5:55	R	[Discussing current architectural writing, the different purposes and audiences of the two kinds of writing]
6:20	R	"So maybe that means I wanna come up with ideas on how to translate, in a sense, the architectural way of writing into a narrative."
9:10	R	"The whole point is for the reader to . . . is trying to imagine the building" [goal to set the context of the reading]

But this plan—not to mention her goal to challenge a highly standard professional practice—presented some dilemmas. Taping a self-interview on a "critical incident" that that occurred along the way, Rain starts by noting the context for this incident:

0:05	"So I'm trying to investigate how I negotiated the discourses of architecture and academia."
0:57	"I had defined my own metrics of success and deliverables but didn't know what advisors expected or wanted."
1:35	[M-L (architecture advisor) suggested some artists and sources to look at (more research) while M (linguistics advisor) had said, don't do any more research, start writing.]
5:58	"I assumed that both . . . advisors had ideas about what they wanted from me." [I realize here that maybe their expectations weren't as specific as I had thought.]
7:53	"In the end it falls to me as my thesis to figure out what works Best." [Don't look for others to decide what the outputs and specifics are; self-define them. But then, I am the student, and they evaluate my performance. How do I know what they are looking for?]

In her final paper for the Process class (A Strategic Portrait of My Writing Process), Rain interprets these events as more generalizable and transferrable insights.

There are several aspects of my process and resulting strategic methods that may be specific to this case study, though this is not to say that they will not work for other genres. First, I was writing academic, conceptual prose, different, for example, from the kind of text my thesis was proposing, which was concrete, descriptive, fiction-type text. I was also representing and responding to two very different discourse expectations: that of the academic thesis paper and the architectural thesis. I was also attempting to negotiate multiple discourses, mediating research from many different fields into one final thesis.

She concludes with a “Quick Reference Guide” for herself—a note on 10 particular strategies she discovered working well for her across data-gathering, planning, and writing, from seeking out experts for advice early on, to using nonsense words to keep the flow going when you need info or don’t have the right word. It is an idiosyncratic set—not a theory—to be sure. But it reflects the value of *using* theory and methods to discover and articulate a new level of understanding about your own thinking, the discourse, the social context you are in and the question of transfer.

Sara, on the other hand, looks back over her data and constructs a narrative of initially unnoticed, quietly competing schemas, which she used to explain previous struggles. Her story ends, however, with a revealing insight into the way “affect” directly influenced her strategic choices. One of her strategies for writing this process paper itself was to consider the explanatory power different concepts from our course readings might offer this analysis. When she looks at her own “task representation” as a “schema,” she notices: “I used to think that before I wrote a paper, my ideas and inferences and conclusions were already established in my head. I discovered that this rarely happens. As we will see, . . .”

Her story starts with a discussion with her Chaucer professor in which they agreed that an “interesting” paper would want to go beyond a simple comparison/contrast of two characters to a more specific idea.

I also said off-handedly that I think there’s something fishy about the Prioress, but I couldn’t quite put my finger on it—something was just off about her. I reasoned that maybe with more research, I would have a better understanding of my feelings towards her. [The Professor] agreed, and said something that seems to have foreshadowed my whole writing process for this paper: write out your thesis/main argument right now, before you do any research, she said, and then research and write and realize that your perspective may change.

This session with Peggy was really important in helping me understand myself as a strategic writer.

As Sara's story unfolds, she sees herself moving into a "knowledge-based" phase, guided by a familiar "schema."

Because I dedicated a lot of time and effort to finding sources and listing somewhat objective information about the Wife of Bath [sic] and the Prioress, my schema for this writing task seemed to change. I completely forgot about looking into the "fishiness" of the Prioress, and I just went on comparing and contrasting the two characters in terms of [how they glossed the Scriptures]. I convinced myself that even if I didn't offer a profound insight to anything, it would still be kind of an interesting paper . . .

It was easier to choose a task representation that followed my schema of "a comparison paper" rather than construct a task representation where I would have to further build new connections to my schema of the two characters in *The Canterbury Tales* (this is what I was expected to do—and, of course, what requires a lot more cognitive effort).

She reports an epiphany and schema shift between the sixth and seventh draft when, in a self-interview, "I realized that Peggy has probably read all these articles I'm citing. I have to create my own voice." Sara's interpretation draws on a theoretical contrast between "knowledge-driven and constructive planning" from our readings. But her reasoning about the necessary trigger is a different claim (that was debated when she presented it in the class):

That was when I went from knowledge-driven to constructive planning. I discovered that I could interpret the Prioress's character and tale *through* the Wife of Bath [sic] (and that would help me uncover her fishiness!). . . . I believe that being stuck in knowledge-based planning for six drafts was necessary for me to reach a higher level of understanding. I don't think I would've thought that I could use the Wife of Bath [sic] to interpret the Prioress if I hadn't listed all of the facts about both pilgrims to begin with.

It would be easy to look at the strategies Sara and Rain discuss as part of a growing repertoire of options suited to particular parts of a writing process or to solving a variety of knowledge-building or discourse demands. We might expect

that more experienced writers have more of these in the store room and a better indexing system to call them up. This self-analysis gives them presence and a name. Sara's summation is a nice example:

So, the problem for writing my Chaucer paper was going from choosing a task representation to *constructing* one. I discovered that this transition involves: going from knowledge driven to constructive planning, recognizing the audience (and moving to reader-based prose), and incorporating cognition and affect to make inferences about the context. Cognition plays another important role: it helps build a schema of a new task representation; it challenges you to not only use already well defined connections between points in your schema network, but to create new connections, make new inferences, offer a unique insight—and, in this case, to look at the Prioress from the perspective of the Wife of Bath [sic].

However, when Sara's final self-interview explored the role of "affect," she also she got at one of the profound but less visible connections between cognition and rhetoric.

When I was writing my first few drafts of just plain comparisons, for example, I was not hoping to impress my professor or offer an amazing insight in the field. In a retrospective interview, I said:

"I wish I could say that I knew what I was doing—that I was laying down information first and then I knew I was going to interpret it in a unique way after I had everything written. But I don't think I was. I think I was just going to compare and contrast and write info that I found and I just reasoned that one mediocre grade won't kill me. . . . It wasn't until I thought about Peggy [my Professor], and how much I enjoy the class, and how I want to contribute something. So my respect for my professor's knowledge motivated me to offer a more insightful paper; not just a mediocre essay that didn't offer anything new."

From a theoretical perspective Sara has sketched writing as a social/cultural/cognitive activity loaded with affect. It is an action deeply tied not only to the context of education, achievement, and academic discourse but also to personal relationships, her own self-image, and her goals and choices in a paper on Chau-

cer. And more to the point for her as a learner, these ideas have taken a live, richly instantiated, potentially memorable shape in terms of her own experience.

A pedagogy that incorporates a social cognitive process of inquiry is also an example of teaching for transfer. As Anson suggests in his case study of a failure to cross genres, transfer is difficult even when it is supported by metaknowledge of rhetorical strategies. An earlier volume called *Transfer on Trial* helps show why, especially in the cases James Greeno, Joyce Moore, and David Smith call the “transfer of situated learning” (1996). What transfers, they argue is not *knowledge* (abstract, symbolic, or propositional representations), but *knowing*. That is, knowing how to interact with people and things, how to participate in another activity by being able to perceive the “affordances” of both situations, to recognize critical features and see parallels (pp. 99-100).

As Rain would say, the power of narrative is to let us put ourselves into a space, walk around and do things. Engaging with writing as a social cognitive process draws us into the space theory can provide, helping us imagine the interactive, interpersonal activity in which writing takes place. And as an educational practice, its methods and ideas are available to both researchers and students.

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