CONSTRUCTED KNOWING: PROMOTING COGNITIVE GROWTH IN FRESHMAN WRITERS THROUGH JOURNAL-WRITING

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INTRODUCTION

For fifteen years I was a restaurateur rather than a college teacher, and I still have more than a passing interest in restaurants. I consider myself a discriminating deconstructionist of menu prose, and decisions about which conference sessions to attend are driven equally by lunch possibilities and by my interest in this or that speaker or subject.

I have always known how fickle and trendy the restaurant industry is: last year it was nouvelle cuisine, mesquite grilling,

and blackened anything; this year it's Southwestern cooking, domestic goat cheese, and sun-dried tomatoes. But I have only recently realized that my current profession is just as much in thrall to trends. The only differences are that my colleagues and I use multisyllabic words and that our menu appears in journals and conference programs rather than in restaurant windows. Gender issues, multiculturalism, and literacy are everyone's favorite ingredients this year, and they are being whipped up into a tempting array of workshops, articles, and books.

This article investigates new reasons to pay attention to the student journal, a classic ingredient that is no longer trendy, but that belongs in the repertoire of every writing teacher—I would argue, the repertoire of every teacher, period. One of the traits of a classic is that subsequent theories add to our understanding of its power rather than rendering it obsolete. In this case, current research in psychology and epistemology yields new insight into the value of journal writing.

When they first received critical attention, journals were shown to help students explore their thoughts and feelings in a low-risk format and to promote more active modes of learning (Fulwiler "Personal," *Journal;* Haviland, Whitehill). Recent work in post-Piagetian cognitive development and the exploration of alternative epistemologies suggests that journals encourage students to test the limits of their cognitive frameworks. By virtue of their flexibility, journals invite the exploration of alternative or advanced ways of knowing, specifically what William Perry calls commitment through relativism, William Basseches calls dialectic, and Belenky et al. call constructed knowing.

RESEARCH AND THEORETICAL BASIS

William Perry and Commitment Through Relativism

As you will recall, William Perry claims that the Harvard undergraduates interviewed for his study of cognitive and ethical development over a four-year period traveled along a continuum from dualism through multiplicity to commitment based on relativism (*Forms*).

1. Dualism divides meaning into Good or Bad, Right or Wrong. Knowledge is quantitative, and authorities possess the

right answers, which the rest of us learn by listening and memorizing ("Cognitive" 79).

2. Multiplicity acknowledges that in some areas, differences of opinion are permissible, but that such a situation occurs mostly when the correct answers are not known. Opinions cannot be evaluated, because everyone has a right to his/her own ("Cognitive" 79-80).

3. Relativism sees knowledge as contextual and qualitative. Opinions can be evaluated, based on the foundations on which they rest ("Cognitive" 80). Critical detachment becomes possible, even necessary: "One must be able to stand back from oneself, have a look, and then go back in with a new sense of responsibility" (*Forms* 35).

4. Commitment consists of "an affirmation, choice, or decision. . .made in the awareness of Relativism" ("Cognitive" 80). Commitment is so permanently open to re-examination that one of Perry's subjects, upon graduating, predicted, "Now I know I'll never know how many times I'm going to be confronted" ("Cognitive" 97).

Michael Basseches and Dialectical Thinking

Michael Basseches enriches the study of adult development by applying to it the intellectual tradition of dialectical thinking. He sees dialectical thinking as the open-ended and continuing form of knowledge-building needed to complete Piaget's model, which is limited by its assumption that cognitive growth is completed during adolescence (56). Basseches conducted semi-structured interviews and then analyzed the writing of 27 subjects who were freshmen, seniors, and faculty at Swarthmore. From this data Basseches extrapolates a 24-stage schema representing developmental stages in dialectical thinking (72). He calls these stages "movements in thought" and finds that the more mature the thought processes, the more comfortable the subject is with contradiction, process, and change.

Belenky et al. and Constructed Knowing

Mary Field Belenky and her colleagues interviewed 135 women—some in formal educational settings and some connected to human service agencies offering parenting assistance—then used their testimony of these women to examine "how

women's self-concepts and ways of knowing are intertwined" (3-4). The steps in their developmental sequence frequently parallel Perry's—a parallel which they are careful to analyze and qualify.

1. *Silence.* The knower is apparently mindless, voiceless, and subject to the whims of outside authority (5). There is no parallel stage in Perry's scheme; Belenky et al. assert that this is because no matter how primitive his position in a scheme of cognitive development, a man seldom feels totally voiceless.

2. *Received Knowledge.* The knower becomes eager to absorb knowledge received from outside authority, but is not able to produce knowledge (5). This corresponds roughly to Perry's dualist stage, except that whereas the men in Perry's study were apt to divide the world into "we-right" and "them-wrong," women frequently do not identify themselves with those who possess the right answers (the "we-right") and so find themselves disenfranchised even when they are no longer silent (9).

3. *Subjective Knowledge.* The knower rejects knowledge from outside sources in favor of self-created knowledge (5). As one subject puts it, "My gut is my best friend" (53). Although most of Belenky's subjective knowers are still dualists in the sense that they believe right answers exist, others—mostly advantaged women—become "hidden multiplists" (64): unlike Perry's male subjects, who embrace multiplism joyfully, these women fear that relying on their own truth may bring isolation and alienation (67).

4. *Procedural Knowledge.* Using the "conscious, deliberate, systematic analysis" that is required for mature thought (93), the knower applies objective procedures and knowledge from outside authority to produce new forms of knowledge. As one subject explains, "They're teaching you a method, and you're applying it to yourself" (92).

5. *Constructed Knowledge.* Now the knower speaks with "the voice of integration" (133), combining reason, personal experience, intuition, and material from authorities to create a kind of knowledge in which "the knower is an intimate part of the known" (137). This stage, which corresponds to Perry's commitment through relativism, is characterized by sensitivity to context and situation, and by the desire to make connections between areas of knowledge (140-41).

Common Traits of Cognitive Maturity

In spite of their differences, these three models all describe cognitive maturity as possessing these four traits:

1. A tendency to synthesize and make connections, whether it be between theory and application, the general and the particular, personal experience and received knowledge, different areas of study, or different sources of knowledge.
2. An active, engaged attitude towards learning, rather than a passive, receptive attitude.
3. Meta-thinking, i.e., the ability to step back and outside of one's own assumptions and examine them objectively—what Ann Berthoff calls "thinking about thinking" (743).
4. The ability to confront contradiction, ambiguity, and uncertainty without being paralyzed by it.

These are not by any means the only theories of post-adolescent cognitive development (see Arlin, Commons, King, Kitchener, Rest, Riegel, Sinnott), but they are the richest in implication for writing teachers and the ones that were most helpful to me in examining student journals for signs of intellectual maturity.

SUPPORTING MATERIAL FROM STUDENT JOURNALS

Background to Student Journals

Students in two freshman composition courses at Boston University's College of Basic Studies kept a journal during two week-long interdisciplinary projects designed by me and four colleagues from humanities, social science, science, and psychology. The first project investigated the impact of Charles Darwin's theories on nineteenth and twentieth century thought, whereas the second explored the theme of the body, including issues such as death and the body, sexism, changing concepts of the ideal body, eating disorders, psychic phenomena, stress and relaxation, and use of the body in advertising.

This annual project is an opportunity to cross disciplinary borders, to use alternative pedagogies, and to encourage active student involvement. A journal seemed the perfect vehicle to accomplish these goals, and I also hoped that the journal's informal structure would encourage experimentation and risk-taking.

The journal was the sole writing component for the week-long project. So that they would not deteriorate into breakfast-to-bed diaries, I specified what kinds of entries were to be included, but students decided when and how to do each entry. The required entries included a comparison/contrast of any two events during the week, exploration of why a reading passage was interesting, exploration of why a reading passage was difficult or confusing, a summary and evaluation of one stage of group work, a dialectical (two-column) entry made while doing one of the readings, and an analysis of the most surprising connection between two elements of the week's work. So that students would take the journals seriously, I explained that I would collect and read them, evaluating them on the basis of engagement with the material rather than style or surface features.

My colleagues and I found the journals fascinating windows into the mental processes that students went through as they read, wrote, and thought about difficult and controversial material.[1] But I did not realize the journals' real value until I began to learn about cognitive development, and to look again at the kinds of "movements in thought" that students were trying out in their journals. I soon realized that these movements corresponded to the characteristics of cognitive maturity common to the models of Perry, Basseches, and Belenky et al.

Making Connections

The journals illustrated in abundance the drive to synthesize and make connections of all kinds, building bridges between different elements in the interdisciplinary project, and between the project material and their regular courses.

One student connected Darwin to Marx and to the movement from faith to logic which had been traced in his social science course; he connected an article by Huxley to Max Weber and *The Declaration of the Rights of Man*; and he connected a passage about isolation in Darwin to Dostoefsky's treatment of the same theme in *The Underground Man*. Another student was reminded of the relationship between serfs and nobles in medieval society when Darwin described the relationship between breeders and the domesticated animals whose fate they controlled. A third student, probably a business major, found

echoes of Darwin's concept of natural selection and the struggle for existence implicit in highpowered, competitive business magazines.

Students synthesized in another way when they applied to their reading an approach that they had learned in another course. One student, for instance, isolated a passage in Darwin and praised its thorough development, an element of good writing which he had learned to search for when he wrote peer reviews:

> In this passage, Darwin presented his ideas and then supported and illustrated them with concrete ideas and examples. . . .Facts are given or an idea is stated and then clear examples drive the point home. I truly feel the book would have been more effective (more understandable and interesting) if this type of format were used more frequently. . . .

Rhetorical analysis informs a highly polished entry, in which the student deals at length with the "tangled bank" passage, Darwin's attempt to overcome readers' religious scruples. First the student acknowledges the degree to which Darwin's style begins to weaken her defenses:

> When he says, 'There is a grandeur. . . ..' he assures me that he has not just clinically reduced nature to a bunch of laws, but that he appreciates and respects nature, and I am therefore rendered more receptive to his ideas. . . .

Then she goes on to analyze the other ways that he strengthens his argument:

> I was surprised with how aware Darwin was of the objections his theories would encounter, and although he addresses these more directly elsewhere, here as well he seems to anticipate (I think) those who will argue that his theories are sacrilegious. . . . From what I understand a good argument always anticipates the opponent's rebuttal. . . .

In short, the open format of the journal gave students the room they needed to spread out all their sources of knowledge for

examination, and to speak in "the voice of integration" that Belenky et al. describe.

Active Learning

The students showed evidence of active, questioning involvement in their reading, an attitude particularly useful in connection with the difficult Darwin readings. In one entry they were required to write about a passage they did not understand. By the end of the entry, most students were able to articulate what was giving them trouble; many worked out a possible interpretation or several. Because this journal entry required that they write discursively, they went beyond two postures which I have found common during class discussion of difficult reading material: self-deprecation ("There must be something wrong with me that I couldn't figure this out on the first go-round") or panic ("I'm never going to get this"). Instead, their attitude in the face of puzzlement had time to evolve into curiosity about unraveling a complex issue. Here is one student trying to analyze her difficulties:

> I read through a paragraph that said how animals and man differ when it comes to how much hair is on their bodies. Darwin says, 'May we then infer that man became divested of hair from having aboriginally inhabited some tropical land?'

Now the student initiates a conversation with the text.

> What does this mean? There are plenty of animals from tropical islands that are completely covered with hair; why would the tropical weather be any different for us? I understand that hair protects us; then why are we not fully 'clothed with hair.' I just don't understand how Darwin says that man became naked through the action of the sun. Don't you think the hair would be surrounding us all over to protect us from the sun's rays? This may sound strange. I mean I know that man has clothes to protect him from the sun, but it just seems to me like a contradiction of this part of Darwin.

The student identifies a logical inconsistency in this part of Darwin's argument. In the process, she makes sound decisions about when to quote directly and when to paraphrase, she clearly distinguishes between her own voice and that of her source, and she incorporates material from Darwin into her own argument. Temporarily released from the constraints of a more formal genre, she is questioning rather than submissive in the face of Darwin's text.

Another student tries to unravel Darwin's explanation of whether animals can reason:

> My question is how can you be sure if an animal is reasoning or if it's instinct, or if it has been handed down to him by his elder? Darwin uses the example of the dogs on the ice. I think that dogs follow the leader and that if the leader in the pack feels from instinct that the ice is thin he would move away from the pack and the others would follow his leadership. Another problem I have with saying that animals can reason is to what degree can you say what reasoning is? Human reasoning can be mistaken for instinct as well as following other dogs. After all, did not Lavoisier say that reasoning is nothing more than language well arranged?

Digression and muddled syntax aside, this student is energized rather than daunted by problems that he finds in Darwin's discussion, and he pours this energy into an impressive array of reasoning skills. He questions Darwin's main point by addressing Darwin's example, he asks a follow-up question which states a sub-section of the problem, and he presents an alternative definition, supporting it with material from another context.

These instances of the active role students take in their journals also illustrate how characteristics of mature thought interpenetrate and overlap: becoming an active learner often involves synthesizing information from various sources. In the first example, for instance, the student uses her own observation to question Darwin's connection between temperature and the distribution of body hair; in the second example the student uses information from another course, and his own ideas about animal behavior, to take issue with Darwin's discussion of instinct.

Meta-Thinking

At many points in their journals, students demonstrated the ability to step outside what was happening to them, to reflect on its significance, and to look for patterns rather than isolated facts. "Ideas kept coming back," one student writes in describing the way her journal looped back on itself throughout the week. Another student, describing a seminar on the ideal of physical beauty in art history, documents the shift in her perception from particulars to principles:

> At first I thought the goal of this session was just to show us how the ideals of the body in the arts changed through the years, but now I think that the goal was to show us how art goes through cycles, and forms reoccur through history.

Meta-thinking sometimes leads to catching oneself in an error—not a factual error, but a procedural or conceptual error which can be monitored only by someone who is "thinking about her thinking." This occurs when a student tries to figure out her attitude towards a passage about eating disorders which asserts, "Fat is the individual's rebellion against an imprisoning social role."

> . . .I am not fully convinced with the conclusions made by the author. . .If one likes to eat, then that could be a good reason that they are fat. I don't want to say that by someone being fat, they are rebelling against the norms of society. An individual can be fat because it's in his genes.
>
> Personally I don't see what is the big deal of a person being fat or skinny. If anything, being skinny or trying to get skinny would be the imprisoning social role. **From writing that, I just contradicted myself**. I saw and understood what the author meant by saying that "Fat is the individual's rebellion against an imprisoning social role" (bold-face mine).

Although the passage obviously illustrates the first two traits of mature thought—the writer is synthesizing material from her reading and from her own knowledge of why people are fat; she is reading actively and critically—it is most interesting for

the critical distance the student is able to put between herself and her ongoing analysis of the passage.

Dealing with Contradiction

The controversial nature of the two interdisciplinary projects, together with the flexible format of the journal, allowed students to think about ambivalence, contradiction, and uncertainty, to examine them thoroughly, and to make some tentative moves towards dealing with them.

Indicative of the students' ability to deal with contradiction was their delight in paradox. One writer chooses as his epigraph the passage, "The body is both intensely private and flagrantly public," and continues, "When I read this whole passage, I began to understand this sentence which contradicts itself." Another student, responding to the passage, "No hippie chick wanted to be thought of as hung up," revises his previous vision of the recent past: "I thought women of the 60's were freer. Even freedom can trap you into doing things you do not want to do."

The most threatening kind of contradiction is selfcontradiction or ambivalence, and students dealt with this in a variety of forms, some trivial and some significant indeed. For instance, after reading Darwin's discussion of animals and their lack of memory, a student writes:

> I find this interesting but I do not agree totally. Because we got one of my dogs from this man and at that time my dog had a different name. When I call her that now she does not even pay attention to me. It used to bother her the first couple of weeks and she would growl. But then again I agree also, because my dog Duchess was abused by her last owner and she is afraid of many things. Examples: the cellar, the dark, being alone.

Drawing from her rich repertoire of personal experience and observation of pets, the writer sees that at least initially there is evidence both for and against the existence of memory in animals. Using her journal to take inventory, she lists the evidence on both sides, rather than hastening to a premature and oversimplified choice between them.

One way of dealing with uncertainty is to use it as an excuse for stasis and alienation: in the absence of certainty, I cannot act or choose. Students, however, did not do this often in their journals. Most of them arrived at some form of "commitment through relativism" and took a stand, even if it required combining positions which were originally seen as opposites. At the end of the Darwin week, one student summarizes his experience this way:

> One of the main things that I am still discussing with people is the creation story. I always thought that man came from lower animals. I saw pictures of neanderthals which made me believe this. I also believed the story in the Bible about Adam and Eve because I never really contrasted the two beliefs. After this week I have incorporated the two and decided for myself that God created man through evolution. I enjoyed reading this book because it is so controversial and it made me think, and when I think I learn.

Using the term in its technical sense, dialectic has occurred here, as the student combines a thesis (divine creation) with an antithesis (evolution) to create his own synthesis (divine creation through evolution).

A truly moving example of commitment reluctantly accepted comes from a student working out her position on the issues of censorship and pornography. She is so acutely aware of her ambivalence that she personifies the two sides of this issue, which is anything but theoretical for her.

> Whether censorship is appropriate in such a case becomes a question in me where a tug of war between my morality and my rationality makes it impossible to give an emphatic answer. My morality screams, "Yes, yes, yes, yes, any reasonable person can see that." But my mind knows better than to listen to morality use the word "reasonable" because morality can in no way be reasonable. It taints every idea with irrationality, vehemence, and judgment; no, morality cannot provide me with a correct answer.
>
> My rationality answers me with a monotoned, "Each individual must be given freedom not to be subjected to any sort of totalitarian rule which censorship would function

as," but rationality does not take into account that I am a woman and I am directly affected by this cruel and blatant violence. Rationality is ignorant of emotion, pride, or feeling—it is icy cold and calculated. No, rationality cannot provide me with an answer either. It doesn't remember certain sleeze buckets I've actually, willingly gone out with that have sexually harassed and attacked me, making my self concept and distinction as a woman shatter; its pieces left for me alone to deal with. To hell with rationality, I say. I refuse to be left in that pitiful situation again.

After defining the limitations of both morality and reason, the student reluctantly embraces censorship on the basis of her revulsion to exploitation:

> I have no right to negate another's individual freedom, nor would I want to. I merely feel it is my duty to defend myself as well as other women (and even future women) from the fright and misery of sexual exploitation. To put it bluntly, the feeling sucks and I refuse to be a conformist—to simply nod my dainty head like a proper young lady and accept what is dished out to me? No, thank you!

There are so many things happening in this passage that one hardly knows where to look first. The personifications of reason and morality are detailed and convincing. Given the writer's emotional investment, there is remarkable control, with a logical progression from one point to another and a resounding conclusion. There is wit and irony in the next-to-last sentence, with its diction flip-flopping between profanity and proper English, then ending with the demure, well-bred mask back in place ("No, thank you") but the resolve intact.

The passage illustrates all four characteristics of mature thought. Not only is the writer actively involved in the subject she is exploring, but she has discovered that in the knowledge that matters, "The knower is part of the known." She draws on all kinds of material—personal experience, logic, recent reading and discussion of pornography, and the theoretical arguments that are fundamental to the debate—matching, comparing and contrasting, holding them up against each other, and finally synthesizing them. In spite of the high personal stakes involved,

she is able to step outside the discussion and evaluate the limitations of both points of view—she can think about her thinking, and even about her feeling. And finally, speaking with "the voice of integration," she takes a stand, still acknowledging ambivalence and contradiction, and thus achieves some degree of control over an issue which by definition fosters feelings of powerlessness.

Conclusion

These samples from student writing illustrate the value of journals as vehicles of intellectual development. When students are invited to write in the process of thinking, and are temporarily freed from the constraints of formal academic modes, they will try out new and risky "movements of thought." The profile of cognitive maturity which emerges in the work of Perry, Basseches, and Belenky et al. is also a compelling portrait of freshman journal-writers.

NOTES

[1]For an earlier analysis of these journals, see Capossela, "Student, Teach Thyself: The Journal as Educational Toy." *Kansas English Bulletin* 76.2 (1991): 62-75.

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