

COGNITIVE PSYCHOLOGY AND COLLEGE COMPOSITION

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In 1970, John S. Antrobus wrote about the renaissance of cognitive psychology. He traced the study of cognitive processes back to William James in the 1890's, but noted that problems of unreliability, ambiguity, and inconsistency in the definition of terms and in experimental findings could not be overcome at that time, and so many researchers experimented in other areas (p. 1).

The primary emphasis for a while shifted to postivism and behaviorism, especially in the United States. However, some Europeans such as Bartlett at Cambridge; Piaget in Geneva; and Wertheimer, Kohler, and Koffka in Germany continued cognitive research (Antrobus).

Interest in cognitive psychology was renewed worldwide when it became possible and desirable to make various devices such as automatic pilots and computers that exhibited characteristics that are generally regarded as being unique to living systems. In other words, when it became technologically possible to simulate various everyday processes of human beings, it became helpful to know as much as possible about the cognitive operation of those processes.

Ideally, cognitive psychology research will provide a sort of "flow chart" and, also, cognitive analyses that contain "a common language to use in speaking about internal processes," (Beers, 1) and to make assumptions about those processes.

One branch of cognitive psychology deals with how a person changes with and makes sense of his or her environment. Researchers such as Jean Piaget, Erik Erikson, Lawrence Kohlberg, and William Perry defined models which "depict ethical conciousness as developing through age related stages" (Brand, 438).

Piaget identified what he believed to be two major stages of development which he called *heteronomous morality* and *autonomous morality* (Barnsley and Wilkinson). Simply stated heteronomous morality is that morality determined by constraints such as law and punishment, while autonomous morality is based on mutual respect and "whatever is good."

While it is a useful scheme, Barnsley and Wilkinson point out that Piaget's work was based on a sample of pre-adolescent children and that mutual respect might well lead to "conformity or ratification of the law by the individual intelligence" (6). This implies that Piaget's theory can be difficult to apply to other age groups, and that it can result in contradiction.

As well, there have been discussions about whether the stages should be considered as cumulative or discrete. Piaget admitted that the stages are not necessarily discrete, but that a child's judgements are "spontaneous products of a general cognitive and emotional disposition rather than learned responses..." (Barnsley and Wilkinson, 8), so some consistency could be expected and used to classify those responses.

Nevertheless, even with these controversies, Piaget's theory is viable enough that Joanne Kurfiss states that these stages can be considered as "cognitive, epistemological, or moral 'lenses' which affect how experience is interpreted and which in turn are shaped by experiences," and that the "concrete / formal progression is most relevant for college teaching" (2).

Concrete thinking, Kurfiss says, is typical of children and adolescents. They are able to deal with relationships between concrete objects, but have trouble with the organization of abstract concepts and propositions. Using writing as an example, she says, "Thus in the concrete operations stage an individual may be able to classify various animals, but will have trouble organizing a series of ideas into a logical sequence or hierarchy -- a paragraph or an outline for instance" (2).

“In the formal operations stage of cognitive development, thought becomes systematic, abstract, general, and hypothetical” (Kurfiss, 2), so logically, the students could now be expected to organize a paragraph or an outline.

Kohlberg agreed that the progression of moral reasoning is from a self-perspective to an increasingly abstract concept of others (Kurfiss, 5), and he correspondingly expanded on Piaget’s model and developed a three level model with two stages in each level. In the *preconventional level*, the focus is on the self. In the *conventional level*, others are considered but on the basis of desire for social approval and society’s expectations perhaps shown by the legal system. In the *post-conventional level*, the legal system is questioned and judgements are made according to what is fair or just. In answer to critics who suggested that culture might strongly influence actions or judgements in the different levels especially the post-conventional level, Kohlberg claimed that he felt there are absolute universal principles that underlie our sense of what is right, and that judgements based on these principles represent the highest form of moral reasoning (Kurfiss, 4).

While Kohlberg’s scheme covered more aspects than did Piaget’s, Carol Gilligan, author of *A Different Voice*, felt that there should be modifications made so it would be more representative of women. Gilligan’s opinion is that “judgements based on the concerns, needs, and circumstances of individuals and groups affected by a decision are as mature as those based on rights and principles” (Kurfiss, 5), and those judgements are thought to fit the conventional level, but might instead fit the post-conventional level. Therefore, some women who had been rated at the conventional level may instead be operating at the post-conventional level.

Kurfiss believes that Gilligan’s recommendation for Kohlberg’s scheme could also be applied to Perry’s scheme, and points out that since much of women’s reasoning is contextual in nature, it would correspond

to the achievement of college students in Perry's model. Perry's model has four levels which are subdivided into nine positions; however, the researchers cited in this paper usually only refer to the four levels, *Dualism, Multiplicity, Relativism, and Commitment in Relativism*, when relating the scheme to composition. Explanations of the levels will be given as the scheme is applied to the composition process.

Brand emphasizes that the link between cognitive maturity and cognitive thinking has inspired a coupling between more maturity and writing. She is concerned that the affective aspects may be disregarded because cognitive psychology is patterned after the harder sciences. However, she notes that Piaget and Erikson repeatedly implicated affect, and, of course, Kohlberg and Perry show ethical consciousness developing through stages. Even though this seems to make their theories more satisfactory to her, she points out that this leads to the assumption that the more advanced the moral development is, the more advanced student's "rhetorical effectiveness" will be. One problem she sees is that emotional neutrality is considered to be the most advanced stage, and she feels that it is impossible for a human being to be aloof (438).

Still, several researchers have decided that Perry's cognitive development model is the best one to relate to the writing process.

Bizell sees Perry's scheme as differing from Piaget's in two important ways. First, Perry describes development as something a person undertakes, while Piaget sees it as a natural process. Second, Perry sees the students as developing philosophical assumptions not strictly cognitive stages. Bizell cautions, however, that not all 18- to 21-year olds go through Perry's process, and, in fact, perhaps only those who receive an education do because part of the development described occurred through exposure to the tradition, habits, and values of a community through a liberal arts curriculum.

Joanne Kurfiss takes a more positive view of the develop-

mental models. She states that the work of Piaget, Kohlberg, and Perry has provided her with “a framework for observing and interpreting the interplay between students accumulating knowledge, their intellectual growth, and their ability to express their ideas in writing” (1). She favors Perry’s model because she believes it includes the idea of contextual reasoning thought important by Gilligan and because “subsequent work has confirmed the model in a variety of setting and for women as well as men...” (6).

Applying the model to writing, Kurfiss found that dualistic students, those in the first level, will dutifully record information but are not able to discuss the information or write about it because this is “the teacher’s responsibility” (7). Nor does the student think it necessary to analyze or reorganize the material because the facts speak for themselves. When they do write, dualistic students are rarely able to show an understanding of someone else’s world being different from their own. Thus, the dualistic students often make unsupported claims with little concern for their audience (8).

Reinforcing the idea of Perry’s dualistic stage, another researcher, Susan Miller, suspecting that developmental factors affected her freshman students’ writing, asked the students to write an essay on one of Kohlberg’s moral problems. She concluded that her students could be placed somewhere between conformity (stage three) and law and order (stage four) on the Kohlberg scale (cited in Hays, 1).

As the students discover that not all the experts agree, the multiplicitic position begins. The students begin to feel that their assignments are evaluated, not on their ability, but on “mysterious intangibles” such as style or expression or the whims of the instructor who still seems, at least partially, to be an authority figure.

At this point, Kurfiss says, the students discover that the authorities admit many views but endorse certain views as their own. Gradually, the students find that they can succeed in writing by offering

an opinion if they support the opinion with factual evidence.

Still later, a sense of cooperation between teacher and student forms and knowledge is seen as “a function of its context or the point of view from which the matter is viewed” (9). Some opinions are seen as better than others because they are more logical, more well supported than others, or fit the situation better. At this point, the students have moved into the relativistic level. Yet, even though they can compare and contrast skillfully at this level, it may still be difficult for the students to take a stand, and in their writing, they may “overuse qualifiers and modifiers” (9).

In the final level, commitment to relativism, the students become more sure of their own position, but at the same time more tolerant of other options and the people who choose those options.

This is supported by what Hays found in her evaluation of the compositions of her freshman class. Their writing followed a similar pattern to that stated by Kurfiss in that the earlier papers contained “flat, simplistic, and unsupported assertions” (21). Then, other points of view were acknowledged, and this was followed by a “full recognition of multiple perspectives without dealing with them” (21). Hays feels that the most difficult transition for the students is from multiplicity to relativism, but she found that the writing of those who make the shift becomes “more elaborated, more qualified, more concessionary, and yet at the same time more committed to a position” (21).

If the Perry model, or another developmental model, is applied to the teaching of composition, what are the implications?

Hays suggests :

1 Teachers can understand more readily the immaturity shown in the actions and writing of the younger students, in particular the freshmen.

2 Graduate writing tasks should not be given to undergraduate writers. [Certainly, such higher level assignments would be given judi-

ously.]

3. After recognizing the students' positions on the maturity scale, they can be introduced to "calculated incongruities" to help them move to the next stage.

4. Writing should be encouraged in all areas of the curriculum not just composition classes or freshman English.

5. More writing assignments should be given, but they must be carefully controlled assignments not just a greater number.

For freshman, this might mean requiring students to give reasons for their assertions and examples to illustrate those reasons, and then to develop these examples... At the high freshman or low sophomore level, we could require students accurately and fairly to summarize several opposing points of view on a given topic, to give reasons for and examples of each of those viewpoints, and then to choose the perspective they find most compelling and give reasons for their choice. We could then ask them also to argue just the opposite perspective. Such a sequencing of tasks could be designed for every stage of writing development up through the practice of mature discursive structure..." (Hays 23—24).

Indeed, care must be taken that the assignments provide challenges which are not more than one level above the stage where the student is positioned. If the students are pushed too hard toward the next stage, they may "freeze" in their position. In fact, Perry identified three ways students use to delay their progress: "temporizing," in which the student prefers the comfort of the present stage ; "escape," in which the student seeks refuge in the last held position ; and "retreat," in which a student may regress all the way back to dualism (Delworth, Hanson and Associates 95).

Burnham also decided that an understanding of how students develop as learners could be related to composition through Perry's work.

In fact, he says, “[Perry’s] scheme is comprehensive and rich in its implication for all college teaching, but especially for the teaching of writing” (3).

Burnham gives the following suggestions for first to second stage writers :

FIRST STAGE

1. First stage writers should be required to articulate and define their beliefs.

2. These writers should then determine the origins of their beliefs.

TRANSITION TOWARD THE SECOND STAGE

3. Grouping and organization of illustrations into generalizations should be taught.

4. The writers should be required to determine the assumptions on which some outside beliefs are based and defend them with details and illustrations.

5. The writers should then do step 4 with their own beliefs.

Two good techniques to help the learning activity, Burnham says, are expressive writing and collaborative learning.

Expressive writing is actually the writer writing to herself or himself, but this writing can be a valuable diagnostic tool for the teacher to discover the students’ thought processes. It also benefits the writer by giving practice in making thought connections, improving structures, and discovering an identity. It is an opportunity for dualistic students “to begin an internal dialog...” and become aware of their belief without involving “hostile” others (9).

Collaborative learning was developed for writing by Ken Bruffee. Its value is that “students write, talk about their writing, evaluate each other’s writing, discover the assumptions -- the absolute or underfended generalizations withing their writing -- and eventually defend their writing” (Burnham 9—10). This last step of defense helps prepare the student for the commitment needed for the later Perry stages. A possible

assignment at this point is to revise earlier expressive writing drafts and direct them at a specific audience or audiences. Burnham claims that using expressive writing and collaborative learning together properly, “moves the students into the second half of the Perry scheme and fosters moral and ethical development” (10). He believes, though, that teachers can only start the development process in the time the students are in the classroom, and that it is the responsibility of the students to finish it.

Beers, claiming that writing “contributes to the broader intellectual skills of our students” and that “it is not uncommon to hear college teachers say they want their students to learn how to think,” (3) finds the Perry scheme the easiest to use with college writers because it was developed from interviews with college students and “teachers find it easy to recognize the different viewpoints that Perry describes...” (4). She suggests if a student is operating in a multiplistic orientation when he or she sees evaluation as being arbitrary, the teacher might encourage that student to “play the game” hoping that practice at the “game” might cause the student to see that the evaluations are not so arbitrary and become aware of the value of supporting his or her arguments or belief (11).

Another technique is to have personal conversations with the students about a piece of writing, the implications of that writing, and the assumptions behind it without directly mentioning the movement toward relativism as the purpose of the discussion (11). Obviously, the point again is to have the student see how the process operates at the next level, and to try to practice that operation in his or her future writing.

The previously cited researchers dealt primarily with typical college students in liberal arts. Overbeck, however, relates the Perry scheme to remedial writing. She says that the Perry model made her more aware of the vulnerability that is involved when a student goes through a transition from one stage to the next. Also, she found

that her students are not only dualistic about their beliefs, but also about their writing skills. Therefore, she has added an extra step at the beginning of the developmental process to help the students gain confidence in their writing skills. After that confidence has been achieved, the normal developmental pattern can function.

Martinez and Martinez looked at Perry's scheme relative to basic writers but are suspicious and disturbed about its use because they feel the method implies that basic writers are cognitively deficient. They argue that their comparison of basic writers and graduate students showed no difference in cognitive level, but it did show a significant difference in the command of writing conventions (1). They also state that "using essay writing... to measure the cognitive level of basic writers, who by definition are novices in writing, nearly guarantees a deficient response" (3). They strongly suggest that the "writing problems" of the basic writers must be solved before attempting to rework their structures or even revise their world views..." (8).

In sum, I believe there is good cause to connect cognitive development with the composing process in terms of moral development or cognitive thinking. The relationship appears to be best realized with the typical liberal arts student in a two-year or four-year college environment, especially if the Perry model is used.

The stating of this relationship is almost simplistic. That is, it is very easy to say and see that the more cognitively mature a student is, the more his or her writing will reflect that maturity.

However, being aware of this relationship would seem to be an important teacher benefit. That is, knowing where the student is in terms of cognitive development should allow the teacher to make wiser choices in terms of what to expect from each student, and how to get the students to progress in their development at the proper rate.

One difficulty is applying this relationship to classroom techniques. The researchers cited above have given a few examples of how

they use or have used the theory for their writing classes. However, some such as Martinez and Martinez and Overbeck have also pointed out some of the pitfalls in its use, and it is certainly necessary to question whether the relationship is applicable to all groups, or what adjustments must be made to make it applicable.

For example, if I were to apply this concept to my writing classes for Japanese junior college women, I would have to determine how culture affects my students. There are likely more, but five ways come quickly to mind.

First, the Japanese educational system from the beginning years and even including the college years, is an authoritarian system. It would seem possible that the system, not the students themselves, may be delaying their progress by keeping them in a sort of dualistic environment. That is, the teacher is an unquestioned authority, and this concept is so ingrained, especially through the high school years, that it is difficult even in college to get the students to feel comfortable about even *thinking* about asking questions in class. Their reaction is often something like, "You are the teacher. You tell us."

Second, does Gilligan's theory work for Japanese women as it does for American or European women? By this I mean, do Japanese women make their judgements based on the same kind or any other certain kind of personal relationship? If so, how does this compare with the judgements made by Japanese men? If they, the men or women, are using even a slightly different cognitive operating scheme, adjustments would have to be made.

Third, how does the culture outside of education affect how Japanese women's judgements are made? In several areas, they are kept subordinate to male "authority," and, yet, in some areas such as the family budget they are given complete responsibility. Does this somewhat contradictory situation, and others like it, create an environment that helps or hinders progression through the developmental levels?

Fourth, how does learning writing in a second language affect the content of the student's papers? Do they have some of the problems that the basic writers and remedial writers mentioned above have? It is certainly likely, and it is also likely that they will need some exercises to help them gain confidence in their second language skills before their cognitive development will show clearly in that language. For my part, I must try to be more sensitive to the ways in which the cognitive development does show and not expect those ways to be exactly the same as a native English speaker.

Finally, another problem is that Japanese students find it hard to put any details, examples, illustrations, and so on in their compositions as support for their thesis statement. It has been assumed that this was, again, because of the culture, and, indeed, some researchers claim that the Japanese do use a more circular pattern of reasoning in their writing compared to the more linear American reasoning, and, also, that the Japanese feel it unnecessary to say or write what they believe is "obvious." That is, there is a feeling that the other person already knows what you are going to say past a certain point so there is no need to say or write it again. A strict interpretation of the Perry scheme could lead to the misinterpretation that the Japanese writers stay at the multiplistic or low relativistic levels because they do not specifically defend their position.

The challenge then, perhaps using the Perry scheme as a guide, seems to be to determine what characteristics of the Japanese reflect the different levels of the maturity scale, how they show those levels in their writing, and how those findings can be applied in composition classes.

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