ABSTRACT

The theories of cognitive development put forth by William Perry and by Jean Piaget are helpful in understanding the writing choices students made in responding to an assignment involving writing a persuasive essay. Some students were looking for the "Right Answer" and when they found it, they assumed that everyone would agree with them. Perry's notion of "dualism" helps to explain why such students rely on authority. The stages of relativism also help explain why some students could not think of anything worth writing about because everyone is entitled to their own opinion. Piaget's account of students' early attempts at mastering formal operations helps explain why some students refused to revise their papers after receiving criticisms from other students. Students at this stage think hypothetico-deductively and construct an argument when they mean to persuade. Students at this stage are also egocentric in that they cannot comprehend why reality should not conform to the conclusions reached by logic. (RS)

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Persuasion from the Student's Perspective: Perry and Piaget

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Recent theorists have been interested in the sequencing of writing activities so that they will correspond to, and perhaps encourage the development of, students' cognitive abilities. We came to our study of Perry and Piaget from the other direction. We had asked our students to persuade other members of their small workshop groups on a subject of their choice and found ourselves puzzled by some of the writing decisions they made. We turned to Perry and Piaget looking for explanations.

Let me illustrate with an anecdote. Sean had decided to persuade his group to eat less red meat because it was not good for them. One day he burst into my office: "My whole topic is shot," he said in a panic-stricken voice.

"How so?" I asked.

"Well, I went to the library and I found this book and it says red meat is actually good for you."

"Did you look in any other books?"

"Why? I imagine they'd all say the same thing."

"So what are you going to do?" I asked.

"Start eating red meat," he replied.

Another student, Alicia, wanted to persuade her group to be in favor of genetic engineering including creating human beings through cloning. She had interviewed her group to better understand what attitudes she was trying to change. In answer to the question "What are your moral beliefs on the production of human beings by this form of asexual reproduction [cloning]?"
one student answered, "I feel that children should be 'produced' the natural way. Otherwise everyone is playing God." Another said, "it goes against my morals, man isn't supposed to mess with genes of anything, especially himself."

After discussing other uses of genetic engineering, to which her group was receptive, she gets to this one--using cloning for "the production of a human being." She says, "To some this is a terrifying concept, they feel that it would be playing God." To address this concern, she relies solely on one quotation from Joshua Lederberg, a "Noble Laureate" who expresses in cold, mechanical terms her audience's very fears: "if a superior individual... is identified, why not copy it directly, rather than suffer all the risks of recombinational disruption, including those of sex... Leave sexual reproduction for experimental purposes; when a suitable type is ascertained, take care to maintain it by clonal propagation." It seems strange that Alicia thinks this will persuade her group.

Why did Sean and Alicia think as they did and make the writing choices they did? The work of William Perry helps us understand. In Forms of Intellectual and Ethical Development in the College Years: A Scheme, Perry describes a line of development that takes a student from dualism to relativism to commitment in a relativistic world. Perry's studies suggest that most students arrive at college in mid to late dualism or early relativism.

In the stages of dualism, students believe there are Right Answers. These can be learned from Authorities who reside either in the classroom or in the library. Sean was prepared to change
his diet when he had found "the Answer" in the library. Alicia persisted in thinking that a "Noble Laureate" must know the Answer and quoting him must be persuasive, even when her classmates said she had not persuaded them. She did not revise in the light of their comments.

David provides a third example of a student who seems to be making writing choices based on a dualistic world view. His paper begins: "In reviewing the situation in Central America, specifically in Nicaragua, it is often hard to distinguish between good and evil. . . . On one side of this battle is the Sandinistas. . . . On the other side is a small resistance group known as the Contras." David seems to be thinking in terms of right vs. wrong, good vs. evil. In order to decide which is which, David relies on the testimony of one Contra, Miguel Bolanos, who defected from the Nicaraguan government. Bolanos accuses the Sandinistas of destroying private enterprise, denying freedom of speech, and attacking the church. David concludes: "Now that you know the facts. . . ." David seemed to think that if he went to the library and located one authority, he would be finding out the facts, and that if he quoted from that Authority, he would be able to persuade his classmates. Although in rating David's paper one of his classmates listed all of the "facts" that were confusing to him, David's revision still relied solely on this one Authority.

Other puzzling examples come up in conference, where some students say "I can't think of anything to persuade my group about. I don't feel strongly about anything." This may reflect the uncertainty of the early stages of relativism, when
the realm in which there are Right Answers grows smaller and smaller and, as Perry says, "Everyone has a right to his own opinion." If everyone has a right to his or her opinion and no opinion is better than another, why try to persuade at all?

Other students have a "This is all a game" attitude. For example, Guy said, "I'll write about capital punishment. I can take either side," and in his journal he called the assignment "busywork." This may reflect how some students in the early stages of relativism view relativistic reasoning—as a special case of "what They want" within Authority's realm.

For other papers Piaget's theory of cognitive development helped us understand the writer's thinking. Here's an example: Vermont had just raised the drinking age from 18 to 21, much to students' dismay. Andy decided to persuade his group that 21 was appropriate. He begins his paper:

I am quite aware that you all drink, and a big concern of your's is the twenty-one year old drinking age. When you are eighteen you are supposedly a legal adult and have all the responsibilities of that, but most of you don't show any sign of responsibility when it comes to drinking, and that is the problem with which you should be most concerned.

Here is one classmate's evaluation of Andy's paper: "On a scale of 1-5 I would give his paper a 1. First of all, there is no way he could ever convince me that the drinking age should be 21. And secondly, his paper really didn't have enough strong facts to back up his opinion."

Andy chose not to revise. Why? Inhelder and Piaget provide an explanation. In their book The Growth of Logical Thinking from Childhood to Adolescence, they suggest that most eighteen-year-olds are in the process of mastering formal
operations, or abstract logical thinking abilities.

What thought processes characterize formal operations?

According to Piaget, a tendency toward hypothetico-deductive thought. Barry Wadsworth, in *Piaget's Theory of Cognitive and Affective Development*, explains:

whereas concrete operational thought is logical thought, it is restricted to the "concrete" world. Not until the development of formal operations does reasoning become "content free" or "concrete free." Formal reasoning can deal with the possible as well as with the real. (169)

Inhelder and Piaget assert that "the most fundamental property of formal thought is this reversal of direction between reality and possibility" (255), explaining

Possibility no longer appears merely as an extension of an empirical situation or of actions actually performed. Instead, it is reality that is now secondary to possibility. . . . In other words, formal thinking is essentially hypothetico-deductive. . . . conclusions are rigorously deduced from premises whose truth status is regarded only as hypothetical at first; only later are they empirically verified. This type of thinking proceeds from what is possible to what is empirically real. (251)

Given this tendency toward hypothetico-deductive thought, it is not surprising that a student would interpret "persuade your classmates" as "construct an argument"—would be interested in beginning with hypothetical assertions and creating a deductive argument which would lead to conclusions the writer would see as more "real" than any isolated concrete facts, including his classmates' "real" beliefs about the topic.

If we look more closely we can see what Andy was doing, namely constructing a deductive argument based on hypothetical premises. Notice the way he uses the word "responsibility" to construct a deductive argument: "When you are eighteen you are
supposedly a legal adult and have all the responsibilities of that, but most of you don't show any sign of responsibility when it comes to drinking. . . ." His premises are

(1) To be given the responsibility to do things, you must do them responsibly;

(2) You admit you don't drink responsibly.

The implied conclusion is "Therefore you shouldn't be given the responsibility to drink." Perhaps Andy saw no need to make any changes in his paper because he thought his logic made the paper irrefutable and so persuasive.

Another student, Rob, chose to persuade his group that God does not exist. He begins: "By applying simple logic, Atheism appears to be the only reality." He develops the paper by giving his reasons: "Therefore, if man is totally free, then God can not exist"; "If there really were a God, how could such an omnipotent being allow so much evil to be so prevalent in society?"; "Belief in a super-being is inconsistent with the recognition of worth, freedom, and responsibility of man." Near the end of his paper he states: "I can not see how a thinking individual, after deliberating these two questions, could honestly believe in an all-powerful being."

This dumbfoundedness suggests another point Inhelder and Piaget make about adolescent thinking: that egocentrism accompanies this stage of growth. In Piaget's theory, each new gain in cognitive ability is accompanied by a corresponding type of egocentrism—in this case, an inability to see why reality should not correspond to the conclusions reached by (one's own) logic. To quote:
The indefinite extension of powers of thought made possible by the new instruments of propositional logic at first is conducive to a failure to distinguish between the ego's new and unpredicted capacities and the social or cosmic universe to which they are applied. In other words, the adolescent goes through a phase in which he attributes an unlimited power to his own thoughts so that the dream of a glorious future or of transforming the world through Ideas seems to be not only fantasy but also an effective action which in itself modifies the empirical world. This is obviously a form of cognitive egocentrism.

Barry Wadsworth rephrases: "In adolescent thought, the criterion for making judgements becomes what is logical to the adolescent, as if what is logical in the eyes of the adolescent is always right, and what is illogical is always wrong. . . ."

(164).

With this view of the world as logically ordered, one would assume, as Rob did, that a logical presentation of the material or an explanation of the logic that led to his conclusion would convince any audience, even on the subject of whether or not there is a God.

Chris offers a humorous example. In trying to persuade his group not to be afraid of sharks, he is so confident his logic is convincing that he unwittingly includes specifics that play into their very fears. He begins:

As you enter the crisp blue waters of the caribbean seas you are delighted by the warm waters. You swim maybe twenty yards, than a little further. The strange bending of the light in the water beneath you makes it seem as if there are shadows all around you. Suddenly your pleasant thoughts are shattered by fear. The shadows take shape in the form of large bloodthirsty sharks, and now its a race back to the safe white sands. Is this fear justified?

A little later he assures his classmates that "man shouldn't fear sharks any more than he should a pitt-bull terrier." And
on page two he says, "Of all the hundreds of shark species in the world there are only a few that would even consider attacking a human being. These would include the Great White Shark, the Hammerhead, the Tiger shark and maybe an occasional Mako."

In evaluating Chris' paper, one of his classmates wrote: "I'm confused as to the purpose of his opening paragraph. For instance, when he used a word like 'bloodthirsty' and a 'race back to shore' he makes the reader envision being frightfully scared of this beast. . . . Already by using this terminology, you have the reader in the wrong frame of mind." Again, Chris did not revise, perhaps because of egocentrism: he finds his own reasoning so compelling that he overlooks many of the fearful associations his choices will evoke.

Having done all this reading of Perry and Piaget, we were pleased to read the recent article in College Composition and Communication by Mike Rose which seems to support the way we've applied cognitive theory to 18-year-olds. He urges us to consider, before we apply a cognitive theory to writing, whether it will reduce or enhance our understanding of students and their writing, whether it will "strip and narrow experience and cognition, or . . . open up the histories of students' involvements with writing, their rules, strategies, and assumptions, the invitations and denials that characterized their encounter with print" (296).

We did not use the theories of Perry and Inhelder and Piaget to categorize our students or to set up a curriculum which would encourage them to move to higher categories,
although both Perry and Piaget suggest that disequilibrium encountered through formal education can foster cognitive growth. Rather, we found these theories most useful in helping us understand the writing choices our students made in response to a particular assignment. As Perry himself points out in responding to the question "To what then do we apply the theories [of cognitive development]?"

if we apply the theory to ourselves, to our ways of seeing, then we can see the students better where they are, where they're coming from, and where they may have to go, and if we see the students better where they are, we then may be able to invent better ways of communicating with them. (63)

Theories of cognitive development, then, can help us practice what we preach when we teach eighteen-year-olds: consider your audience.

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WORKS CITED


