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Is Teaching Still Possible? Writing, Meaning, and Higher Order Reasoning

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## Is Teaching Still Possible? Writing, Meaning, and Higher Order Reasoning

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In the memorable disquisition with which he begins *Permanence and Change* (Indianapolis, Ind.: Bobbs Merrill, 1954), Kenneth Burke explains how thinking which does not include thinking about thinking is merely problem-solving, an activity carried out very well by trout.

Though all organisms are critics in the sense that they interpret the signs about them, the experimental speculative technique made available by speech would seem to single out the human species as the only one possessing an equipment for going beyond the criticism of experience to a criticism of criticism. We not only interpret the characters of events. . . . We may also interpret our interpretations. (pp. 5-6)

That species-specific capacity for thinking about thinking, for interpreting interpretations, for knowing our knowledge, is, I think, the chief resource for any teacher and the ground of hope in the enterprise of teaching reading and writing.

I plan to be cheerful but there is a certain amount of setting aside which needs to be done before I can confidently claim that teaching is still possible. About half my time will go to nay-saying: I want first to assess the hazards of developmental models and the positivist views of language which underwrite them. I will turn then to a consideration of how alternative views of language and learning can help us invent a pedagogy that views reading and writing as interpretation and the making of meaning.

What we have these days is properly described, I think, as a pedagogy of exhortation: "Feel comfortable. . . . Wake up! . . . Find something you're interested in. . . . Get your thesis statement. . . . Say what you really think. . . . Go over your paper and take out all unnecessary words." But exhortation, whether left-

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wing or right-wing, is not instructive. (No writer ever puts in words which he or she thinks are unnecessary; learning to discover that some *are* is one of the chief challenges in learning to write.) What must supplant the pedagogy of exhortation is a "pedagogy of knowing." The phrase is Paulo Freire's, and he means by it what Socrates, Montessori, Jane Addams, I. A. Richards, Roger Ascham, or other great teachers would have meant, namely, that unless and until the mind of the learner is engaged, no meaning will be made, no knowledge can be won.

What chiefly forestalls our moving from a pedagogy of exhortation to a pedagogy of knowing is a dependence on a view of language which cannot account for meaning nor give an account of meanings. A positivist conception of language as a "communication medium," as a set of muffin tins into which the batter of thought is poured, leads to question-begging representations and models of the composing process. Understanding what a pedagogy of knowing would involve is prevented by an unhealthy confusion about what development means and a damaging dependence on the stage models which cognitive psychologists have elaborated, supposedly for the benefit of rhetoricians as well as for guidance counsellors, therapists, curriculum designers, and the publishers of values clarification kits.

Let me begin with a passage from an article by a rhetorician who is discussing cross-disciplinary programs.

Since the early 1970s evidence has been accumulating which suggests that up to fifty percent of the adolescent population in this country fail to make the transition from the concrete operational stage to formal operations by the time they have reached late high school or college age. Judging from this empirical research, it would appear that as many as half of our students from junior high on into adulthood are unable to think abstractly, to process and produce logical propositions.<sup>1</sup>

Three points are notable: First, the Piagetian model, which is of course intended to represent the stages of development of the language and thought of the child, is here applied to the reasoning of young adults; second, "empirical research" is taken as providing evidence in support of certain claims about learning; third, the failure to reach the stage of formal operations is made equivalent to an inability to "think abstractly," which, in turn, is identified as processing and producing logical propositions. These are all misconceptions. The attempt to apply the Piagetian stage model to non-children is futile; the claim that empirical research supports the efficacy of doing so is false; the identification of abstract thought with processing propositions begs the question of what constitutes that process.

What the child does or does not do may look like what the incompetent or deficient or uneducated adult does or does not do, but it does not follow that the two instances are alike so far as motivation or function are concerned. Just so, the savage is not a child; the lunatic is not a poet; the chimp who has been taught sign language cannot be said to be using it as either the hearing or deaf

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1. Randall Freisinger, "Cross-Disciplinary Writing Workshops: Theory and Practice," *College English*, 42 (1980), 163.

human being does. To see the similarities without noting the differences is to settle for pseudo-concepts, in Vygotsky's phrase.

If we do form a concept of language as not just a medium of communication but a means of making meaning, we preclude a dependence on empirical research to find out what is happening in our classrooms, to see what writers do when they compose. If you start with a working concept of language as a means of making meaning, you are recognizing that language can only be studied by means of language. Understood in such terms as *context, purpose, intention, import, reference, significance, ambiguity, representation*, and so on, linguistic structures or texts or speech acts can only be studied by interpreting the interdependencies of meanings—and by interpreting our interpretations. But if these conceptions are central, what is there for empirical researchers to investigate? Empiricists do not generally recognize that all method, including scientific method, entails interpretation; they do not generally recognize that there are no raw data; there are no self-sufficient facts; there is no context-free evaluation. Their method is not to recognize the fact that all knowledge is mediated and that facts must be formulated, but to proceed as if interpretation were supererogatory. Empirical researchers leave out of account meaning because they have no means of accounting for it. I. A. Richards observed of this kind of investigator that he “does not know how to respect the language.”

He does not yet have a conception of the language which would make it respectable. He thinks of it as a code and has not yet learned that it is an organ—the supreme organ of the mind's self-ordering growth. Despite all his claims to be expert in collecting, reporting, comparing, and systematizing linguistic facts, he has not yet apprehended the greatest of them all: that language is an instrument for controlling our becoming.<sup>2</sup>

Some of the human sciences have seen the folly of denying the very subject which should be at the heart of the study of the language animal, the *animal symbolicum*. The anthropologist Clifford Geertz, in a wonderful essay called “Thick Description,” shows just what it means to ask questions about what human beings are doing.<sup>3</sup> He undertakes to explain how context and perspective function in interpretation by subjecting an example of Gilbert Ryle's to analysis: A boy is seen to wink; another boy has a tic which involves his eyelid; a third boy is seen practicing an imitation of the boy with the tic. Try describing these “behaviors,” as the empirical researcher would call them, and watch two of

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2. *Speculative Instruments* (New York: Harcourt Brace, 1955), p. 9. It is the lack of a philosophy of language that could properly account for meaning which invalidates the procedures so frequently recommended for students of the composing process. George Hillocks, for instance, suggests that inquiry procedures are well-modelled by ethology. (See his article “Inquiry and the Composing Process: Theory and Research,” *College English*, 44 [1982], 659-673.) But as Susanne K. Langer has shown in the second volume of *Mind: An Essay on Human Feeling* (Baltimore, Md.: Johns Hopkins University Press, 1972), Frisch, Tinbergen, et al. are unaware of the role metaphor plays in their descriptions; of presuppositions which remain entirely unexamined; of distortions resulting from a failure to differentiate animal and human acts. Ethological interpretations are shown to be pseudo-concepts, generalizations about particular cases, not authentic concepts.

3. *The Interpretation of Cultures* (New York: Basic Books, 1973), pp. 3-30. Reprinted in my *Reclaiming the Imagination*, (Upper Montclair, N.J.: Boynton/Cook, 1984), pp. 226-248.

them become human acts, motivated and meaningful—and subject to interpretation.

If meaning is set aside in the search for “data,” the findings will not then be applicable to the making of meaning. But composition specialists who follow psycholinguistic principles of analysis want to have it both ways: their empirical research requires that meaning be left out of account, but they also want to claim that their findings are relevant to pedagogy. What writers do is thus confused with what psycholinguists want to study. This methodological pitfall is impossible to avoid when the investigator is guided by a conception of language as a code.<sup>4</sup>

The empiricist needs something to measure, and cohesive devices can be counted, once there is a taxonomy. They are a feature of discourse analysis, which is not, as one might have thought, a matter of studying the dialectic of what-is-said and what-is-meant; it is not the analysis of intention and recalcitrant linguistic structures in dialectic, the relationship that makes the representation of meaning possible; it is by no means simply a fancy name for “critical reading”: discourse analysis is the study of “information management,” “thematic structure,” “sentence rules,” and, preeminently, of “cohesion.” Now the “cohesiveness” of a text is not the same thing as “coherence.” Coherence is mentalistic; it isn’t there on the page; it cannot be measured and graphed; it can only be interpreted in terms of the emergent meanings of the writer. But for the psycholinguistic investigator, it is not writers who produce texts; texts are created by cohesive devices.

At a recent conference I heard a psycholinguist explain how, in order to foreground the cohesive devices, he had to reduce the role of meaning. The first problem in the design of his experiment was to find a passage or a stretch of discourse in which meaning was not important so that it would be easier to measure the responsiveness of college students to cohesive devices. He spent some time in preparing the text, but I wondered why he didn’t simply excise something from any textbook in any discipline published in any year, since they are generally written so that readers will not be irritated or distracted by the need to interpret what is being said in an attempt to understand what was intended.

This kind of empirical research institutionalizes the pedagogy of exhortation: “Does your paper flow? If not, check your transitions. Can your reader follow you? Be sure to give him clues.” Thus we get papers full of road signs pointing in the wrong direction—*however*, when there is no *however* relationship; *on the other hand*, introducing a faulty parallel; redundancy (the uninstructed writer’s only means of emphasis); end linkages—which I call Nixonian Syntactic Ligature—with the beginning of each sentence picking up the exact wording of the end of the preceding sentence. Research on cohesive devices easily seeps into composition theory because it sounds scientific and because anything that lets us count will seem helpful in evaluating what we think we are teaching. But

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4. Max Black in an essay on Whorf entitled “Linguistic Relativity” notes “the linguist’s fallacy of imputing his own sophisticated attitudes to the speakers he is studying” (*Models and Metaphors* [Ithaca, N.Y.: Cornell University Press, 1962], p. 247).

the fact that cohesive ties may be identified and classified can easily distract us from the problem of learning how to help writers discover, in the very act of realizing their intentions, the discursive power of language itself, what Edward Sapir meant by calling language heuristic. Empirical research into “discourse acquisition” is likely, I think, to mislead us—to lead us away from thinking about thinking, to keep us from studying the process whereby writers discover the resources of language and learn to control them in the making of meaning.<sup>5</sup>

The challenge to experimental design should be not to reduce meaning or to try to eliminate it; this is a primitive conception of what disembedding involves. The challenge to experimental design is not to dispense with meaning but to control language so that there are not too many meanings at a time; so that the learners can discern, in I. A. Richards’ words, “the partially parallel task” (*Speculative Instruments*, p. 96) when they confront it; so that the teacher, by means of a careful sequence of lessons or assignments, can assure that the students are conscious of their minds in action, can develop their language by means of exercising deliberate choice. Positivists see no virtue whatsoever in consciousness of consciousness since they model conceptualization on motor skills—and everybody knows that there consciousness becomes self-consciousness: you’ll fall off the bicycle if you think hard about what you’re doing. What is forgotten is that wherever language is concerned we are dealing with symbolic acts. Consciousness there is not that “self” consciousness which is so destructive but Freire’s “conscientization” or Burke’s “interpretation of our interpretations” or Richards’ “comprehending our comprehensions more comprehensively” or Coleridge’s “knowing our knowledge” or Cassirer’s “confrontation of an act of awareness” and so on. Consciousness of consciousness is entailed in our activity as language animals.

If psychologists would read Susanne K. Langer’s *Mind: An Essay on Human Feeling*, they would have a clearer idea of what they are about. Or they could read a little phenomenology, but psychology is usually about a generation behind. Thus psychologists have recently taken up structuralism, just as it’s being

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5. I do not deny the value of analyzing cohesive devices in the context of discourse; this, I take it, is precisely what Richards had in mind when he called rhetoric “the study of how words work.” But “discourse analysis,” as presently practiced, does not always take into account the interdependence of linguistic and rhetorical functions. It begs the question of the relationship of language and thought, because the positivist conception of language by which it is guided does not provide the means for accounting for meaning. Discourse analysts separate thinking from writing, which they conceive of as the manipulation of *devices*. When Charles R. Cooper tells us in “Procedures for Describing Written Texts” (in *Research on Writing*, ed. Peter Mosenthal and Shaun Walmsley [New York: Longman, 1983]) that the “thinking process leads the writer to choose appropriate strategies and forms for presenting the outcomes of thought *as written text*” (p. 291), he has not been alert to those hazards Vygotsky urges us to avoid by beginning with the unit of meaning. For Professor Cooper it is clearly not part of the procedure for describing, much less for producing, “texts” to take into account the heuristic powers of language or the interplay of feedback and what Richards calls “feedforward.” Yet “shaping at the point of utterance” is not exclusively an oral phenomenon.

It should be noted that for Halliday and Hasan, whose taxonomy is widely used, the working concept of a text is as a semantic unit. For an excellent discussion of the interdependence of meaning and grammatical, logical, and rhetorical forms, see Jeanne Fahnestock, “Semantic and Lexical Coherence,” *College Composition and Communication*, 34 (1983), 400-416. And see anything Josephine Miles has ever written.

laid to rest elsewhere. And before that it was operationalism, which fed itself on hard data. Robert Oppenheimer, in a brilliant talk to the American Psychological Association in 1955, urged the members not to mimic a determinist physics “which is not there any more” (“Analogy in Science,” reprinted in *Reclaiming the Imagination*, pp. 189-202). He suggested, rather, that they listen to a man named Jean Piaget. Nowadays, when psychology is awash in Piagetian concepts, it is hard to imagine that this warning was necessary, but Oppenheimer realized that those in charge were the successors to those whom William James had called “brass instrument psychologists.” Oppenheimer said: “I make this plea not to treat too harshly those who tell you a story, having observed carefully without having established that they are sure that the story is the whole story and the general story” (p. 201).

The story Piaget had to tell was certainly interesting, but it isn't the whole story or the general story, and some psychologists, by examining Piaget's experimental designs very carefully, have shown how and where he went wrong. I call your attention to an excellent little book, *Children's Minds*, by Margaret Donaldson (New York: Norton, 1979). (She is neither polemical about Piaget nor worshipful of some anti-Piaget.) Dozens of experiments are described which offer alternative explanations of children's responses to certain questions and situations designed to test their cognitive skills. They clearly establish that Piaget's findings, in instance after instance, are the artifacts of his procedures. The alleged incapacity to “decenter” is seen to be a matter of difficulty in locomotion and movement and not in a lack of “object concept” or an incapacity to entertain other points of view. It seems clear that children who made “egocentric” responses in various experiments of Piaget did not fully understand what they were supposed to do.

Margaret Donaldson writes in one of the summaries:

Children are not at any stage as egocentric as Piaget has claimed . . . [they] are not so limited in ability to reason deductively as Piaget—and others—have claimed . . . . There is no reason to suppose that [the child] is born with an ‘acquisitive device’ which enables him to structure and make sense of the language he hears while failing to structure and make sense of the other features of his environment. (pp. 55-56)

The recent corrective experiments she discusses are fascinating, but there are precedents. What Margaret Donaldson's psychologists have done for the semantics and syntax of Piagetian questions, Rudolf Arnheim did for visual representation in Piagetian problems. Ever alert to the powers of visual thinking, Arnheim illustrates what he calls “visual illiteracy” with a pair of drawings in cross section of a water tap in open and closed position, schematic representations used in one of Piaget's perceptual problems. In a series of devastating questions in *Visual Thinking* (Berkeley: University of California Press, 1969) he points out the ambiguities and concludes as follows:

I am not denying that a person, immunized and warned by years of exposure to mediocre textbook illustrations, mail order catalogues, and similar products of visual ineptness, can figure out the meaning of these drawings, especially if helped by verbal explanation. But surely, if a child passes the test he does so in spite of the draw-

ing, not with the help of it; and if he fails, he has not shown that he does not understand the working of a tap. He may simply be unable to extricate himself from a visual pitfall. (p. 312)

But of course the centrally important critique of Piaget's work came from Lev Vygotsky as early as 1932. Vygotsky's strictures concern not only the relationship of language and thought but also that of learning and instruction.<sup>6</sup> All study of language and thought, Vygotsky argued, must begin with the "unit of meaning," since neither language as element nor thought as element can be apprehended in its real character without the context provided by the other. Speech is not articulated sound plus intention; it is not speech until and unless it is meaningful. Neither language nor thought is meaningful outside a social context—which is to say that purpose and intention are from the first constrained not by a need for "communication" but by a need for representation, which of course invites and demands interpretation. Language is symbolic activity and from the first establishes itself in a social setting. The crucial difference between Vygotsky's procedures and Piaget's is that language is built into Vygotsky's test design and the tester is actively involved in exchanges with the subject. Piaget, Vygotsky thought, did not appreciate the complex dialectic of the learning curve and the role of instruction. The explanation for the misleading questions and the ambiguous directions is to be sought in the fact that Piaget thought that the only way to test cognitive skills was to isolate them as far as possible from language-dependent settings. The failure to understand the interdependence of language and thought is consonant with the misconception of the role of instruction which, like test design, is considered by Piaget in mechanistic terms.

Why should we care about Piaget and his critics? Don't we have enough to do, taking care of course design and teacher training and writing across the curriculum and trying to assure the survival of departments of English and to assuage deans who are counting FTE's—don't we have enough to do without worrying over arguments which may or may not be intelligible or important? The answer is that if we don't understand the grounds for a critical appraisal of theories of cognitive development, if we let our practice be guided by whatever we are told has been validated by empirical research, we will get what we have got: a conception of learning as contingent on development in a straightforward, linear fashion; of development as a pre-set program which is autonomous and does not require instruction; of language as words used as labels; of meaning as a one-

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6. See especially "Development of Scientific Concepts in Childhood" in *Thought and Language*, trans. and ed. Eugenia Hanfman and Gertrude Vakar (Cambridge, Mass.: MIT Press, 1962). Vygotsky analyzes the theories of the relationship of learning and development held by Piaget, William James, and the Gestaltists and then goes on to outline his own theory, the central feature of which is "the zone of proximal development." The interdependence of "scientific" and "spontaneous" concepts is exactly analogous to that of discursive and mythic forms of thought in Cassirer's philosophy of symbolic forms and Susanne K. Langer's philosophy of mind. The idea of development "upward" in spontaneous conceptualization and "downward" in the formation of scientific concepts is fundamental to Vygotsky's dialectical conception of learning and development as set forth in *Mind in Society: The Development of Higher Psychological Processes*, ed. Michael Cole, Vera John-Steiner, Sylvia Scribner, and Ellen Souberman (Cambridge, Mass.: Harvard University Press, 1978). See especially pp. 78-91.



directional, one-dimensional attribute; of the human mind as an adaptive mechanism. Thus are we wrecked on the rocks of teaching seen as intervention; of the so-called student-centered classroom; of single-skill correction; of discourse analysis, in which the chief function of discourse is disregarded; of reading instruction in which language is considered solely as a graphic code; of writing seen as the assignment of topics sequenced according to the commonplaces of classical rhetoric, as interpreted by associationist psychology: narrative before description, compare-contrast separate from definition, expression way before exposition; an affective English 101 (Turn off your mind and float downstream) and a cognitive English 102 (Get your thesis statement! Generalize! Be brief! Don't generalize!).

Developmental models uncritically deployed lead to the kind of judgment exemplified in the final sentence of the text I took as my point of departure, the one stating that students can't think abstractly, that they can't "produce or process logical propositions." We should not be surprised that this writer goes on to say that "It is fairly obvious from work done in psychology that we cannot accelerate the transition from concrete to formal operations." What is surprising is the rest of the sentence: "but we may be able to promote its natural development by creating a more natural classroom environment" (Freisinger, p. 163). Why would we aim to promote its "natural development" if we don't think we can "accelerate the transition" to a stage now long overdue? Yet I am cheered by this absurd contradiction, cheered according to the same logic by which Gide was led to praise hypocrisy as a step in the right direction. I think the writer is a better teacher than the theory he explicitly depends on lets him be; so he discards it! He finds another which allows him to speak of promoting natural development in a natural environment. That sounds like somebody who believes that teaching is still possible!

I am now ready to be cheerful. The first piece of good news is that what college students find difficult—what everybody finds difficult, what diplomats and doctors, of medicine and of philosophy, find difficult, is not *abstraction* but *generalization*. These acts of mind are conflated by positivists, but they are not the same. Abstraction is not generalization. This is not a quibble; if it were, our enterprise would be futile and the very idea of education fatuous.

Abstraction is natural, normal: it is the way we make sense of the world in perception, in dreaming, in all expressive acts, in works of art, in all imagining. Abstraction is the work of the active mind; it is what the mind does as it forms. The name for this power of mind used to be imagination. We do not have to teach it: it is the work of our Creator. It is a God-given power or, if you prefer, it is a specific power the *animal symbolicum* has in lieu of a repertory of instincts which obviate the necessity of interpreting interpretations. We do not have to teach abstraction. What we do have to do is to show students how to reclaim their imaginations so that "the prime agent of all human perception" can be for them a living model of what they do when they write. What we must learn to do, if we are to move from the pedagogy of exhortation to a pedagogy of knowing, is to show our students how to use what they already do so cleverly in

order to learn how to generalize—how to move from abstraction in the non-discursive mode to discursive abstraction, to generalization. We must strive to “raise implicit recognitions to explicit differentiations”: that phrase comes from a book called *The Philosophy of Rhetoric*, published nearly fifty years ago by I. A. Richards. We do not yet have a philosophy of rhetoric, for the very good reason that we, teachers of reading and writing and those responsible for literacy at all levels, have not “taken charge of the criticism of our own assumptions,” as Richards urged. The second piece of good news is that there is a semiotics which can guide that enterprise.

It starts from a triadic rather than a dyadic conception of the sign and you can represent it rather easily by drawing two triangles. Draw first an equilateral triangle, pointing upward. At the southwest corner write “Writer or encoder”; at the southeast, write “Audience or decoder” and at the top, write “Message.” This constitutes what positivist rhetoricians call the triangle of discourse: It is worthless. As you can easily see, it leaves out purpose, meaning, and intention; it confuses message with signal. Now draw another equilateral triangle and make the base a dotted line. Label the southwest angle “representamen or symbol”; the southeast angle, “object or referent”; at the apex, write “interpretant or reference.” You can get from the symbol to what it represents only by means of a meaning, a mediating idea. This curious triangle represents the triadicty central to C. S. Peirce’s *semiotics* and it appears in *The Meaning of Meaning* (New York: Harcourt, Brace, 1944) by Ogden and Richards, a work first published in 1922. I know of no evidence that Vygotsky had read either Peirce or Ogden and Richards, but the triangle with the dotted line appears in an excellent paper of his on symbolization as mediated activity, first published in 1930 (“Mind in Society,” reprinted in *Reclaiming the Imagination*, pp. 61-72).

Triadicty is an idea whose time has surely come. It can help us take charge of the criticism of our assumptions about teaching because in the triadic conception of the sign, the symbol-user, the knower, the learner is integral to the process of making meaning. The curious triangle, by thus representing the mediating function of interpretation, can serve as an emblem for a pedagogy of knowing. Indeed, my third piece of good news is that triadicty can help us reclaim imagination and the idea of language as “the supreme organ of the mind’s self-ordering growth.” I will conclude now with a sketch of this view of language and how it can lead us towards an authentic pedagogy of knowing.

Language seen as a means of making meaning has two aspects, the hypostatic and the discursive. By naming the world, we hold images in mind; we remember; we can return to our experience and reflect on it. In reflecting, we can change, we can transform, we can envisage. Language thus becomes the very type of social activity by which we might move towards changing our lives. The hypostatic power of language to fix and stabilize frees us from the prison of the moment. Language recreates us as historical beings. In its discursive aspect language runs along and brings thought with it, as Cassirer puts it. Discourse grows from inner dialogue (and the differing accounts by Piaget and Vygotsky of that development make a fascinating study). From this earliest activity of the mind, language gradually takes on the discursive forms which serve the communicative

function. Because of this tendency to syntax, we can articulate our thoughts; we can think about thinking and thus interpret our interpretations.

Seeing language in this perspective encourages the recognition that meaning comes first; that it is complex from the start; that its articulation is contingent on the mind's activity in a human world. The chief hazard of the developmental model is that it sanctions the genetic fallacy—that what comes first is simple, not complex, and that what comes after is a bigger version of a little beginning. Thus we have the idea that there is first one word and then another, another, another, until there is enough to fill out the awaiting syntactic structures. But this isn't the way it happens. The hypostatic word, the single uttered syllable, is a proto-sentence; syntax is deeply implicated, we might say, in every human cry. Children let a single word do the work of the sentence until the discursive power of language can draw out and articulate the meaning. The conception of a semantic component added to a syntactic structure is a mechanistic conception which must be supplanted. I suggest as an image of the growth and development of language one of those little wooden flowers which the Japanese used to make—before they turned to silicon chips—a tiny compacted form which, placed in a dish of water, opens and expands, blossoming in the shape of a fully articulated flower. Please note the dialectic: it is the water which acts to release the form. In my extended metaphor, the water is our social life, the essential context for the making of meaning. Cognitive psychologists who deliberately ignore it have not advanced over those early kings whose hobby it was to try to discover which language is oldest. They sequestered newborn twins in castle keep or cottage, in the care of a mute nurse, and breathlessly awaited news of what language it would be, when the babies came to speak. And you can safely bet that the court astrologer—that proto-psycholinguist—saw to it that the first reported syllables were construed as Swedish or Hebrew or whatever language it was that the monarch—that proto-funding agency—expected.

In my opinion the ambiguities of the determinism suggested by any account of natural, normal development can serve as the hinges of our thinking about thinking in the interest of discovering the laws of growth, the interdependency of nature and nurture, seed and soil. Language and learning, like syntax and semantics, are in a dialectical relationship which we must learn to construe and represent so that it is accessible to our students. Just so, we must guide their consciousness of consciousness so that it can become the means of freeing the self from itself: as a pleasant way of resolving that paradox, I recommend Walker Percy's new book, *Lost in the Cosmos: The Last Self-Help Book*. After a startling and instructive analysis of twenty versions of the lost self, we have a chapter on triadicity, the means of reclaiming the self. Dr. Percy is an artist, a scientist, and a philosopher for whom triadicity provides the means of conceiving that symbolic activity which defines the mind.

Because they make interpretation central, triadic models of the composing process are the trustworthy ones we need in developing a pedagogy of knowing. The two I consider most useful are perception and dialogue. Every course I teach begins with observation—with looking and looking again. It is my strong conviction that what is looked at should include organic objects, themselves

compositions. But of course we must also “problematize the existential situation,” as Freire rather infelicitously puts it. I bring seaweed and crab legs to class, the seed pods of sedges and five kinds of pine cones, but I also ask students to problematize the soda cans and milk cartons left from the last class.<sup>7</sup> (I haven’t dared to undertake the archeology of the waste basket: God knows what we might find!) We use my version of the journalist’s heuristic, *HDWDWW?*—deliberately constructed to resist becoming an acronym: *How does who do what and why?* How does that come to be on your desk? Who left it there? Why do you leave this junk around? What are these things in evidence of? What is the meaning of this litter? Looking and looking again helps students learn to transform things into questions; they learn to see names as “titles for situations,” as Kenneth Burke puts it. In looking and naming, looking again and re-naming, they develop perspectives and contexts, discovering how each controls the other. They are composing; they are forming; they are abstracting.

Perception is non-discursive abstraction; the questioning of perceptions is the beginning of generalization, of discursive abstraction. Perception as a model of the composing process lets us capitalize on the hypostatic function of language. Students can discover that they are already thinking; by raising implicit recognitions to explicit differentiations, they can, as it were, *feel* the activity of their minds. By beginning with meaning, with complexity, we assure that minds will, indeed, be active. As I’ve been arguing, that complexity must be controlled by the way we use language or it will overwhelm, but the complexity entailed in making meaning should never be put off: *elements of what we want to end with must be present in some form from the first or we will never get to them.* That, I take it, is the chief law of growth.

Dialogue is the other triadic model. The “natural environment” necessary to the growth and development of the discursive power of language requires dialogue. Looking again starts that questioning which is the beginning of dialectic and it should be practiced in dialogue in class, of course, but also in what I call a “dialectical notebook,” the facing pages offering a structure which enables the student to talk to herself. Dialogue is essential not only because it provides practice in those other uses of language—speaking and listening—but because it can model that constant movement from the particular to the general and back again which for Vygotsky is the defining characteristic of concept formation. But let me be explicit about this natural environment: it is a *prepared* environment, in the sense in which Montessori spoke of her classroom as a prepared environment. This dialectic of particularizing and generalizing, this conceptualizing, this thinking, though it is a power natural by reason of language itself, though it is natural to the human mind, must be put into practice. Like speech itself, it requires a social context in which purposes can be arrived at, intentions discovered and formulated and represented in different modes of discourse.

If college students find generalizing difficult, it’s because nobody has ever taught them how to go about it, and abstraction which proceeds by means of

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7. For excellent examples and interesting procedures, see Ira Shor, *Critical Teaching and Everyday Life* (Boston: South End Press, 1980), pp. 155-194.

generalizing—*concept formation*, as it is often called—must be deliberately learned and should therefore be deliberately taught. But few methods for doing so have been developed and those which have are, generally speaking, of the type Freire calls the banking model: the teacher deposits valuable information. Developmental models are most dangerous when they distract teachers from recognizing the deficiencies of their pedagogy. When we are told, as we are by almost everybody reporting research, that students are good at narrative but fall apart when faced with exposition, it is not necessary to hypothesize that students have come bang up against a developmental fence. The first step of the analysis should be to look at the character of the assignments, at the sequence of “tasks.” In an interesting variation on this theme of “narrative good, exposition terrible,” one researcher contrasts how well students do with persuasion and how poorly they do with argument.<sup>8</sup> She reports how intelligently students have jumped through the hoops of compare-contrast, “explain a process,” “describe an incident,” etc., etc.—all in the interest of composing in the persuasive mode—only to fall flat on their faces with the argumentation paper. And guess where it came from? Not from exploration or dialogue or observation or a close reading of texts. No: it came from an assigned topic on euthanasia. Why is anybody surprised when they get terrible writing from a terrible assignment? “Who is to get the kidney machine?” is no advance at all over “Which is greater, fire or water?” “Provocative” topics stimulate cant and cliché; they breed English; they lead to debate, which is by no means dialectic. Nobody learns from debate because, as Richards often observed, the disputant is commonly too busy making a point to trouble to see what it is.

Assigning topics—the essential strategy of the pedagogy of exhortation—is no substitute for instruction. But the deeper reason for the failure in the argumentation paper is the same as for the proclaimed success in the persuasion paper. Persuasion is the air we breathe; it is the mode of advertisement. But where do our students hear argument? Mine do not have the faintest idea of the conventions of an editorial—and when have they ever heard an authentic, dialectical exchange on television information shows? The discourse we find familiar to the point of being able to reproduce it has nothing to do with developmental stages, once childhood is passed—or maybe even before. You may be sure that pre-pubescent Presbyterians in the eighteenth century were capable of composing arguments on natural depravity, while pre-pubescent Baptists were writing on grace abounding unto the chief of sinners, and little Methodists were writing on topics like “Must the drunkard be an unhappy man?” My advanced composition students find almost intolerably difficult Huxley’s “On a Piece of Chalk,” a public lecture which a century ago famously enthralled workers with no secondary education—but Huxley’s audience had heard two or three sermons every week of their lives! Argument was the air you breathed, a hundred years ago. I am not, of course, claiming authenticity or moral superiority for those who can argue. I mean only that the capacity to manage disputation is a culture-bound skill

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8. Susan Miller, “Rhetorical Maturity: Definition and Development,” in *Reinventing the Rhetorical Tradition*, ed. Aviva Freedman and Ian Pringle (Conway, Ark.: L & S Books, 1980), pp. 119-127.

and that its dependence on neurobiological development is a necessary but not a sufficient condition.

Ironically, it is sometimes students themselves who misconceive the developmental model. Especially older students fear that they must return to Square One. They have to make it all up, they think. When we ask them, like everybody else, to look and look again, we must, by a careful choice of reading—on the model of malt whiskey, not diet soda—lead them to discover that scientists and lawyers and poets look and look again. Of course we must begin with where they are—as meaning makers. We must, in I. A. Richards' phrase, offer them "assisted invitations" to look carefully at what they are doing—observing a weed or drawing up a shopping list—in order to discover *how* to do it.<sup>9</sup> Our job is to devise sequences of assignments which encourage conscientization, the discovery of the mind in action. That will not be accomplished by setting topics, no matter how nicely matched to the "appropriate" developmental stage they might be.

Rather, in our pedagogy of knowing, we will encourage the discovery of mind by assuring that language is seen not as a set of slots, not as an inert code to be mastered by drill, but as a means of *naming* the world; of holding the images by whose means we human beings recognize the forms of our experience; of reflecting on those images, as we do on other words. We teachers will assure that language is continually exercised to name and establish likes and differentials so that by sorting and gathering, students will learn to define: they will learn to abstract in the discursive mode; they will learn to generalize. They will thus be able to "think abstractly" because they will be learning how meanings make further meanings possible, how form finds further form. And we will, in our pedagogy of knowing, be giving our students back their language so that they can reclaim it as an instrument for controlling their becoming.

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9. I have borrowed the phrase "assisted invitations" for the exercises in *Forming/Thinking/Writing: The Composing Imagination* (Upper Montclair, N.J.: Boynton/Cook, 1982). Richards returns continually to the importance of the conscious and deliberate auditing of meaning as a means of making further meaning. See Ann E. Berthoff, "I. A. Richards and the Audit of Meaning," *New Literary History*, 14 (1982), 64-79.