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Cognitive and Ethical Growth:
The Making of Meaning

Have you received the latest "printout" of your students' evaluation of your teaching from the computer? If so, I trust you are properly encouraged. But my intent is to raise the possibility that those comfortable "means" and "standard deviations" may conceal unexamined educational riches. In the usual form of such evaluations, the shortness of the scale (commonly five or seven points, from superb to awful), the neatness of the standard deviations, and the comfort of the mean inspire in us all a confidence that further analysis would tell us little. Indeed, our friends assure us that even those vagaries in our students' opinions that prevent the mean ratings from being as high as we had hoped can be chalked up to our credit under the rubric, "The best teacher never pleases *everybody*."

Surely it seems reasonable enough to average check marks on items like

	1	2	3	4	5
Organization of assignments:	Excellent	Good	Fair	Poor	Very Bad

and to print 1.9 as the mean. But if you have ever given your students an opportunity to be more expansive, you can never again be wholly comforted. What can you do with such unaverageable judgments as "This course has changed my whole outlook on education

and life! Superbly taught! Should be required of all students!" and "This course is falsely advertised and dishonest. You have cheated me of my tuition!"

Over the years I have received just such comments at the end of a noncredit course on Strategies of Reading, when I asked, "What did you expect of this course?" (big space) and "What did you find?" (big space). I do not ask the students for their names, just for their scores on pre- and post-tests. Twenty years ago I reported on the course in a faculty meeting (Perry, 1959) and read one student's comment as my punch line. Since the student had scored 20 percent comprehension at 120 words per minute on pre-test and 90 percent comprehension at 600 words per minute on post-test, I had looked forward to some flattery. What I found was, "I expected *an organized effort to improve my reading*," followed by, "This has been the most sloppy, disorganized course I've never taken. Of course I *have* made some improvement (arrow to the scores), but this has been due *entirely to my own efforts*." This got a good laugh from the faculty, largely, I suspect, owing to the realization that "evaluations" threaten not only the vanity of teachers but their very sanity as well.

At the time, no one, myself included, stopped to inquire whether this student's outrage bespoke more than some comical aberration. It took my colleagues and me twenty years to discover that such comments reflect coherent interpretive frameworks through which students give meaning to their educational experience. These structurings of meaning, which students revise in an orderly sequence from the relatively simple to the more complex, determine more than your students' perception of you as teacher; they shape the students' ways of learning and color their motives for engagement and disengagement in the whole educational enterprise. Teachers have, of course, always sensed this and have tried to teach accordingly.

This chapter illustrates, in students' own words, the typical course of development of students' patterns of thought. Twenty years ago, a small group of us, counselors and teachers, were so puzzled by students' varied and contradictory perceptions of ourselves and their other teachers that we set out to document their experience. We invited volunteers to tell us, at the end of their freshman year, what had "stood out" for them. We encouraged them to talk freely in the interview without preformed questions from us, and the diversity of their reports exceeded even our own expectations. After the manner of the time, we supposed the differences arose from differences in "personality types." However, as the same students returned to report their experience year by year, we were startled by their reinterpretations of their lives. Then these reinterpretations seemed to fall into a logical progression. Each step represented a challenge to the student's current view of the world. Different students might respond differently, with courage or defeat, but all faced the same basic challenges to making meaning in a complex world (Perry, 1970).[1]

We found that we could describe the logic or "structure" of each of these successive reinterpretations of the world and identify the challenges that precipitated them. We made a map of these challenges—a "Pilgrim's Progress" of ways of knowing, complete with Sloughs of Despond—giving each of the successive interpretations a numbered "Posi-

[1] *Forms of Intellectual and Ethical Development in the College Years: A Scheme* (New York: Holt, Rinehart and Winston, 1970; first published Cambridge, Mass.: Bureau of Study Counsel, Harvard University, 1968). It embarrasses me that in the argot of the field this ponderous title has been shortened, inevitably, to "The Perry Scheme"; the evolution of the scheme required teamwork involving more than thirty people over a span of fifteen years—six to eight counselors at any one time, working in a small office without formal provisions for research.

tion." We then put the map to a test by giving raters a number of interviews and asking them to state for each interview that Position which seemed most congruent with the pattern of the student's thought. Since the raters agreed strongly with one another, we knew that the developments that we had seen were there for others to see. This map of sequential interpretations of meaning, or *scheme of development,* has since been found to be characteristic of the development of students' thinking throughout a variety of educational settings (see this chapter's reference section). This chapter makes this developing sequence of interpretations explicit. Along the way, I shall suggest what I see to be the general implications of this sequence for educational practice. Readers interested in the ways these implications have found particular expression in various educational contexts can then consult the work of those researchers and practitioners whom I cite.

Scheme of Development

One naturally thinks of any scheme of development in terms of its "stages"—or "Positions," as we called them in our own scheme. In summarizing our students' journey for the reader of this chapter, I therefore first excised from all our students had told us a quotation or two to illustrate each Position. To my dismay, the drama died under the knife.

Then I realized that Positions are by definition static, and development is by definition movement. It was therefore the Transitions that were so fresh and intriguing. Each of the Positions was obvious and familiar in its delineation of a meaningful way of construing the world of knowledge, value, and education. The drama lived in the variety and ingenuity of the ways students found to move from a familiar pattern of meanings that had failed them to a new vision that promised to make sense of their broadening experience, while it also threatened them with unanticipated implications for their selfhood and their lives. I thus decided to select quotations illustrating for each step the breakup of the old and the intimations of the new. (Perhaps development is all transition and "stages" only resting points along the way.)

But this expansion of the summary puts severe strains on the boundaries of this chapter and on the reader. I can surely trust the reader to remember that each simple quotation stands for many intriguing variants in the ways students gave meaning to the unfolding landscapes of the journey. But we have more to do than trace the journey. I have promised to note some further thoughts on these developmental progressions—thoughts that have arisen in a decade of dialogue with others who have used our scheme as a starting point for explorations of their own. Had my briefest summary of the scheme sufficed, I could have moved on directly to commentary on other researchers' work and on our own recent thinking about particular passages or issues in the scheme. After the more expanded summary, however, the reader and I would find ourselves too far away from the data relevant to such commentary. It has seemed best, therefore, to digress occasionally as relevant points emerge.

If the reader is to tolerate lengthy digressions at dramatic moments—as happens in early Victorian novels—I should at least give evidence in advance that I know where I am going. Figure 1 gives a synopsis, in bare bones, of our scheme of cognitive and ethical development—the evolving ways of seeing the world, knowledge and education, values, and oneself. Notice that each Position both includes and transcends the earlier ones, as the earlier ones cannot do with the later. This fact defines the movement as *development* rather than mere changes or "phases." Figure 2 gives a map of this development. Following are definitions of the key terms, abstractions to which the students' words will subsequently give life:

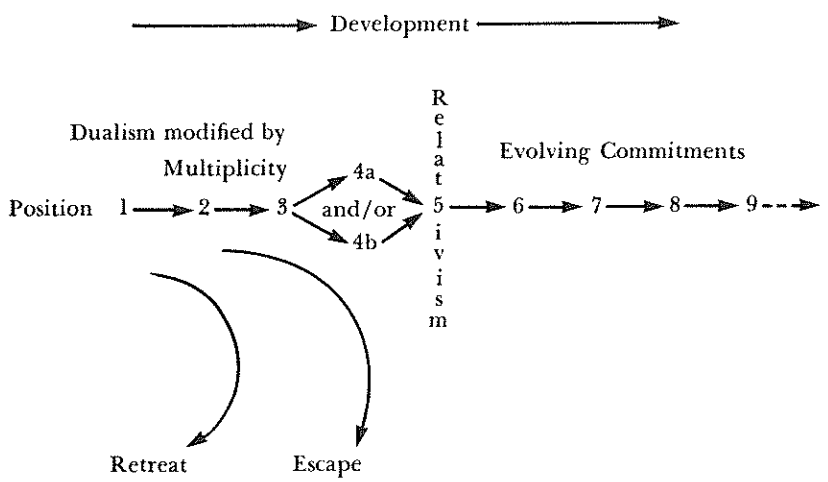
Figure 1. Scheme of Cognitive and Ethical Development

Dualism modified →	Position 1	Authorities know, and if we work hard, read every word, and learn Right Answers, all will be well.
	Transition	But what about those Others I hear about? And different opinions? And Uncertainties? Some of our own Authorities disagree with each other or don't seem to know, and some give us problems instead of Answers.
	Position 2	True Authorities must be Right, the others are frauds. We remain Right. Others must be different and Wrong. Good Authorities give us problems so we can learn to find the Right Answer by our own independent thought.
	Transition	But even Good Authorities admit they don't know all the answers *yet*!
	Position 3	Then some uncertainties and different opinions are real and legitimate *temporarily*, even for Authorities. They're working on them to get to the Truth.
	Transition	But there are *so many* things they don't know the Answers to! And they won't for a long time.
	Position 4a	Where Authorities don't know the Right Answers, everyone has a right to his own opinion; no one is wrong!
	Transition	But some of my friends ask me to support my opinions with facts and reasons.
	(and/or)	
Relativism discovered →	Transition	Then what right have They to grade us? About what?
	Position 4b	In certain courses Authorities are not asking for the Right Answer; They want us to *think* about things in a certain way, *supporting* opinion with data. That's what they grade us on.
	Transition	But this "way" seems to *work* in most courses, and even outside them.
	Position 5	Then *all* thinking must be like this, even for Them. Everything is relative but not equally valid. You have to understand how each context works. Theories are not Truth but metaphors to interpret data with. You have to think about your thinking.
	Transition	But if everything is relative, am I relative too? How can I know I'm making the Right Choice?
Commitments in Relativism developed →	Position 6	I see I'm going to have to make my own decisions in an uncertain world with no one to tell me I'm Right.
	Transition	I'm lost if I don't. When I decide on my career (or marriage or values) everything will straighten out.
	Position 7	Well, I've made my first Commitment!
	Transition	Why didn't that settle everything?
	Position 8	I've made several commitments. I've got to balance them—how many, how deep? How certain, how tentative?
	Transition	Things are getting contradictory. I can't make logical sense out of life's dilemmas.
	Position 9	This is how life will be. I must be wholehearted while tentative, fight for my values yet respect others, believe my deepest values right yet be ready to learn. I see that I shall be retracing this whole journey over and over—but, I hope, more wisely.

Dualism. Division of meaning into two realms—Good versus Bad, Right versus Wrong, We versus They, All that is not Success is Failure, and the like. Right Answers exist *somewhere* for every problem, and authorities know them. Right Answers are to be memorized by hard work. Knowledge is quantitative. Agency is experienced as "out there" in Authority, test scores, the Right job.

Multiplicity. Diversity of opinion and values is recognized as legitimate in areas where right answers are not yet known. Opinions remain atomistic without pattern or

Figure 2. A Map of Development



system. No judgments can be made among them so "everyone has a right to his own opinion; none can be called wrong."

Relativism. Diversity of opinion, values, and judgment derived from coherent sources, evidence, logics, systems, and patterns allowing for analysis and comparison. Some opinions may be found worthless, while there will remain matters about which reasonable people will reasonably disagree. Knowledge is qualitative, dependent on contexts.

Commitment (uppercase *C*). An affirmation, choice, or decision (career, values, politics, personal relationship) made in the awareness of Relativism (distinct from lowercase *c* of commitments never questioned). Agency is experienced as within the individual.

Temporizing. Postponement of movement for a year or more.

Escape. Alienation, abandonment of responsibility. Exploitation of Multiplicity and Relativism for avoidance of Commitment.

Retreat. Avoidance of complexity and ambivalence by regression to Dualism colored by hatred of otherness.

I shall now let the students speak for themselves as they spoke in interviews in which we asked unstructured questions (such as "what stands out for you as you review the year?") in order to allow the students freedom to structure their own meanings. I shall report our sense of the import of their words for the development we trace, and I shall digress on occasion to consider implications for teaching and educational policy.

Positions 1 Through 5

Position 1: Basic Duality. This is the Garden of Eden, with the same rules. Here the student is embedded in a world of We-Right-Good (Other-Wrong-Bad is "out there"). We called this Basic Duality. Right Answers for everything exist in the Absolute, and these are known to Authorities, whose role is to mediate (teach) them. Knowledge and goodness are perceived as quantitative accretions of discrete rightnesses to be collected by hard work and *obedience* (including the requirement to read *all* assigned books word by

word from the beginning). We held our interviews in May and June, and no freshman still spoke from this Position in its purest form. A few, however, saw themselves in retrospect as having come to college with this view intact. This student's words show how hard it is to articulate an embeddedness so complete that it offered no place from which to observe it:

> Student: I certainly couldn't–before I was, you know, I wouldn't ask. /Yeah/ I wouldn't have–I wouldn't be able to *talk* on this subject at *all* . . . that what I had just–well, was *there* you know.

Only a dim sense that there is a boundary somewhere beyond which lies Otherness provides Eden with shape:

> Student: Well I come, I came here from a small town. Midwest, where, well, ah, everyone believed the same things. Everyone's Methodist and everyone's Republican. So, ah, there just wasn't any . . . well that's not quite true . . . there are some Catholics, two families, and I guess they, I heard they were Democrats, but they weren't really, didn't seem to be in town really, I guess. They live over the railroad there and they go to church in the next town.

But obedience is the Way:

> Student: Well the only thing I could say to a prospective student is just say, "If you come here and do everything you're supposed to do, you'll be all right," that's just about all.

But such innocence is short-lived:

Transition from Position 1 to Position 2. The first challenge often comes from peers:

> Student: When I went to my first lecture, what the man said was just like God's word, you know. I believe everything he said, because he was a professor, and he's a Harvard professor, and this was, this was a respected position. And, ah, ah, people said, "Well, so what?" . . . and I began to, ah, realize.

And especially in the dorm:

> Student: So in my dorm I, we've been, ah, [in] a number of discussions, where there'll be, well, there's quite a variety in our dorm, Catholic, Protestant, and the rest of them, and a Chinese boy whose parents, ah, follow the teachings of Confucianism. He isn't, but his folks are . . . And a couple of guys are complete, ah, agnostics, agnostics. Of course, some people are quite disturbing, they say they're atheists. But they don't go very far, they say they're atheists, but they're not. And then there are, one fellow, who is a deist. And by discussing it, ah, it's the, the sort of thing that, that really, ah, awakens you to the fact that, ah . . .

Diversity, experienced among peers and again in the classroom, must now be accounted for. Difference of opinion surely cannot exist in the Absolute. If earthly Authorities disagree, perhaps some are mere pretenders? Or do They put all the complexities in there just to exercise our minds? Such interpretations of diversity deny it a full legitimacy and preserve the simplicity of Truth:

Position 2: Multiplicity Prelegitimate. True authority may perform its proper role of direct mediation while complexities confuse pretenders:

> Student: For one thing, Professor Black who taught us [in First Term] . . . Christmas! you couldn't lose him on one point. Man, he wouldn't, you couldn't, you couldn't *find* a question *he* couldn't answer. I doubt. And you respected him for it. Not that you're trying to trick the, the section man, but you, when you come up with any kind of a reasonable question, he [Prof. Black] can answer it

for you, and he can answer it *well.* Whereas the section men dwiddle around and, and talk a lot of nonsense.

Or if True Authorities offer complexities, they enable us to learn the way to truth:

Student: I found that you've got to find out for yourself. You get to a point where you, ah, see this guy go through this rigamarole and everything and you've got to find out for yourself what he's talking about and think it out for yourself. Then try to get to think on your own. And that's something I never had to do, think things out by myself, I mean. In high school two and two was four; there's nothing to think out there. In here they try to make your mind work, and I didn't realize that until the end of the year.

Interviewer: You kept looking for the answer and they wouldn't give it to you?

Student: Yeah, it wasn't in the *book.* And that's what confused me a lot. *Now* I know it isn't in the book for a purpose. We're supposed to think about it and come *up* with the answer!

So in Position 2, the student has given meaning to diversity, uncertainty, and complexity in Authority's realm by accounting for them as unwarranted confusion in poorly qualified Authorities or as mere exercises set by Authority "so we can learn to find The Answer for ourselves."

Transition from Position 2 to Position 3. This last concession—that answers sometimes must be *searched for* by students—can lead directly to a generalization that fatefully includes Authority itself. The issue may be avoided temporarily by dividing disciplines into the definite and the vague:

Student: I'll tell you the best thing about science courses: Their lectures are all right. They sort of say the facts. But when you get to a humanities course, especially—oh, they're awful—the lecturer is just reading things into the book that were never meant to be there.

But in the end even Science fails:

Student: That seems to be the, the excuse that natural science people give for these courses: They're supposed to teach you to arrive at more logical conclusions and look at things in a more scientific manner. Actually, what you get out of that course is that science is a terrifically confused thing in which nobody knows what's coming off anyway.

Position 3: Multiplicity Legitimate but Subordinate. If even Scientific Authority does not yet know all Truths in its own domain, one must, presumably, settle for less, at least for now:

Student: I'd feel [laughs] rather insecure thinking about these philosophical things all the time and not coming up with any definite answers. And definite answers are, well, they, they're sort of my foundation point. In physics you get definite answers to a point. Beyond that point you know there *are* definite answers, but you can't reach them.

That is, as many students said, "you can't reach them *yet.*" Uncertainty is temporary. The Truth is still there to be found in the Laplacean Universe. Some diversity of opinion, therefore, is legitimate, but temporary.

Transition from Position 3 to Position 4. The concession, "but you can't reach them [yet]," contains the seeds of destruction for the major structural assumptions of Positions 1 through 3. Human uncertainty has been accorded a legitimacy that has the

potential of spreading from a temporary case to the whole of human knowledge. The tie between Authority and the Absolute has been loosened. Uncertainty is now unavoidable, even in physics.

> Student: Here was this great [physics] professor and *he* was groping *too*!

This realization can raise a severe procedural problem. How, in an educational institution where the student's every answer is evaluated, are answers judged? Where Authority does not know *the* answer yet, is not any answer as good as another?

So far, Authority has been perceived as grading on amount of rightness, achieved by honest hard work, and as adding an occasional bonus for neatness and "good expression." But in the uncertainty of a legitimized Multiplicity, coupled with a freedom that leaves "amount" of work "up to you" and Authority ignorant of how much you do, rightness and hard work vanish as standards. Nothing seems to be left but "good expression," and Authorities are suspected of different or obscure standards for that:

> Student: If I present it in the right manner it is well received. Or it is received . . . I don't know, I still haven't exactly caught onto what, what they want.

Authority's maintenance of the old morality of reward for hard work is called into serious question, and disillusion is imminent:

> Student: A lot of people noticed this throughout the year, that the mark isn't proportional to the work. 'Cause on a previous paper I'd done a lot of work and gotten the same mark, and on this one I wasn't expecting it . . . I just know that you can't, ah, expect your mark in proportion to the amount of work you put in . . . In prep school it was more of a, more, the relationship was more personal and the teacher could tell whether you were working hard, and he would give you breaks if he knew you were working. It wasn't grading a student on his aptitude, it was grading somewhat on the amount of work he put in.

This uncertain relationship between work and rewards can lead to bitterness:

> Student: This place is all full of bull. They don't want anything really honest from you. If you turn in something, a speech that's well written, whether it's got one single fact in it or not is beside the point. That's sort of annoying at times, too. You can put things over on people around here; you're almost given to try somehow to sit down and write a paper in an hour, just because you know that whatever it is isn't going to make any difference to anybody.

Hence, an intellectual question has led to a precarious ethical dilemma:

> Student: It looks to me like it's [laughs] kind of not very good, you know? I mean you can't help but take advantage of these things.

Here, as in every transitional phase, the issues of development hang in the balance. The students have not yet distinguished between legitimate abstract thought and its counterfeit, "bull."[2] They see the "bullster" winning honors while they themselves work hard and receive C's. They feel tempted. Their dilemma may appear false, looked at from the vantage point of later Positions, which transcend it, but at the moment it is bitter and poignant. In their disillusion they find cynicism and opportunism inviting indeed. The students are struggling in a moral battle, blind to the possibility that its resolution is intellectual.

[2]For a discussion of the relation of "bull" and "cow" in academia see Perry, 1969.

In this moment, then, the students are confronting two closely related perceptions incongruent with their construal of the world from Position 3: (a) the spread of uncertainty and diversity into Authority's domain of the known and (b) Authority's insistence on grading even in the domain of uncertainty. Our interviews reveal that a student's attitude toward Authority is crucial at this point. If the student is intensely resentful (Oppositional, as we called it), the temptation may be strong to take refuge in alienation (which we called Escape) or in the simplistic dualism of Position 2 (which we called Retreat), from which otherness, differentness, and complexity can be righteously hated.

In contrast, students whose opposition to Authority was less intense, and those whose trust in Authority we called Adherence, moved forward, but along a different path. The structure of the meaningful world constructed by the moderately Oppositional students requires attention first:

Position 4a: Multiplicity (Diversity and Uncertainty) Coordinate with the "known."

> Student: I mean if you read them [critics], that's the great thing about a book like *Moby Dick.* [Laughs] *Nobody* understands it!

Students such as this seize on the notion of legitimate uncertainty as a means of creating, out of personalistic diversity of opinion, an epistemological realm equal to and over against the world of Authority in which certain Right Answers are known. In this new realm, freedom is, or should be, complete: "Everyone has a right to his own opinion; they have no right to say we're wrong!"

This new structure, by dividing the world into two domains, preserves the fundamentally dualistic nature of earlier structures. To replace the simple dualism of the right-wrong world of Authority, these students create the double dualism of a world in which the Authority's right-wrong world is one element and personalistic diversity (which we labeled Multiplicity) is the other. The students have thus succeeded in preserving a dualistic structure for their worlds and at the same time have carved out for themselves a domain promising absolute freedom. In saying in this domain, "Everyone has a right to his own opinion," students are also saying, "Where Authorities do not know the Answer, any opinion is as good as any other."

> Interviewer: Can you say that one point of view is better and another worse?
>
> Student: No, I really can't on this issue [creation versus evolution of man]. It depends on your beliefs. Since there's no way of proving either one.
>
> Interviewer: Can you say that one is more accurate than the other?
>
> Student: No, I can't, I believe they're both the same as far as accuracy.
>
> Interviewer: Would you go so far as to say your opinion is the right one?
>
> Student: No.
>
> Interviewer: But yet you believe so strongly in it; that's why I'm asking . . .
>
> Student: I'm the type of person who would never tell someone that their idea is wrong—even if they have searched, well, even if they haven't searched, even if they just believe it—that's cool for them.
>
> Interviewer: Can you say that one opinion is better and one opinion is worse?
>
> Student: No, not at all. It's better for them and like their opinion would probably be worse for me.

I am indebted to King (1977a) for this vivid excerpt from her interviews. We have

found few students who would defend this personalism so nobly against an interviewer's probes; under pressure most students move ahead into concessions, albeit still epistemologically quantitative: "Well, maybe some opinions might have more facts." The pure statement that, in the domain of uncertainty, to "have" an opinion makes it as "right" as any other expresses an egocentric personalism that we called *Multiplicity*. The students, as they moved on, were emphatic about the distinction between this outlook and that of disciplined Relativism (discussed later).

This personalism that we called Multiplicity Coordinate serves many purposes besides that of a hoped-for freedom from the tyranny of Authority. It makes sense in the midst of a diversity which can only appear chaotic until some reasoned qualitative distinctions can be discerned. Moreover, its egalitarian spirit provides a haven of ultimate peace at the end of dormitory bull sessions. At a deeper level, it expresses a respect for others through a respect for their views. (Others as persons are not yet differentiated from the opinions they *hold*; they *are* their opinions, as I am mine). As a stepping stone, then, Multiplicity is not to be dismissed as mere license or as a simple misapplication of religious tolerance to epistemological and ethical realms.

Yet in this structure all debatable propositions remain atomistic. An opinion is related to nothing whatever—evidence, reason, experience, expert judgment, context, principle, or purpose—except to the person who holds it. Even the relation of the opinion to the person is limited to the fact that the person "has" it. All that Authority cannot prove to be Wrong is Right. This structuring of meaning is therefore still dualistic; the world so construed is not yet open to Relativism's analysis, rules of evidence, disciplines of inference, and concern for the integrity of interpretations and systems of thought.

Unfortunately, the unconsidered statement, "Anyone has a right to his own opinion," is popularly thought to be the heart of Relativism, and its implication of moral license has given Relativism a bad name. King herself labels the excerpt quoted above as an illustration of "relativism," and such a veteran as Kohlberg has been perilously slow to acknowledge the distinction. I shall remark later in this chapter (see also Gilligan in her chapter) on the difficulties that have followed on such conflation in such crucial matters as evaluation of the moral development of women. Perhaps some simpler-sounding word than Multiplicity (Personalism, for example) would have helped distinguish this more simplistic structure.

In any case, the students, having construed diversity of opinion as a realm for personalistic rightness, are poised at the edge of a fateful moment in their destinies. Major incongruities face them. In their academic work, teachers insist on continuing to grade the students' opinions in such debatable areas as sociology and literature. On what grounds? What teacher has not experienced despair in trying to explain to a student at this level of development that grades depend, not on the *quantity* of work and "facts" and, especially, unsupported "opinions," but on the quality of the relationships between data and interpretations? Such a freshman, winner of a national prize in history in senior year of high school, once complained to me: "They told me here to 'Describe the theory of monarchy assumed in Queen Elizabeth's speech to the Commons in 1601.' I said what her main points were, but my section man says to look between the lines for her theory of monarchy! And I look between the lines and I can't see anything there!"

The capacity for *meta*-thought, for comparing the assumptions and processes of different ways of thinking, has not yet emerged. This is perhaps the most critical moment in the whole adventure for both student and teacher.

Transition from Position 4a (Multiplicity) to Position 5 (Relativism). Before tak-

ing up the smoother movement of the more Adherent students through Position 4b, I wish to note the special difficulty of transition into Relativistic thought experienced by the students who have embraced Multiplicity with greatest enthusiasm. I have suffered too many defeats by the ingenuity of Multiplistic Libertarians to offer any handy-dandy pedagogical devices for helping students in this transition. Together with the teacher-researchers, mentioned later in the chapter, who have focused their experimentation on this problem, I have found all solutions to be relative to the subject matter. The work of these researchers contains rich ore for any prospector. Here I wish to report our students' experience of first discovery, so vital and usually so explicit, of qualitative epistemological structures and complex relations.

Sad to say, the very spunk with which our most Oppositional students invented the realm of Multiplicity (to set against the Right-Wrong world they attributed to Authority) seemed to lead them into a stalemate. Entrenched in this Position, they found it difficult to abandon the slogan, "Every opinion is right," for the qualitative analyses and appraisals of Relativism to which the best of their instructors would try to introduce them. Most did find ways, as I shall suggest shortly in discussing the general mechanisms of transition, but some were cornered into a choice between leaving the field and outright capitulation. Most fortunate were those for whom the demand to substantiate opinion came from more advanced peers.

Those less entrenched in opposition moved more easily:

> Student: [Reading written statement handed him by interviewer] "In areas where experts disagree, everyone has a right to his own opinion"—Yeh, sure. I mean, if the answers aren't in, like in lots of things, then sure, anyone's opinion.
>
> Interviewer: So really you're saying that here, anyway, no opinion can be *wrong,* sort of, so one opinion is really as good as any other?
>
> Student: Yeh, ah, well—no, not really—I, well I hadn't thought of that before. No—I mean you've got to have some facts *under* the opinion, I guess.

"Some facts" is still a quantitative criterion, but it opens the door to the qualitative notion of "better" (rather than right-wrong) opinions. Though the student may still have much to learn about the relations of "facts" and "opinions," that learning has now a real potential. Here, the transition seems initiated by the interview itself. It is easy to imagine, however, a variety of experiences other than the interviewer's question that would have set the same process in motion.

Position 4b: Relativism Subordinate. The more trusting Adherent students seemed to find a smoother path. Their integrity seemed less entrenched in Multiplicity's fortress: "They have No Right to Call Me Wrong." Trusting in Authority to have valid grounds for grading even in areas of uncertainty, they set themselves to discover those grounds. Laurence Copes recently pointed out to me that some students may sensibly find their way out of the impass of Position 4a via the discovery of Position 4b as described later. A review of the data supports this proposition, namely that a path through Position 4a and 4b can be sequential. In some one course or another—or in some other particular context —they perceived relativistic thinking as a special case of "what They want":

> Student: Another thing I've noted about this more concrete and complex approach—you can get away without . . . trying to think about what they want—ah, think about things the *way* they want you to think about them. But if you try to use the approach the course outlines, then you find yourself thinking in *complex terms*: weighing more than one factor in trying to develop your own opinion. Somehow what I think about things seems to be more—oh—it's hard to say right or wrong—but it seems [pause] more *sensible.*

Here the correction from "*what* they want" to "the *way* they want you to think" signals the discovery of the articulation of the "concrete" with the "complex" in "weighing" relationships—a mode of thought that is the structural foundation of Relativism. The weighing of "more than one factor," or, as this student later explained, "more than one *approach* to a problem," forces a comparison of patterns of thought—that is, a thinking about thinking. The person, previously a *holder* of meaning, has become a *maker* of meaning. For most students, as for this student, the event seems to be conscious and explicit; that is, the *initial* discovery of meta-thought occurs vividly in foreground, as figure, against the background of previous ways of thinking, and usually as an assimilation to the old paradigm—that is, as an item in the *context of* "what They want."

Now, the capacity to compare different approaches to a problem in "developing one's own opinion" is presumably the ordinary meaning of *independent thought.* The paradox for liberal education lies in the fact that so many of our students learned to think this way because it was "the way They want you to think"—that is, out of a readiness to conform. The challenge of a more genuine independence then confronted these students later in the revolutionary perception of the general relativism of *all* knowledge, *including* the knowledge possessed by Authority itself (Position 5).

Transition from Position 4b (Relativism Subordinate) to Position 5 (Relativism). The first steps in the direction of Relativism are articulated by the same student just quoted:

> Student: I don't know if complexity itself [he has been speaking of relativistic analysis] is always necessary. I'm not sure. But if complexity is *not* necessary, at least you have to find that it *is* not necessary before you can decide, "Well, this particular problem needs only the simple approach."

Although this transitional statement implies that relativistic thinking will be required more *frequently* than "simple" (dualistic) solutions, the student does not yet recognize that even the "simple" case owes its simplicity to a complex context of assumptions, rules, and contingencies. That is, this same student, quoted in the illustration of Position 4b, first saw relativistic thought as a special case in the context of "what They want." This present statement catches him halfway to the perception of relativistic thought as general *context* and "what They want" as a special case. I shall refer to this transformation of a special case into a context later in considering the forms of transitions in general.

We found it rare to catch this momentous revolution in the act. By the next year this student simply took the whole matter for granted, with a kind of amnesia for the deep reorganization involved. Indeed, in senior year he had this to say on hearing himself as sophomore:

> Student: [scornfully] You can't even *talk* about taking a simple approach to something. I mean it's just a way of looking at things that is complex—it's not a conscious policy, it's just something that's been absorbed into you.

I recall, without the precise reference, that Piaget once remarked on this curiosity of cognitive growth: *assimilations*—the attributions of meaning to objects or events that reduce their dissonance with the person's extant structures of meaning—tend to be remembered; *accommodations*—the subsequent reorganizations of basic structures to achieve congruence with dissonant assimilations—tend to be forgotten (perhaps because memory's own filing system is, in the very process, in flux). Could it be that we teachers require special exercise in the recall of our own accommodations in order to understand some students' apparent density?

In any case, an understanding of the forms that such transitions take would seem fundamental to curriculum design and teaching strategies. The transitions we have noted so far appear to start with assimilation of some incongruity to an extant paradigm. In the transition just traced, for instance, the student first perceived relativistic thinking simply as a special case in the general dualistic frame of "what They want." But this assimilation turned out to be a Trojan Horse, its inner forms emerging to overwhelm its simplistic host and force an accommodation of fundamental assumptions. Education has thus changed from collecting "what They want" to developing a way of thinking shared by both teacher and student.

Here, then, the accommodation takes the form of a radical reversal of part and whole, detail and context: the task of generating and comparing several interpretations of a poem, for example, may first be assimilated as a special case into the larger context of "what They want." In short, contextual relativism is perceived as if it were similar to "right answers." And yet it is also perceived as not quite similar: "As soon as I saw what they wanted . . . well, no, not *what* they wanted but the *way* they wanted you to think. . . ." The shift from "what" (content) to "way" (generalized process), being a move to a higher level of abstraction, frees the "way" to become context, displacing the "what" and relegating it to the status of a particular. In other instances, accommodation appears to be brought about by the sheer weight of quantitative expansion of the assimilated incongruity: uncertainties or diversities multiply until they tip the balance against certainty and homogeneity, precipitating a crisis that forces the construction of a new vision of the world, be it one marked by cynicism, anxiety, or a new sense of freedom.

The use of analogy—what Piaget called *décalage*—is doubtless involved in these processes and will become more evident in the remaining steps of the journey. *Vertical décalage* manifests itself in the "lifting" of a pattern of meaning from a concrete experience and using it as an analogue for meaning at a level of greater abstraction. For example, one student, terrified after making an error on his job, was astounded by the calmness of his employer's quiet suggestion that he plan things more carefully next time. He reported that the experience freed him to think more creatively in his studies and to affirm his opinions more confidently, relieved of irrational anxiety about impending judgment. Likewise, there are many areas of life in which students have learned at early ages patterns of qualitative and contextual judgment, as opposed to all-or-none quantitative and absolutistic judgment. For example, they have moved in early years from "What's your *favorite* color, ice cream, friend, sport, and so on" to considerations of what color with what other colors, what ice cream with what other foods, what friend in what activity or sharing. These contextual schema provide ready analogies in concrete experience that the student may "lift" to provide patterns for abstract thought itself. Ideas can then be conceived as contextual, relativistic, and better or worse, rather than right or wrong.

This comparison of interpretations and thought systems with one another introduces *meta-thinking,* the capacity to examine thought, including one's own. Theories become, not "truth," but metaphors or "models," approximating the order of observed data or experience. Comparison, involving systems of logic, assumptions, and inferences, all relative to context, will show some interpretations to be "better," others "worse," many worthless. Yet even after extensive analysis there will remain areas of great concern in which reasonable people will reasonably disagree. It is in this sense that relativism is inescapable and forms the epistemological context of all further developments.

Position 5: Relativism. Let us now examine the reactions of students to the simultaneous discovery of disciplined meta-thought and irreducible uncertainty.

> Student: It's a method that you're dealing with, not, not a substance. It's a method, a purpose–ah, "procedure" would be the best word, I should imagine, that you're looking for. And once you've developed this procedure in one field, I think the important part is to be able to transfer it to another field, and the example that I brought up about working with this, this crew of men. It's probably, ah, the most outstanding, at least one of the achievements that I feel that I've been able to make as far as transferring my academic experience to the field of everyday life.

This process of drawing an analogy between different areas of experience *(horizontal décalage)* highlights the fact that individuals mature their cognitive structures at different rates in different areas of their lives. They can thus transfer the more advanced patterns of thought learned in one area to areas in which they have been thinking more simplistically. The student just quoted has used relativism learned in academic work to broaden his understanding of others and expand his social skills. No doubt this has increased his potential for empathy. However, the salient initial experience is usually one of expanded competence:

> Student: Besides your meeting people, it's–it's the way of thinking–I mean just by the process of going through school, the courses are lined up so they make you think, especially when you come to, say, hour exams and you have to take them. This rubs off–when you meet people and have to talk to them, the process is in your mind and then you can think about things and be able to come up on your feet.

Relativistic consideration has already grown somewhat beyond its value as a practical tool, and its epistemological implications soon become explicit.

> Student: So here were all these theorists and theories and stuff in [economics] and psychology and historiography–I didn't even take any straight philosophy–and hell, I said, "These are *games,* just *games* and everybody makes up their own rules! So it's gotta be bullshit." But then I realized "What else have we got?" and now every time I go into a thing I set out to learn all its rules cold–'cause that's the only way I can tell whether I'm talking bullshit.

In this powerful statement, the responsibility and initiative that used to be the domain of Authority (leaving that of obedience to the student), have been internalized. This sense of agency as a learner is expressed first, appropriately enough, in a care for precision of thought within given contexts. Indeed, the student's redefinition of "bullshit" encapsulates his momentous revision of his epistemology and his self-definition in it. It is hardly surprising that there is still no hint in the protocol of a further responsibility to choose among contexts or "games." In Position 5 students seem much taken up with expansion of their new skills, exploring alternative perspectives in many disciplines and areas of life. Their explorations may occupy them for more than a year before they sense a necessity to orient themselves in a relativistic sea through their own Commitments (see the discussion of Positions 6-9). It is not really fair to describe the typical suspension of development at this point as Temporizing, since there is evidence of "lateral growth" (Perry, 1970, p. 175). This factor may help explain the findings of recent experiments (Knefelkamp, 1978c) that "developmental instruction" is more successful in facilitating students' movements from Dualism into Relativism than from Relativism into Commitments, at least within the limits of a semester.

Needless to say, many students react to the discovery of relativistic thinking with profound anxiety.

> Student: You know, in the past months, it's been a matter of having really . . . having reduced to the level where I really wasn't sure there was anything in particular to follow. I, you do begin to wonder on what basis you'd judge *any* decision at all, 'cause there really isn't, ah . . . too much of an absolute you can rely on as to . . . and even as to whether . . . there are a lot of levels that you can tear it apart, or you can base an ethical system that's a, presupposes that there are men who . . . or you can get one that doesn't presuppose that anything exists . . . and try and figure out of what principles you're going to decide any issue. Well, it's just that right now I'm not sure that . . . of what the, ah, what those de-, how to make any decision at all. When you're here and are having the issues sort of thrust in your face at times . . . that is, just seeing the thinking of these men who have pushed their thought to the absolute limit to try and find out what was their personal salvation, and just seeing how that fell short of an all-encompassing answer to, for everyone. That those ideas really are individualized. And you begin to have respect for how great their thought could be, without its being absolute.

I picture this student standing beside Sisyphus (Camus' embodiment of the human predicament in the *Myth of Sisyphus*) and gazing in dismay at the rock of reason, which has turned on itself and rolled once again to the foot of the mountain. He sees, in wonder and terror, Sisyphus' wry smile bespeaking his awareness that he must again resume the quest for certainty of meaning, a labor that forever ends in the same defeat. Is this vision tolerable?

Deflections from Growth

We shall leave our students poised in their journey at this realization that even the most careful analytical thought and logical reasoning will not, in many areas vital to their lives, restore the hope of ultimate rightness and certainty promised by Authority in the Eden they have left behind. "I'm not sure how to make any decision at all." At this moment, the potential for apathy, anxiety, and depression may appear alarming clinically, and the potential for cynicism equally alarming educationally.

Looking back to the dualistic worlds of Positions 1-3, we can observe that the students and much of the environment were conspiring to maintain the illusion that meaning existed "out there," along with rightness, power, and sound advice. One should, of course, try to "think for oneself," but when such efforts end in uncertainty and confusion, one naturally appeals to external authority, secure in the expectation of an answer. Students in this frame of mind present themselves to "career counselors" expecting to be told "the right job" or even to be "placed" in it. "What do the tests say my interests are?"

When all knowledge is revealed to be relativistic, probabilistic, and contingent, *A*uthority appears as limited *a*uthority, uncertain even in its specialties, and ignorant beyond them. In this collapse, the agency for making sense, originally supposed to exist "out there," may vanish entirely. We should note here, therefore, the reactions of those students (happily a small minority of our informants) who reacted with postponement, apathy, or rage. Against the background of their experience we can then better appreciate the transcendence of those who found a more positive resolution.

Temporizing. Some students simply waited, reconsigning the agency for decision to some event that might turn up:

> Student: I'll wait and see what time brings, see if I pass the foreign service exam. Let that decide.

Or even more passively:

Student: It, ah . . . Well, I really, I don't know, I just, I don't get particularly worked up over things. I don't react too strongly. So that I can't think. I'm still waiting for the event, you know, everyone goes through life thinking that something's gonna happen, and I don't think it happened this year. So we'll just leave that for the future. Mainly you're, you're waiting for yourself to change, see after you get a good idea, continued trial and effort, exactly how you're going to act in any period of time, once you get this idea, then you're constantly waiting for the big chance in your life. And, it certainly didn't happen this year.

Students speaking this way often expressed a sense of guilt or shame—an uneasiness about a failure of responsibility with which they felt helpless to cope.

Retreat. In the late sixties and early seventies, some students found in the far extremes of political positions, both of the right and of the left, a way of preempting the absolutism that "wishy-washy" authorities had abandoned. The structure of thought to which they returned was that of Position 2, but with an added moralistic righteousness and righteous hatred of Otherness: "The others are so wrong they should have *no rights,* even to speak." Academically, however, this Retreat to the all-or-none of Position 2 often took the form of childlike complaints and demands:

Student: I mean, when I talk, as I say, I like to be out in the open. I mean I like to just, just come out with the facts and have them say, "Here's the information I want you to learn. This is the way I want you, this is what I want you to get out of the course when you come out." If I know what I want . . . I'm expected from a teacher . . . and what kind of questions he might ask, how thoroughly he wants you to read this material. . . . The big things are to get the basic principles. But he doesn't give you these! He ought to line them up right at the beginning; right at the first lecture he ought to tell you exactly what you're going to go over and what he wants us to basically get out of that course.

Escape. More complex reactions of alienation we labeled Escape. I shall not attempt to categorize or analyze their variants here; a few samples will speak for themselves —perhaps all too well:

Student: But, ah, I just, I don't, don't, don't have any, ah, consuming interest or burning desire or anything. And I just, just drift along, I guess you might say.

On the one hand, I, I—am, um, having an, an, ah . . . ah, an extremely comfortable life here. But, ah, perhaps later, I'm, I may find out that I'm ah . . . drifting and, and that I'm not happy in my drift.

And I was wondering if I might not be headed in that direction and, and it might turn out that when I get older I, I'll find that . . . umn . . . I am living a, a hollow life.

Is Relativism the road to Escape or the precondition of Commitment?

Student: I know that I had trouble, ah, first of all in just listening to the lectures, trying to make out what they meant . . . These, ah, ah, the pursuit of the absolute first of all . . . And then I . . . [laughs] sort of lost the absolute, and stuff like that. I think that gradually it sunk in, and, I don't know, maybe it's just . . . Well, it came to me the other night: if relativity is true on most things, it's an easy way out. But I don't think that's . . . maybe that's just the way I think now . . . Well, in, in a sense I mean that you don't have to commit yourself. And maybe that's just the push button I use on myself . . . right now, because I am uncommitted.

Does the purity of detachment preclude meaningful involvement?

Student: I've thought quite a bit about this: I've never really identified myself with anything. I hadn't permitted myself to so far as grades were concerned or as far as friends—particularly in a few isolated cases. I had just a sort of "I'm me, and I just like to stand out there and look things over" attitude, and I don't know whether this is good or bad.

But there's always impulse:

Student: So the best thing I have to do is just forget about deciding, and try to . . . I mean, not give up on any scheming or any basic set of ideas . . . that'll give myself, they'll give me a direction. Just give up completely, and when it comes down to individual choices, make them on what I feel like doing emotionally at the moment.

Not all the students who spoke this way left such statements with us as their final words. Many reported a resurgence of vitality and involvement:

Student: Emotionally I think I was trying to find some sort of rationalization for my feeling that I wasn't going to achieve anything. These are certainly not the values I have now. They're not the goals I want now. I don't think I'm going to be happy unless I can feel I'm doing something in my work.

Student: I think I've, to some extent, not perhaps as well as I like, have risen up to be able to accept it [academic work], and the responsibility that goes with it, but it's one little change.

Student: I was sort of worried when I came back, wondering if, "Well, shucks, am I just going to lie down on the job or am I going to do it because it has to be done?" I found out that I wasn't doing it because it *had* to be, but because things interested me. Some things didn't interest me so much, but I felt I couldn't let them slide and I took them as best I could, in what order I could.

We know from everyday observations and from studies of adults (Keniston, 1960; Vaillant, 1977; Salyard, in progress) that the alienation we called Escape can become a settled condition. For the students reporting their recovery of care, however, their period of alienation appears as a time of transition. In this time the self is lost through the very effort to hold onto it in the face of inexorable change in the world's appearance. It is a space of meaninglessness between received belief and creative faith. In their rebirth *they experience in themselves the origin of meanings, which they had previously expected to come to them from outside.*

Development Resumed

Position 6: Commitment Foreseen. Students who were able to come more directly to grips with the implications of Relativism frequently referred to their forward movement in terms of commitments.

Student: It took me quite a while to figure out that if I was going for something to believe in, it had to come from within me.

Many students foresaw the challenge:

Student: I would venture a guess that this problem bothers everybody except for, ah, a very, very small few, this, this constant worry about whether you can face up to it, and, and I think the earlier you find out that you can . . . I think the more important it is . . . A sense of responsibility is something which, I don't

think . . . you're necessarily are born with, it's, ah . . . something that you're aware of . . . but . . . it's never very pronounced until you're on your own and until you're making your own decisions, more or less, and then you realize how very important it really is.

As a generalized realization, lacking as yet a focus in some specific content, the vision seems to derive from the felt exigency of "action":

Student: Once you get to be past twenty-one or twenty-two, if you haven't begun to get control of yourself, you can't, if you haven't begun to get a certain amount of direction, you can't expect these internal evolutions to just develop and then suddenly bloom, you've got to work at it, I think.

You've got to do something, you've got to act. You've got to act these things . . . if you have these thoughts, and you don't act on them . . . nothing happens.

But how to begin? The same student goes on to imagine that the first steps may require an almost arbitrary faith, or even a willing suspension of disbelief:

Student: You just have to jump into it, that's all, before it can have any effect on you. And the farther in you force yourself to get in the first place, the more possibilities there are, the more ideas and concepts there are that can impinge on you and so the more likely you are to get involved in it. Actually you have to make some kind of an assumption in the first place that it's worthwhile to get into it, but . . . and that you're capable of doing something once you get into it.

Commitments and choices are apprehended as "narrowing"—there are so many potentialities and alternatives to let go of. Yet the sustaining energy is the awareness of some sort of internal spiritual strength. Such an explicit affirmation as this one is rare:

Student: I wasn't *deploring* the fact that my interests were narrowing, I was just simply *observing* it. I don't see how I could get by without it. You know what Keats says in one of his letters, he says when he's sitting in a room and everybody is talking brilliantly and he's sitting in the corner and he's sulking and everybody is whispering to each other, "Oh that poet Keats is sitting over there like a wallflower," he says in moments like that, he doesn't care about that because he's aware of the, the resource in his breast. I think that's the expression he uses. And what goes along with this narrowing of the purpose is the greater and greater sense of, that resource in my breast which is, I don't suppose that everybody needs it, but I need it. You know, it just, it just puts a center and a focus into your life, into what you're doing. And it hasn't really anything to do with where you would like to think that it would go on, this "inner life" (which I think is really bad to call it) that will go on no matter what you're doing, whether you're traveling around the world or whether you're sitting in your stack in Widener. So I know that it must seem like a disparity, but I don't feel it that way.

More usually:

Student: There are all kinds of pulls, pressures and so forth . . . parents . . . this thing and that thing . . . but there comes a time when you've just got to say, "Well, . . . I've got a life to live . . . I want to live it this way, I welcome suggestions. I'll listen to them. But when I make up my mind, it's going to be me. I'll take the consequences."

So far I have chosen statements that are "contentless" in the sense that no specific value or activity is named as the investment of commitment. My object has been to allow

the students to convey the sense and "feel" of commitment as an internal disposition through which one apprehends the possibility of orienting oneself and investing one's care in an uncertain and relativistic world. The next step, of course, is one of choice and action (see Positions 7, 8, and 9), as for example in one's academic work:

> Student: This year I'm beginning to see that you don't ever get anywhere unless you do work. You, you just can't sort of lie back and expect everything to come to you. That's the way I was trying to let it work, but that doesn't work.

That these emerging Commitments call upon a *new kind* of investment from within (as compared with unquestioned commitments–lowercase *c*–of the past) is evident in this student's report of her new sense of her religion. She has just reported that she had always "taken it for granted" that she would join the ministry:

> Student: The thing is, when you have a bunch of beliefs sort of handed to you, you don't really do that much thinking. I mean I was never even concerned with philosophy. I never read a single thing. I didn't have to. I mean, I accepted the Christian faith because my parents were Christians and I believed that, well, you know I never even thought, well, maybe there isn't any God. I mean it doesn't enter your mind. You just think, well, there's a God, you know, and he has a purpose for everybody's life. . . . But the thing is, I didn't know what I was really gonna do with my life. My life just sort of seemed, well, the main purpose was just telling everybody else that they had to believe in Jesus or they weren't going to go to heaven. . . . It's just that I was always going to be . . . working with the church, you know, but, I, I never really thought about what is my, you know, place in the universe, or anything. And, but the thing is, it really hasn't been unsettling, because . . . ahh . . . well, I don't know, now I'm more . . . somehow now I feel . . . I don't know, just more honest about, about my beliefs, now that I'm sort of getting them on my own.

Positions 7-9: Evolving Commitments. Our students, at sea in Relativism, now realized that they must choose, at their own risk, among disparate systems of navigation. What star to steer by? Many felt that once "I know what I'm going to do," all other problems would be solved–or at least fall in line. Then they made their first Commitment (Position 7), whether to a set of values ("This may sound sort of silly, but I've developed a sense of, ah, a set of morals") or to a person ("I started dating this girl"), or, most usually, to a career ("Right now I'd like to go into pediatrics; I'm really set on this deal"). In any case, the sense of "claiming" is vivid:

> Student: Then, by a few months or a few weeks ago, feeling new kinds of resolve, you know, just grabbing hold of myself and saying, "This I want, that I don't want, this I am, that I'm not, and I'll be solid about it."
>
> I'd never believed I could do things, that I had any power, I mean power over myself, and over effecting any change that I thought was right. I'd artificially try to commit myself to something, intellectually understand that I was this way, and then a few months later, the realization would come that yes, I really *am* that way. They're two different things. One's intellectual and comes fairly easily; one is emotional and is a process of absorbing something–the things inside just sort of slowly shifting around and there's a lot of inertia there.

The difference between such Commitments, made after doubt, and those unquestioned childhood beliefs that Erikson calls "foreclosed identity" was dramatized for us by a doctor-to-be who, after years of struggle, received notice of his admission to medical school. He reacted with panic: "But I've never *decided* to be a *doctor*!" He decided, and

then had to decide if his decision was real or simply a way of justifying his investment. Such is the nature of Commitments.

Yet one Commitment does not, after all, order all one's life:

> Student: I don't think it reduces the number of problems that I face or uncertainties, it just was something that troubled me that I thought was—I always thought it was an unnecessary problem and based on my limited experience with a broadened world . . . [Now] I don't see it as something that is passed; it is something that I have to decide continually.

So when further Commitments are affirmed (Positions 8 and 9) it becomes necessary to balance them—to establish priorities among Commitments with respect to energy, action, and time. These orderings, which are often painful to make, can lead to periodic experiences of serenity and well-being in the midst of complexity—moments of "getting it all together":

> Student: Well, ah . . . I don't know exactly if there's any one thing that's central . . . this is the whole point that, ah . . . there are factors in the whole . . . you group all these facts . . . I don't know that there's one thing about which everything revolves . . . but it's rather just a circle.
>
> Interviewer: It's the constellation that, ah . . . you try to maintain?
>
> Student: Yeah. Right. Yeah, you think of the old, ah . . . the balance of powers, you know . . . you know it's not . . . north and south or black and white . . . it's . . . it's not a simple thing. It comes in any given occasion . . . and . . . it's different . . . This is what makes things exciting—it offers a challenge.

Another senior has been groping to describe the new sense of living with trust even in the midst of a heightened awareness of risk:

> Interviewer: And I take it, part of this mellowness that you speak of is being able to live in peace with this complexity . . . if it isn't so simple . . .
>
> Student: It's not as frightening as it may have been. . . . If you feel that, ah, whatever you do there's going, there's going to be much more to do, more to understand, you're going to make mistakes . . . but you have a certain sense of being able to cope with a specific, or rather, a small fragment of the general picture and, ah, doing a job, getting the most out of it, but never, never giving up, always looking for something.

Order and disorder may be seen as fluctuations in experience:

> Student: I sort of see this now as a natural thing—that you constantly have times of doubt and tension—a natural thing in existing and being open, trying to understand the world around you, the people around you.

In the loneliness or separateness implicit in these integrations and reintegrations, students seek among their elders for models not only of knowledgeability but of courage to affirm commitment in full awareness of uncertainty.

> Student: That was just about what it was. Somehow I wanted to emulate [such people] because they seemed in some way noble people, and what they were doing seemed somehow noble and lofty—a very moral and superior type of thing. I think I fastened on this.

Yet the same student must come to see that it is the nobility of their care that he wishes to emulate, not the content of their Commitments. At the level of "what they were doing," even the model must be transcended:

Student: One thing I have found *since* is that it's not really *right* to make decisions on this basis, because you may come out doing something you don't find yourself suited for. It's really strange.

Dialectical Logic of Commitments

If one knows one's Commitments are to flow and fluctuate and conflict and reform, is one committed at all? This is the first of the many paradoxes the students encountered in working out their Commitments. Allport (Allport, 1955) observed the paradoxical necessity to be both wholehearted and tentative—attitudes that one cannot "compromise" but must hold together, with all their tensions. The students wrestled with logic to express this paradox:

Student: Well, "tentative" implies . . . perhaps uncertainty and, and, I mean readiness to change to anything, and, ah, it's not that. It's openness to change, but, but not looking for change, you know, ah . . . At the same time, ah, believing pretty strongly in what you do believe, and so it's not, you know, it's not tentative.

In reporting the original study, I pointed to an array of such polarities in the account of a single student in his senior year (Perry, 1970, pp. 167-176). They included certainty versus doubt, focus versus breadth, idealism versus realism, tolerance versus contempt, internal choice versus external influence, action versus contemplation, stability versus flexibility, and own values versus others' values. Because a polarity of this kind does not represent the poles of a continuum, it cannot be resolved simply by finding some balance point or compromise. Instead, our most mature students saw that the tension must be embraced and somehow transcended. To do so, they appealed to dialectical logic, without actually calling it by name.

[Speaking of the necessity of trusting in a professional healer even when evidence contradicts]: See, this is the way you get educated [laughs] . . . that's the big surprise. See I'm still sort of ironical about it, 'cause that's about the only way you can be—'cause ironic—being ironic handles both values at once.

At the time of the original study, I sensed that the term *dialectical thought* meant many things to many people, and I was troubled by the absence of a sense of its limits in the works of Hegel, Nietzsche, and Marx. Various recent writers (Riegel, 1973; Fowler, 1978; Basseches, 1978) have delimited more clearly the reference of the term and write convincingly of the central role of dialectical processes in thought characteristic of the higher ranges of human development.

Basseches (1978) has recently delineated twenty-four characteristics of dialectical thought. He proposes that these analytical tools will distinguish, in the present scheme, between those persons whose Commitments involve forward transcendent movement and those whose Commitments represent more a regression into dualism. By way of analogy, he points to Fowler's Paradoxical-Consolidative stage in the development of faith:

[This stage] affirms and incorporates existential or logical polarities, acting on a felt need to hold them in tension in the interest of truth. It maintains its vision of meaning, coherence, and value while being conscious of the fact that it is partial, limited, and contradicted by the visions and claims of others.

It holds its vision with a kind of provisional ultimacy: remembering its inadequacy and open to new truth but also committed to the absoluteness of the truth which it inadequately comprehends and expresses.

> Symbols are understood as symbols. They are seen through in a double sense: (1) their time-place relativity is acknowledged and (2) their character as relative representations of something more nearly absolute is affirmed [Fowler, 1978, p. 22].

Again, Basseches quotes Fowler regarding the *costs* of this "identification beyond tribal, racial, class, or ideological boundaries. To be genuine, it must know the cost of such community and be prepared to pay the cost" (Fowler, 1978, pp. 6-7). Basseches' distinction regarding this cost is trenchant: "The cost of this openness to universal community of identification surely includes having to embrace viewpoints in conflict with and contradictory to one's own, rather than avoiding those conflicts with 'separate but equal' or 'live and let live' attitude." In short, it is in one's way of affirming Commitments that one finds at last the elusive sense of "identity" one has searched for elsewhere, fearful lest Commitments might narrow and compromise the very self that only the investment of care can create. It is in the affirmation of Commitments that the themes of epistemology, intellectual development, ethics, and identity merge. Knowing that "such and such is true" is an act of personal commitment (Polanyi, 1958) from which all else follows. Commitments structure the relativistic world by providing focus in it and affirming the inseparable relation of the knower and the known.

In the poignant realization of our separateness and aloneness in these affirmations, we are sorely in need of community. Our mentors can, if they are wise and humble, welcome us into a community paradoxically welded by this shared realization of aloneness. Among our peers we can be nourished with the strength and joy of intimacy, through the perilous sharing of vulnerability.

A graduating senior, shaken by the questioning of values he thought he had so firmly established, said to his interviewer, "Now I know I'll never know how many times I'm going to be confronted." Indeed, the development we have traced in college students reveals itself now as "age-free."

Development as Recursive

Fowler's words, which speak of the paradoxical dialectic of holding absolutes in symbols acknowledged to be relativistic, reveal also the limits of the linear structure embedded in the metaphor of our journey. We have followed our students in their cumulative expansion of the meanings of their worlds. Our map of their adventure has required only two dimensions, for in the time at the students' disposal they could traverse this "Pilgrim's Progress" only once. But any adults who have perused the diaries of their teens know well that growth and discoveries are recursive. We are shocked at finding we "knew" at sixteen what we just discovered yesterday. Have we just been going around in circles? Yet the "same" issues, faced over and over again, may not really be the same.

Perhaps the best model for growth is neither the straight line nor the circle, but a helix, perhaps with an expanding radius to show that when we face the "same" old issues we do so from a different and broader perspective (Perry, 1977b). I have before me a letter from a professor:

> I thought you might be interested in a small example of passing through your series of stages more than once. Two years ago I spent three months working on a Danforth Faculty Fellowship Grant on a topic in faculty development, which was a new area for me. For many years I have been confident about skimming, picking and choosing within, and even abandoning books in my own discipline. When reading in faculty development materials, however, I found it necessary to struggle constantly against the impulse to dutifully examine and finish anything

that was recommended to me whether it seemed fruitful or even bore on my problem or not.

The old "impulse" was there, but the new person was not "subject" to it.

Further Explorations with the Scheme

After the graduation of our last sample of volunteers in the original study, eight years passed before our small office found the energies to follow another class through its experience of college. Even then, since our daily work of counseling had doubled, we were unable to afford the systematic rating of the interviews necessary to formal research and had to rely on the informal consensus of our impressions. The average Harvard-Radcliffe freshman of 1970-71 seemed a full Position in advance of his or her predecessor in 1959-60—in fact, beyond the developmental crisis of Position 5. We wondered if this accounted in part for the relative "flatness" we felt characterized most of these students' four-year reports (Perry, 1974). Their concerns with Commitments, too, seemed to focus more narrowly on careers, usually with less sense of permanence of investment (reflecting the slackening in economic growth? post-Vietnam depression?). The overall progression, however, appeared congruent with that traced in the original study. We would say the same of our present sample of the class of '79. The course of cognitive and ethical development outlined in our scheme appears to be a constant phenomenon of a pluralistic culture.

However, we could not subject our impressions to objective testing. Furthermore, the data, as in the original study, are provided by students in a single institution. It has therefore remained for other researchers to show that the scheme provides a useful description of students' development of meaning in other settings, to refine the scheme further, to design more economical measurements, and to illustrate its power for the improvement of teaching and counseling in higher education. James Heffernan was the first to use the scheme for research in his study of the outcomes of the Residential College at Michigan (Heffernan, 1971). Heffernan subsequently developed a cumulative bibliography of research and commentary relating to the scheme, a task currently under the direction of Laurence Copes.[3] This bibliography of over 100 entries (as of April 1980) is included in the references for this chapter.

Here I shall mention briefly the work of those researchers and practitioners most familiar to me, hoping only to show the direction of their explorations. Readers interested in more detailed reviews should start with Heffernan, 1975. Until September of 1975, I was unaware that anyone had taken up the study of our scheme—other than Heffernan and also Joanne Kurfiss (1975), to whose work I shall refer later. To be sure, I had received many requests for a quick pencil-and-paper rating scale to be used for all purposes from admissions to the evaluation of faculty. In the face of my doubts about the reliability of a quick checklist, my friend Eugene Hartley, of the University of Wisconsin at Green Bay, made one from brief illustrative quotations from the original study, which students were to check "acceptable" or "unacceptable" (Hartley, 1973). This prodded

[3] In compiling this bibliography, Laurence Copes has received assistance from L. Lee Knefelkamp, Katherine Mason, John Griffith, and others. Clyde Parker at the University of Minnesota has contributed library facilities and supported the distributions of a newsletter of which Copes is editor. Interested persons may address Copes at the Institute for Studies in Educational Mathematics, 1483 Hewitt Ave., St. Paul, Minn. 55104.

me into making an "improved" version myself to demonstrate that no such things would work. In this exercise I was so successful that my null hypothesis was unequivocally confirmed (unpublished study).

Then, at the Annual Conference of the American Psychological Association (APA) in 1975, Clyde Parker's students came forward with the fruits of three years' research on our developmental scheme. Carol Widick examined the scheme's theoretical structure. L. Lee Knefelkamp and Widick reported on college-level courses taught through "Developmental Instruction" based on the scheme. They adjusted four instructional variables to their students' Positions on the scheme: (1) diversity, (2) learning activity, (3) degree of structuring of assignments, and (4) personalism. Pre-post measures demonstrated superior substantive mastery and developmental progress in students in this special program, compared with those in a comparable course taught traditionally. A measuring instrument developed by Knefelkamp and Widick included sentence-completion and paragraphs susceptible of reliable rating. At the same meeting, Pierre Meyer reported on the uses of the scheme in a study of religious development (Meyer, 1977); Ron Slepitza and Knefelkamp demonstrated its contribution to a model of career counseling making salient the shift from external to internal locus of control (Slepitza and Knefelkamp, 1976); and Stephenson and Hunt confirmed Knefelkamp and Widick's pedagogical methods for furthering college students' movements from dualism to relativistic thinking (Stephenson and Hunt, 1977).

The outlines of this symposium delineated the types of studies that other researchers and teachers were already conducting with reference to our scheme and that later workers would also pursue: (1) elaborations and extensions, (2) use of the scheme to illuminate particular aspects of development, (3) validations in various settings, (4) design of curriculums, instruction, and advising in the light of the scheme, and (5) instrumentation.

Elaborations and Extensions. Blythe Clinchy and Claire Zimmerman at Wellesley College have been engaged in a longitudinal study (1975) in which they first assumed the general validity of the original scheme in order to explore it in greater depth. Their interviews are therefore more focused than those of the original study, with interviewers offering the students groups of statements from which to start their thinking, and following with probes. In 1978-79 they will have thirty complete four-year sequences of rich data. Movement along the scale is already evident, regression rare. They have elaborated on several Positions, especially 3-5, in which they find substages. They are especially interested in exploring the process and contents of Commitment in women. In this regard, they found differential development of girls in a "traditional" and a "progressive" high school (Clinchy, Lief, and Young, 1977) and plan follow-up studies with alumnae. In exploring linguistic and other differences in the "voices" of women and men, they are presently collaborating with Ann Henderson of our office and with Carol Gilligan.

Referring to this scheme as an initial framework, Patricia King (1977a) analyzed the forms of "Reflective Probabilistic Judgment" evident in various levels of development, especially the later ones. Her labeling of Multiplistic thought as "Relativistic" (see the distinction made earlier between these modes of thought) led her to refer to the reasoning she examined as "beyond relativism" (King, 1977b, pp. 12, 17), whereas it would seem in the terms of this scheme to articulate relativistic processes themselves. However, her analysis and scoring procedures, together with those of her colleague Karen Kitchener (1977), provide an invaluable contribution to the understanding of the development of disciplined relativistic thought.

I have already mentioned Basseches' contribution to the identification and analy-

sis of dialectical logic in the upper stages of development.[4] King (1977a) documents a decline in strictly Piagetian formal operations from high school through graduate school, remarking that such logic, so necessary to solutions of "puzzles" in physics, is inadequate for addressing "problems" in life. I would add that a premise common to most formal logic, namely that nothing can be A and not-A at the same time, is too humorless to live by. As one of our students said, "Irony gets both sides."

Joanne Kurfiss, in her early study (Kurfiss, 1975), examined in depth the conceptual properties of the developmental scheme and individuals' comparative rates of development in different areas. She compared five areas–(1) Moral Values, (2) Counseling and Advice, (3) Evaluation of Essays, (4) Responsibility of the Professor, and (5) the Nature of Knowledge–using as a measure the person's capacity to paraphrase statements characterizing various Positions of development in each area. She found considerable disparity in levels of development within individuals. Correlations were found between the areas of Moral Values and The Nature of Knowledge, and also among the other three areas, but not across these two groups. She surmised that the former pair are each relatively abstract and the later trio more concrete.

Use of the Scheme to Illuminate Particular Areas of Education. Confirming the usefulness of our scheme in respect to development of women, Carol Gilligan reports in the present volume on the consequence of rescoring Kohlberg ratings on the basis of the distinction we made between Multiplicity (anything-goes personalism) and contextual Relativism. The rescoring reverses Kohlberg's previously reported differences in rates and achievements of moral development between men and women at the upper levels (see also Gilligan and Murphy, 1979; Murphy and Gilligan, in press). Women appear less interested than men in the issues of conflict of rights presented in Kohlberg's dilemmas; rather, they develop contextually relativistic thinking in their search for the loci of care and responsibility in human relationships. Where this concern has been rated as personalistic "relativism" (Multiplicity), it has been devalued developmentally. The findings of Murphy and Gilligan (1980) are therefore of first-order import in the study of moral development. Their work also rescues sophomores from the condition of anomalous regression to which the earlier scoring had consigned them.

I have mentioned the work of Knefelkamp and Slepitza in career development and of Pierre Meyer in religion. Nowakowski and Laughney (1978) are working with Knefelkamp on the uses of the scheme in the design of training in health careers.

Clyde Parker initiated a Faculty Consultation Project with the College of Agriculture at Minnesota (Parker, 1978b). Interviews revealed the faculty's purposes to be couched in terms proper to our Positions 5 to 9:

> *Professor C:* One criticism I've had is that I ask questions that don't have absolute answers . . . I give them these kinds of questions because that's what life is. There aren't nice clean answers. They must come up with alternatives, weigh things, and make a decision.

Students were responding with plaints characteristic of Positions 2 to 3:

> *Student A:* In biology, there's really not two ways you can look at it. A bird has two feet. That's pretty conclusive.

These are brief samples of findings that are proving seminal in many undertakings in fac-

[4]For a study of the whole developmental progression itself in dialectical terms, see Heffernan and Griffith, 1979.

ulty development throughout the country in which the present scheme forms a point of reference (Chickering, 1976).

Design and Evaluation of Curriculums, Instruction, and Advising. In May of 1976, researchers and teachers interested in the uses of our scheme for improvement of instruction met at Ithaca College on the initiative of Laurence Copes (Copes, 1974) and Frances Rosamond, both assistant professors of mathematics. (I shall remark near the end of this chapter on an incident in this conference linking students' growth in sophistication in mathematics with their experience of loss—a connection I had never imagined.) The patterning provided an opportunity to share the validations and expansions under review and to derive a sense of their momentum.

Heffernan (1975) has this to say of the work of Laurence Copes and also Jack K. Johnson:

> The process in teaching college-level mathematics and their relationships to students' concepts of knowledge, per the Perry framework, have recently been examined by Laurence C. Copes, in a Ph.D. dissertation at Syracuse University. Copes' contention is that the presentation of the relativistic nature of mathematics is conducive to students' developing concepts of knowledge, and that certain teaching methods may be employed which reveal the creative and transcendent aspects of mathematics. He also has examined the theoretical potential of a number of teaching models for creating environments supportive of such conceptual development. His work and a dissertation by Jack K. Johnson relating Positions to open versus closed learning styles and a proposed study on teaching effectiveness in terms of the Perry scheme at the University of Wisconsin-Whitewater represent promising new directions in the improvement of teaching practices by conceptual rather than experiential guidelines [p. 497].

At the conference in Ithaca and subsequently, Knefelkamp and Widick have reported on continued elaboration of their model of Developmental Instruction (Widick and Simpson, 1978; Knefelkamp and Cornfeld, 1977). Others have extended its implications into peer training (Clement, 1977), career education (Touchton, 1978), graduate curriculum in counseling (Knefelkamp and Cornfeld, 1978), and the teaching of history (Widick and Simpson, 1978) and English drama (Sorum, 1976).

Most promising, too, is Knefelkamp's cross-cutting of this developmental scheme with the personality typology of John Holland. Given their choice among six approaches to an assignment centering on the same content, students regularly choose the style designed for their type and level of development (Knefelkamp, personal communication, 1978).

The uses of the scheme in the design of curriculums (Kovacs, 1977) and individual advising of adult learners, as at Empire State (Chickering, 1976), have been elaborated beyond my ability to document here.

Instrumentation. Some economical way of estimating the levels of students' thinking in given areas is central to the scheme's usefulness. Knefelkamp has carried this work furthest in company with Widick in 1975, and Slepitza in 1976. She is presently establishing the reliability of two instruments, both consisting of sentence-completions and short essays. The measure centering on students' thinking about their careers correlates .78 with expensive full-length interviews. Knefelkamp has a rating manual in manuscript.

The probing procedures of Clinchy and Zimmerman (1975) and the paraphrase method used by Kurfiss (1975) need further investigation. The former is economical in assuming the scheme's validity, thus bypassing the diffuseness of our original open interviews. The latter assumes that students can adequately paraphrase short paragraphs where

the complexity is not more than a step beyond the forms in which they characteristically think but will misperceive the meaning of paragraphs in which the structure of thought is more advanced.

Two standards apply to all such instrumentations. Experimenters will naturally require quite precise assessments.[5] For ordinary teaching purposes, however, rough-hewn groupings of students evidencing dualistic thinking, multiplistic thinking, and relativistic thinking will provide ample base for such differential instruction as is economically possible in most classes. For ourselves, we use two estimates. In one we ask for a short essay on "How I learn best." In the other we ask students to grade, with reasons, two students' answers to an essay question on familiar material. One essay, full of facts, is chosen as superior by students honoring memorization but blind to relevance; the other is designed to be chosen as superior by students alert to the issue of interpretation of data in reference to the issue posed in the question. For such rough purposes as selecting those who most stand to benefit from our course in strategies of learning, these measures suffice.

Pending the further development of measurements, it is encouraging to note that in classes with up to forty students, teachers who have simply tuned their ears to the distinctions among modes of thought outlined in this chapter have found themselves able to distinguish students in the major levels of development *in vivo*. Following Knefelkamp's model, they have then been able to create two or three combinations of different supports and challenges appropriate to the major groupings in the class.

Cognitive Styles, Learning Strategies, and Development

The attempts to gear strategies of teaching to students' modes of learning raise the issue of the mutability or immutability of cognitive and learning styles. (See Johnson, 1975; Messick, 1976; Witkin, 1967; Kagan and Kogan, 1970; Whitla, 1978; Santostefano, 1969; and Kolb, in this volume. For a review of contradictory findings see Danserau, 1974, and also Letteri, 1978.)

Hardly any of the studies dealing with this issue (except Johnson's) seem to relate observations and measurements of cognitive or learning styles to a student's development of perceived meaning of learning tasks. Yet when students radically revise their notions of knowledge, would they not be likely to change their ways of going about getting it?

Here, for example, a student recounts the radical change in his ways of learning:

> Student: *Then* it was just the weight of the thing. *Now* it's, it's not so much how many pages there are on the reading list, it's more what the books are worth. What sort of ideas do they have. I mean, I can read a book now, without regard for the pages. And read it pretty rapidly and get the ideas. That is, I'm looking for the ideas rather than plodding over the words and, . . . well, the ideas

[5]There is a problem inherent in making finer measurements with such an ordinal scale. The Positions are coherent *gestalten* in a hierarchical sequence. The scheme says nothing about the "distance" between Positions. If a student is rated as structuring the world from Position 5 three times out of four and from Position 4 once in four, is the rating 4.75 meaningful? The difficulty is compounded in averaging such ratings for groups of students and finding the "modal student" to be at, say, Position 3.83. We ourselves are among those who have committed this sin against parametric statistics. Whether the ends justify the means is a nice problem in contextual ethics, but the act should be deliberate and explicit. The use of parenthetical notation of secondary and tertiary patterns evident in a student's thought—for example, 4(5) or 3(2)(4)—is now a popular and effective way to express location on such ordinal schemes.

> are what count, and unless it's a particularly well-written book, you're not going to get that much pleasure out of how the words are put together. And after all, I've finally decided that you don't read a book just to say you've read it, just to say that you've gone through it. But you read the book for what it's worth, for what it has in it. And this, this doesn't count on any, for exam purposes, that is, it's a broad outlook really. I mean, before maybe I was reading, whereas *now* I tend to generalize the things and get the main ideas and concepts, and then pick up a few illustrations here and there, and amplifications when it seems worthwhile. But it's the broader picture. It's just not reading to have read, but reading to learn something, perhaps.

Since this student has perceived anew the nature of knowledge and of Authority's relation to it, he has discarded obedience in favor of his own agency as a maker of meaning. He dares to select, to judge, to build. As he studies, his intent is now not simply to conciliate Authority, external or internalized, but to learn on his own initiative.

In keeping with this revolution, he tells us that his entire manner of studying has undergone profound change. Judging from what he says, this change should be evident in his observable behavior, all the way from his manner of searching library shelves to his eye movements in scanning a page. These surface changes will, of course, express changes in his altered modes of learning and cognition.

Let us suppose that we had the opportunity to observe this student at work before his restructuring of the meaning of his world and that we had set out to draw inferences about his cognitive and learning styles, selecting our categories from such sources as the glossary of cognitive styles provided by Messick (1976) and the related array explored by Whitla (1977). From the student's literal interpretation of his assignments and his undifferentiated word-by-word reading, we might guess that he would be rated as stylistically *field-dependent* rather than *field-independent.* The probable flatness of his notes and the inevitable confusion among cumulative details in his memory would be congruent with a *leveling* rather than *sharpening* manner of cognition. We would rate him more *cautious* than *risk-taking,* more *constricted* than *flexible* in control, more *receptive* than *perceptive,* more *narrow* than *broad* in scanning, more *data-minded* than *strategy minded,* and more *descriptive* than *analytical* conceptually.

Were we then to observe him again after his conversion, we would of course be led to the opposite inference in every case. Even at the perceptual level, he might report that those words that developmental reading teachers are fond of calling *signposts*—words like *however, moreover, first of all, in sum,* and the like—are beginning to "jump off the page" at him, just as faces hidden in pictures of trees emerge for *field-independent* people.

Granted, this hypothetical observation contradicts the impressive research demonstrating that an individual's "cognitive styles" are remarkably stable over time. Yet it speaks to the present-day concern about the "matching" and "mismatching" of learning styles with teaching styles and the structures of various academic disciplines. Are students' learning or cognitive styles enduring characteristics of the person, subject only to minor and uncomfortable adjustment to uncongenial teaching or subject matter? Kolb's suggestion, in this book, that higher education tends to increase specialization of styles rather than to broaden them has recently been supported by Whitla's findings (Whitla, 1977).

Stability and Mutability of Learning Styles. As a person whose daily work is directed toward increasing the range of students' learning styles to enable them to construct strategies appropriate to different contexts, I have reason to question whether learning styles are as stabile as some measures have made them seem. Allow me to introduce my "evidence."

Over the past thirty years we have in our office counseled over 15,000 students. If I estimate that only one in three of these consulted us explicitly and directly about ways of learning, the sample is still 5,000. In addition, we have provided direct instruction in strategies of learning to another 15,000 students in classes enrolling 80 to 200 at a time. Of this combined sample of 20,000 students (mostly bright undergraduates and graduate students with a scattering of advanced high school students, middle-aged students, and professors) I would say that a minimum of 40 percent reported to us, and demonstrated for us, the same kind of revolution in purpose and strategies of learning reported by the student just quoted; another 30 percent, who seemed already to have attained such a vision of meaning and purpose, used the time with us simply to extend and refine their range of strategies and skills; another 10 percent left us with inconclusive evidence; and 15 percent had a very hard time indeed.

Will the reader be content with that 40 percent figure—800 vivid instances of workaday observation as a substitute for some laboratory-type hard data? I am bargaining; the reader may make a much smaller concession and still share in the dilemma I wish to present. What I feel should concern all educators is the kind of contrast illustrated by the gap between those who experienced this "revolution" and those 15 percent who had a very hard time indeed. What can account for this difference in their response, at a given moment in their lives, to an invitation to alter certain strategies of learning?

Allow me to back up a moment and describe the nature of our instructional effort. Thirty years ago we inherited a conventional "developmental speed-reading" program, including instruction in preliminary scanning of reading material, asking oneself questions, watching for signposts, and all the rest, together with instructional films for pacing and increasing "eye-span." We had not a clue as to how "developmental" such instruction was going to turn out to be, but we did learn in our one-to-one counseling that ways of reading were often integrally embedded in assumptions about purpose, authority, and morals. Students who read word by word often told us that our recommendation to "look ahead" was commending to them a form of "cheating" in which they refused to participate. We found that these students had invested their courage in "concentrating" (that is, *not thinking* of other things) for long hours, and we could not help them to concentrate *on* thinking about what an author was saying until they could reinvest their courage in the risks of judgment.

Such findings led us to dramatize for the students in our large "reading course" the contrasting constellations of meaning, feeling, ethics, and risk that surround the more passive and more active strategies of reading. We created illustrative dramatic monologues of what it felt like to be studying in one's room and then asked the students to engage in reading exercises based on such contrasting assumptions. At the same time, we learned how necessary it was to continue daily the conventional exercises and visual aids as a "support."

Nowadays we regularly provide on the students' work sheets for each day a space for comment, and the next day we may read two or three to the class, anonymously. Recently, in about the middle of the eighteen-day program, I read this comment among others:

> Why does the instructor waste so much time *ranting*? We should be doing more exercises and films. All that ranting takes up time that could be *used*.

This provoked some laughter and many "comments" on the next day's sheets. These comments fell into four types, of which the following are representative:

Type 1. The "ranting" fellow is *right*! You're very funny *sometimes,* but when are you going to teach us to *read faster*?

Type 2. I don't think you're "ranting." I understand what you're saying, but I can't seem to *do* it, damn it.

Type 3. Hey! Rant away! I'm *getting* it! I've *got* it! Last week I did a research paper in half the time and got an A! More! More!

Type 4. Well, it isn't "ranting," but why do you go on repeating yourself? All you've been saying all along is, "think while you read," and I knew that in high school. (But it's still a good course! Courage!)

In the early 1950s, in keeping with much thinking of the time, we would have seen these comments as emanating from different "types" of students. Indeed, when we started out on the study I am summarizing in this chapter, we intended to document the experience of these different types—the "authoritarian," the "dogmatic," the "intolerant of ambiguity," and their opposites. Then, as we listened year by year, it was the students who turned us into developmentalists.

We now see comments of Types 4, 3, and 1 as follows:

- Type 4: Students commenting in this way have come to college construing the academic world in meanings characteristic of at least Position 5 in our scheme. Their capacity to sense the instructor's predicament ("Courage!") suggests that they perceive at these levels in their social worlds as well.
- Type 3: Students making such comments have just discovered (constructed?) the meanings we locate at Position 5 and beyond and have begun to use new strategies of learning and communicating appropriate to these meanings.
- Type 1: Students making such comments are construing the academic world through meanings we characterize as Position 2 or 3. Since I am offering alternatives at Position 5+, two Positions beyond their level of development, the students cannot hear me. Instead, they assimilate my behavior to their own structures by seeing it as "ranting," in which Authority is failing in its duties.

I shall return to the plight of students making comments of Type 2 in a moment. First, I wish to consider students of Types 4 and 1. Apparently, I was boring the former and had so far failed to "reach" the latter. The tone of the former is one of mild frustration, while the latter convey a sense of mounting anxiety and anger. In an early experiment in "matching and mismatching" of teaching-learning styles, Gordon Allport and Lauren Wispe gave instruction congruent and incongruent with students' preferred styles (Wispe, 1951). The experimenters assigned students judged to "want more direction" to one pair of sections and students judged to "want more permissiveness" to another pair of sections. In each of these pairs of sections, one section received its preferred style of teaching and the other received the opposite. The results in terms of students' satisfaction and frustration were as predicted. What startled the experimenters was the intensity of anxiety and hostility expressed by the students who desired precise directions and failed to receive them. In contrast, those who were disappointed of their desired freedom simply reported feeling frustrated.

If we consider "want more direction" and "want more permissiveness" in terms of our scheme, the parallel to our comment sheets is striking. Students thinking in the forms of advanced Positions can understand earlier meanings and procedures and be impatient; students thinking in earlier forms cannot understand the assumptions of advanced Positions. The fear of abandonment evident in Type 1 comments is understandable.

Toward the end of our course there are always some Type 1 comments still coming to us, ever more urgent, and we redouble our efforts to reach these students, mainly through individual counseling. This context makes these results possible: (a) Some students, encouraged to speak freely about their experience and concerns, will suddenly hit upon the very approach they missed in class and exclaim, "Oh, is that what you've been saying in class?" (b) Other students will respond to the counseling session as they did to the course; they give the impression that their emotional controls are so bound up with an internalization of the all-or-none, authority-oriented structures of Positions 2 and 3 that they cannot contemplate change without overwhelming anxiety. Whether their stylistic predispositions could allow them to act on new meanings if they could generate them cannot be determined. (c) The remaining students will make the same discoveries as the first group but not be able to make use of their discoveries. They will then report back with comments of Type 2 ("I understand you, but I can't do it").

We take it that students speaking to us through Type 2 comments have come to construe their educational worlds in ways that make the strategies we offer meaningful and desirable, especially for their approach to reading and research in expository materials characteristic of so much of higher education. Granted the academic performance they have demonstrated in their primary and secondary schooling, their measured "aptitude," and their evident emotional resilience, their sense of incapacity to "do" these strategies suggests strongly that their particular "styles" of cognition, information processing, or learning may be relatively resistant to change and of a kind that do not support the skills required by the strategies we invite them to learn.

Cognitive "Styles" Versus "Strategies." The questions with which I began this digression had to do with the stability and mutability of learning "strategies" and cognitive "styles." I have tried to indicate how this question is embedded in a fabric patterned by developmental status, emotional readiness to develop new interpretations of the world, "dynamics" and traits of personality, and the contexts of teaching and counseling. It should be clear why the researches on "strategies" and "styles" often appear contradictory. Despite the importance of all these threads to higher education, not even the terms of the question are stable; what for one writer is "style" is "strategy" for another.

Educators would be greatly aided in their efforts to make use of these vital researches if the investigators could come to some rough consensus about terms. I would propose that cognitive *style* be used to refer to the relatively stable, preferred configuration of tactics that a person tends to employ somewhat inflexibly in a wide range of environmental negotiations. The word *strategy* could then be used to refer to a configuration of tactics chosen or constructed from an array of available alternatives to address a *particular kind* of environmental negotiation. In short, a strategy would be dominant over "style."

Against this background, I can now say that cognitive styles have been demonstrated to be in many instances highly stable generalized traits often ill-fitted to the cognitive task at hand. However, I can also say that many people demonstrate (both rapid and gradual) acquisition of alternative styles, which then become available to strategies adaptable to the character of different tasks. The stability and mutability of styles are therefore both characteristics in need of explication. The apparently contradictory findings reported by Danserau (1974), for example, may reflect the interests and methods of the researchers. Such is the present state of the art. As practitioners in higher education, meanwhile, we must keep the stability of styles in mind while we also design instruction to maximize the probability that students will develop appropriate strategies.

Kolb, in this book, brilliantly summarizes the development of styles of "experien-

tial learning," positing stages (phases) of *acquisition, specialization,* and *integration.* Acquisition is complete in adolescence. Specialization, the strengthening of one's preferred style, continues through higher education and into midlife. Integration, "the reassertion and expression of the nondominant adaptive modes or learning styles," which makes possible the exercise of what I call strategies, emerges in later life. Kolb's study at M.I.T. documenting the specialization process is paralleled by Whitla's (1977) contemporaneous study at three colleges: students with certain styles who major in subjects with structures congruent with these styles tend to be happy in their work and to become even more specialized in their styles.

These findings concern tendencies or differences statistically significant but "small" (Whitla, 1978). In order to obtain these differences, also, many measurements of "style" must be made under conditions in which the student is put under such stringent time limits that the possibility to exercise choice among procedures is virtually eliminated (Whitla, 1978). These studies, then, have documented the existence of individual differences in styles at certain levels, using large samples under limiting conditions. As educators, however, we stand to learn as much from the minority in the sample as from the majority. What would those students have to tell us who *have* developed a wider range of strategies, instead of specializing?

I suggest that further researches into cognitive and learning styles must include a consideration of the different meanings and purposes that the learners ascribe to learning in different contexts and at different times in their lives. This consideration remains primary to the whole problem of relating strategies and styles of teaching to strategies and styles of learning.

Values and Costs

From all that has been published, written but unpublished, in process of being written, and "personally communicated," I conclude that our scheme of development can be of more practical use to educators than I first supposed (Perry, 1970). Not only did I assume a substantial gap to exist between the scheme and the actual curriculum or classroom but also I felt a deep aversion to "application" in the sense of transforming a purely descriptive formulation of students' experience into a prescriptive program intended to "get" students to develop (Perry, 1974). Lee Knefelkamp took the initiative in challenging me on both these matters, and I joined in a battle that I have found edifying to lose.

Confronting the issues of values and ethics first, Knefelkamp pointed to my agreement that the values inherent in the scheme itself were indeed congruent with the commonly stated objectives of liberal education; there was a sense, then, in which progression toward these general values was inherently prescriptive. But in what sense? Surely educators cannot coerce students into intellectual and ethical development, even if it were ethical to do so. What was prescriptive was that the teaching and curriculums be optimally designed to invite, encourage, challenge, and support students in such development. Our scheme, therefore, is helpful to the extent that it contributes to the ability of planners and teachers to *communicate* with students who make meaning in different ways and to provide differential opportunities for their progress. Within the limits of institutional resources and teachers' energies, a better understanding of where different students are "coming from" can save wasted effort and maximize the effort expended. Knefelkamp has convinced me not only by this logic but by her demonstrations (see, for example, Knefelkamp, 1975).

At the same time, I am impressed by the extent of the revolution in our own thinking—a change that has been forced upon all of us who have become involved over time in what might be called *developmental phenomenology*. We seem so unconsciously immersed in the dregs of the Lockean tradition that we still suppose that there is at least some space in students' heads where a *tabula rasa* awaits the imprint of our wisdom. We observe in ourselves that there seems to be a developmental process involved in coming to understand development. We begin to feel strange and lonely.

I want to burst out to you, my reader, "Look! Do I sound crazy in saying that the *students* are the source of the meanings they will make of you? All right, so you feel that you are making meaning for them; you know your subject, they do not. But it is the meanings they make of your meanings that matter!" Obviously. Why am I shouting? After all, it is the meanings you make of my meanings that matter, and shouting will not help. It is not simply that I have forgotten the long trail of my own accommodations. Our common enemy is that Lockean heritage:

I find hope in the confluence of developmental studies. I do not mean parallelism in their "stages," which would be a dubious virtue in theories that should be complementary. I mean that whether the investigator starts from empirical observations made largely from outside (as did Loevinger with observations of sequential integrations of concerns; or Kohlberg with observations of sequential criteria in moral reasoning) or starts with empathic participation in the phenomenal experience of individuals (as we did in this study) the end products tend to converge. Weathersby, in the second chapter of this book, extends the rating cues of Loevinger's scale to reveal the patterning of individuals' construction of meaning in their lives and learning. Gilligan, in her chapter, does the same with the cues for Kohlberg's scoring, as Kegan (1977, 1979) has also done in an extraordinary reinterpretation of acute depression as a concomitant of transition. This confluence suggests that the centrality of the individual learner as a maker of meaning may be a radical notion but quite likely congruent with the facts.

I have spoken of development of meaning-making as a good thing, at least in our complex world. I have implied, too, in tracing the transitions of the scheme, that development has its costs. I want to end, therefore, with the educator's responsibility to hear and honor, by simple acknowledgment, the students' losses.

I have remarked elsewhere (Perry, 1978) on the importance we have come to ascribe to a student's "allowing for grief" in the process of growth, especially in the rapid movement from the limitless potentials of youth to the particular realities of adulthood. Each of the upheavals of cognitive growth threatens the balance between vitality and depression, hope and despair. It may be a great joy to discover a new and more complex way of thinking and seeing; but yesterday one thought in simpler ways, and hope and aspiration were embedded in those ways. Now that those ways are to be left behind, must hope be abandoned too?

It appears that it takes a little time for the guts to catch up with such leaps of the mind. The untangling of hope from innocence, for example, when innocence is "lost," may require more than a few moments in which to move from despair through sadness to a wry nostalgia. Like all mourning, it is less costly when "known" by another. When a sense of loss is accorded the honor of acknowledgment, movement is more rapid and the risk of getting stuck in apathy, alienation, or depression is reduced. One thing seemed clear: Students who have just taken a major step will be unlikely to take another until they have come to terms with the losses attendant on the first.

"Hearing" a student at such a moment may be best expressed simply by a nod or a respectful silence. We have been accustomed to these suspended moments in our counseling hours. But now we ask ourselves more broadly, "What is the responsibility of

teachers, including ourselves, as we help our students to transcend their simpler ways of knowing?" Jesse Taft, a follower of Otto Rank, once wrote that "the therapist becomes the repository of the outworn self" (Taft, 1933). Perhaps the metaphor is too passive. Perhaps, in moments of major growth, the instructor can serve as a bridge linking the old self with the new: "He knew me when, and he knows me now."

There may be no subject matter in which teachers are wholly immune to the responsibilities of such moments. I was told of an extreme instance by a professor of mathematics who remarked to me after a meeting that he now understood the breakdown of a freshman to whom he insisted that there were indeed three equally good ways of finding the answer to a given problem. "I didn't even tell him there were other answers—just three ways of finding *the* answer—and he went all to pieces." The story made poignant for me a moment in the conference at Ithaca: I was attending the last minutes of a workshop "On Relativism in the Teaching of Mathematics," and on the board was an algebraic proof such as a student might find in an advanced junior class in high school. Under it was another proof, as offered in senior year in calculus, which revealed the false assumptions of the first. Discussion was lively and highly philosophical. The moderator was smiling and saying over and over, "Yes, ladies and gentlemen, but you haven't told me what *happened* to that *first* proof? It was a certainty, wasn't it? I want to know: where did it *go*?" The participants were sobered by their evident reluctance to address this question and finally remarked that it was after all, the same question Gödel has invited us to ask ourselves of all proofs. They wondered, since the question is painfully devoid of an answer, if we are refusing to hear the students ask it.

It is now clear to me that a teacher's confirmatory offering of community is necessary even in the highest reaches of development. Here, where both formal logic and even "reflective probabilistic judgment" fail to support the tensions of life's paradoxes, the students' development is at risk. Even if students do achieve a sense of irony, it may drift into a bitter alienation. Many institutions of higher learning have succeeded, sometimes through careful planning, sometimes through the sheer accident of their internal diversity, in providing for students' growth beyond dualistic thought into the discovery of disciplined contextual relativism. Many would hope to encourage in their students the values of Commitment, and to provide in their faculties the requisite models. To meet this promise, we must all learn how to validate for our students a dialectical mode of thought, which at first seems "irrational," and then to assist them in honoring its limits. To do this, we need to teach dialectically—that is, to introduce our students, as our greatest teachers have introduced us, not only to the orderly certainties of our subject matter but to its unresolved dilemmas. This is an art that requires timing, learned only by paying close attention to students' ways of making meaning.

I have before me the senior thesis of a student who survived an accident in his freshman year that led to the medical prediction that he could never read again or return to academic work. His defiance of the prediction, in the midst of his acceptance of it, led five years later to this honors thesis on the subject of Hope. His preface ends:

> I would define hope as a human self-transcending movement. Hope rests on a foundation of antithesis, particularly the dialectic of possibility and limitation. It serves a centering function within this dialectic; the hoping person at once acknowledges finitude and limitation, and with and within these limitations affirms the power to move forward in time and to create. With the affirmation of this power, hope is not just a mode of being in the world, but brings a world into being. The dialectical character of hope creates the possibility that, in acknowledging limitation and affirming creative possibility, the centered self may transcend its elements [Holmes, 1974].

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