

# *How Do Teachers Manage to Teach? Perspectives on Problems in Practice*

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*The author is a scholar of teaching practice and also an elementary mathematics teacher. Her work, like that of her colleagues at the Institute for Research on Teaching, focuses on teaching practice from the point of view of the practitioner. Here, in two case studies, she views the teacher as dilemma manager, a broker of contradictory interests, who "builds a working identity that is constructively ambiguous." To emphasize her conviction that teaching work is deeply personal, the author makes herself the subject of one of these studies. She concludes with an examination of how her view contrasts with prevalent academic images of teachers' work.*

In the classroom where I teach fourth-, fifth-, and sixth-grade mathematics, there are two chalkboards on opposite walls. The students sit at two tables and a few desks, facing in all directions. I rarely sit down while I am teaching except momentarily to offer individual help. Thus the room does not have a stationary "front" toward which the students can reliably look for directions or lessons from their teacher. Nevertheless, an orientation toward one side of the room did develop recently in the fifth-grade class and became the source of some pedagogical problems.

The children in my classroom seem to be allergic to their peers of the opposite sex. Girls rarely choose to be anywhere near a boy, and the boys actively reject the girls whenever possible. This has meant that the boys sit together at the table near one of the blackboards and the girls at the table near the other.

The fifth-grade boys are particularly enthusiastic and boisterous. They engage in discussions of math problems with the same intensity they bring to football. They are talented and work productively under close supervision, but if left to their own devices, their behavior deteriorates and they bully one another, tell loud and silly jokes, and fool around with the math materials. Without making an obvious response to their misbehavior, I developed a habit of routinely curtailing these distractions from the lesson by teaching at the blackboard on the boys' end of the classroom. This enabled me to address the problem of maintaining class-

room order by my physical presence; a cool stare or a touch on the shoulder reminded the boys to give their attention to directions for an activity or to the content of a lesson, and there was no need to interrupt my teaching.

But my presence near the boys had inadvertently put the girls in "the back" of the room. One of the more outspoken girls impatiently pointed out that she had been trying to get my attention and thought I was ignoring her. She made me aware that my problem-solving strategy, devised to keep the boys' attention, had caused another, quite different problem. The boys could see and hear more easily than the girls, and I noticed their questions more readily. Now what was to be done?

I felt that I faced a forced choice between equally undesirable alternatives. If I continued to use the blackboard near the boys, I might be less aware of and less encouraging toward the more well-behaved girls. Yet, if I switched my position to the blackboard on the girls' side of the room, I would be less able to help the boys focus on their work. Whether I chose to promote classroom order or equal opportunity, it seemed that either the boys or the girls would miss something I wanted them to learn.

This first-person account of a particular pedagogical problem is an unusual way to begin an analysis of the work of teaching. Commonly, such inquiries begin with general observations based on a consideration of several instances of teaching practice or with assertions about what teaching can or should be. I have taken a different tack, however, not because I believe these approaches cannot offer useful insights into what it is that teachers do, but because I believe they are incomplete. Efforts to build generalized theories of instruction, curriculum, or classroom management based on careful empirical research have much to contribute to the improvement of teaching, but they do not sufficiently describe the work of teaching.<sup>1</sup> Such theories and research are limited in their capacity to help teachers know what to do about particular problems such as the one I have just described. My intention, however, is not to build another kind of theory which can more adequately guide practice but to describe those elements of practice which are unconsonant with theoretical principles. To do this, I shall use both my experience as a classroom practitioner and the tools of scholarly inquiry.

The special and salient value of descriptions of teaching from the practitioner's perspective has been recognized by scholars and supported by researchers.<sup>2</sup> Mov-

<sup>1</sup> My distinction between theory and practice here follows that developed by Joseph Schwab in his studies of curriculum development. Schwab has observed that the particulars of time, place, person, and circumstance which surround questions of what and how to teach are incongruent with the order, system, economy, and generality required to build a good theory; see Schwab, "The Practical: Arts of Eclectic," in *Science, Curriculum, and Liberal Education: Selected Essays*, ed. Ian Westbury and Neil J. Wilkof (Chicago: University of Chicago Press, 1978), p. 322.

<sup>2</sup> See, for example, Susan Florio and Martha Walsh, "The Teacher as a Colleague in Classroom Research," in *Culture and the Bilingual Classroom*, ed. Henry T. Trueba, Grace P. Guthrie, and Kathryn H. Au (Rowley, MA: Newbury House, 1981), 87-101; Eliot Eisner, "Can Educational Research Inform Educational Practice?" *Phi Delta Kappan*, 65 (March 1984), 447-452; and Leslie L. Huling, Myron Trang, and Linda Cornell, "Interactive Research and Development: A Promising Strategy for Teacher Educators," *Journal of Teacher Education*, 32 (1981), 13-14.

Christopher Clark and Penelope L. Peterson have recently emphasized that descriptive research on how teachers make interactive decisions in the classroom should be done as a basis for further theory building about teacher thinking; see their "Teacher's Thought Processes," Occasional Paper No. 73, Institute for Research on Teaching (East Lansing, MI: Michigan State University, 1984), p. 76.

ing back and forth between the world of practice and the world of scholarship in order to inquire into the nature of practice fosters in the inquirer a useful sort of deliberation; it enriches and refines both the questions one can ask about teachers' work and the attempts one can make to answer them.<sup>3</sup> In this essay, I shall present two cases which first describe teaching problems from the teacher's point of view and then examine, from the scholar's point of view, the work involved in facing them.

The teacher's emphasis on concrete particulars in the description of a classroom problem distinguishes the perspective of practice from the perspective of the theory-builder. This distinction has received considerable attention in the literature on teaching.<sup>4</sup> Another fundamental though less familiar difference involves the personal quality of teaching problems as seen through the eyes of a practitioner.<sup>5</sup> Who the teacher is has a great deal to do with both the way she defines problems and what can and will be done about them.<sup>6</sup> The academician solves problems that are recognized in some universal way as being important, whereas a teacher's problems arise because the state of affairs in the classroom is not what she wants it to be. Thus, practical problems, in contrast to theoretical ones, involve someone's wish for a change and the will to make it.<sup>7</sup> Even though the teacher may be influenced by many powerful sources outside herself, the responsibility to act lies within. Like the researcher and the theoretician, she identifies problems and imagines solutions to them, but her job involves the additional personal burden of doing something about these problems in the classroom and living with the consequences of her actions over time. Thus, by way of acknowledging this deeply personal dimension of teaching practice, I have chosen not only to present the particular details of two teachers' problems but to draw one of these problems from my own experience.

In addition to recognizing the particular and personal qualities of the way teachers understand problems in their work, I would like to consider another distinction between practice and theory building in education. Some of the problems the

<sup>3</sup> Schwab describes the value of such "deliberation" as a method for studying the teaching process in "The Practical 4: Something for Curriculum Professors to Do," *Curriculum Inquiry*, 13 (1983), 239-265. His notions are expanded, particularly with relation to deliberative exchanges among differing aspects of one's self, by Lee Shulman in "The Practical and the Eclectic: A Deliberation on Teaching and Educational Research," *Curriculum Inquiry*, 14 (1984), 183-200.

<sup>4</sup> The "particularistic" nature of the teacher's perspective has been described by Arthur S. Bolster, "Toward a More Effective Model of Research on Teaching," *Harvard Educational Review*, 53 (1983), 294-308. The context-specific character of work in classrooms as it appears to practitioners has been examined by Walter Doyle in "Learning the Classroom Environment: An Ecological Analysis," *Journal of Teacher Education*, 28 (1977), 51-55, and "Paradigms for Research on Teacher Effectiveness," *Review of Research in Education*, Vol. 5, ed. Lee Shulman (Itasca, IL: Peacock, 1977), 163-198. Philip Jackson compared teachers' propensity for "anecdotal" descriptions of their work with the more abstract quality of academic writing about teaching. See Jackson, "The Way Teachers Think," in *Psychology and Educational Practice*, ed. Gerald S. Lesser (Glenview, IL: Scott, Foresman, 1971), pp. 10-34.

<sup>5</sup> The personal quality of teachers' knowledge is emphasized by Sharon Feiman and Robert Floden. See their "Cultures of Teaching" in *Third Handbook of Research on Teaching*, ed. Merlin C. Wittrock, in press. Gary Fenstermacher argues for considering the effect of the teacher's own concerns and personal history on the decisions she makes in the classroom in "A Philosophical Consideration of Recent Research on Teacher Effectiveness," in *Review of Research in Education*, 6, ed. Lee Shulman (Itasca, IL: Peacock, 1979), pp. 186-215.

<sup>6</sup> I have chosen the feminine gender for pronouns which apply to teachers throughout this manuscript because the majority of teachers are women.

<sup>7</sup> Schwab, "The Practical: A Language for Curriculum," in Westbury and Wilkof, p. 289.

practitioner is required to do something about might be defined as unsolvable. The work required to manage such problems will be the particular focus of my inquiry. It is widely recognized that the juxtaposition of responsibilities which make up the teacher's job leads to conceptual paradoxes.<sup>8</sup> I will argue further that, from the teacher's point of view, trying to solve many common pedagogical problems leads to practical dilemmas.<sup>9</sup> As the teacher considers alternative solutions to any particular problem, she cannot hope to arrive at the "right" alternative in the sense that a theory built on valid and reliable empirical data can be said to be right.<sup>10</sup> This is because she brings many contradictory aims to each instance of her work, and the resolution of their dissonance cannot be neat or simple. Even though she cannot find their right solutions, however, the teacher must do something about the problems she faces.

Returning to my own classroom at this point will serve to explicate more clearly these qualities of a teacher's work. One might think it possible to monitor the boys' behavior in my fifth-grade math class in a way that does not reduce my attention to the girls, or to involve the girls more in the math lesson without reducing my capacity to monitor the boys' behavior. But teaching dilemmas like this are often not so easily resolved in practice. For example, if I were to assign seats mixing the boys and the girls, it might be possible to give equal attention to everyone no matter which blackboard I use, but the silliness that results from proximity to the opposite sex in the fifth grade might then take so much away from the lesson that there would be less of my attention to go around. If I were to leave the boys and the girls where they choose to sit, and walk around the room to spread my attention, then the walking around might cause even greater disruption because it would take me away from the boys who need my presence. It might be possible to use desks instead of tables and seat everyone facing in the same direction as a way of monitoring behavior, but that might make the students' valuable problem-solving discussions with one another impossible. All these possible "solutions" lead to problems. I felt I could not choose a solution without compromising other goals I wanted to accomplish. Yet, I knew that not implementing a solution would have negative consequences too. I was convinced that some action had to be taken.

When I consider the conflicts that arise in the classroom from my perspective as a teacher, I do not see a choice between abstract social goals, such as Excellence versus Equality or Freedom versus Standardization. What I see are tensions between individual students, or personal confrontations between myself and a particular group of boys or girls. When I think about rewarding Dennis's excellent,

<sup>8</sup> See, for example, Bryan Wilson, "The Teacher's Role: A Sociological Analysis," *British Journal of Sociology*, 13 (1962), 15-32; Charles Bidwell, "The School as a Formal Organization," in *Handbook of Organizations*, ed. James G. March (Chicago: Rand McNally, 1965), pp. 972-1022; and Ann Lieberman and Lynn Miller, "The Social Realities of Teaching," *Teachers College Record*, 80 (1978), 54-68.

<sup>9</sup> The language of "dilemmas" to describe classroom problems has also been used by Ann Berlak and Harold Berlak in *The Dilemmas of Schooling: Teaching and Social Change* (London: Methuen, 1981). However, their analysis focuses on cultural contradictions and opportunities for social change as they are manifest in teachers' dilemmas and gives less attention to the practical work involved in managing dilemmas in the classroom.

<sup>10</sup> See Schwab, "The Practical: Arts of Eclectic," p. 318; for a comparison between the knowledge produced by social science research and the knowledge practitioners use in their work, see Charles E. Lindholm and David K. Cohen, *Usable Knowledge: Social Science and Social Problem Solving* (New Haven: Yale University Press, 1979); and also David K. Cohen, "Commitment and Uncertainty," Harvard University, unpublished manuscript, 1981.

though boisterous, contributions to problem-solving discussions, while at the same time encouraging reticent Sandra to take an equal part in class activities, I cannot see my goals as a neat dichotomy and my job as making clear choices. My aims for any one particular student are tangled with my aims for each of the others in the class, and, more importantly, I am responsible for choosing a course of action in circumstances where choice leads to further conflict. The contradictions between the goals I am expected to accomplish thus become continuing inner struggles about how to do my job.

### A Pedagogical Dilemma as an Argument with Oneself

The solutions I imagined to restrain the boys' boisterous behavior and to encourage the girls' involvement in class activities were contradictory. I could do neither without causing undesirable consequences, yet both were important to me. One way to think about the dilemma that I faced is to see it as a problem forcing a choice between equally undesirable alternatives. In this view, my job would be to grit my teeth and choose, even though choosing would bring problematic consequences.<sup>11</sup> Another way to think of a dilemma, however, is as an argument between opposing tendencies within oneself in which neither side can come out the winner. From this perspective, my job would involve maintaining the tension between my own equally important but conflicting aims without choosing between them. It may be true that some teachers do resolve their dilemmas by choosing—between excellence and equality, between pushing students to achieve and providing a comfortable learning environment, between covering the curriculum and attending to individual understanding; but I wish to argue that choosing is not the only way to manage in the face of self-contradictory alternatives. Facing a dilemma need not result in a forced choice. A more technical definition of a dilemma is “an argument that presents an antagonist with two (or more) alternatives, but is equally conclusive against him whichever alternative he chooses.”<sup>12</sup> This definition focuses on the deliberation about one's alternatives rather than on a choice between them. The conflicted teacher is her own antagonist; she cannot win by choosing.

As I presented my case for leaving the boys' area of the room to be nearer to the girls, my argument for taking such an action was conclusive against me because my students and I would be distracted from our lessons by my need to control overtly the boys' behavior. If I argued, on the other hand, for continuing to teach from the boys' side of the room, I would also lose the argument because I

<sup>11</sup> Descriptions of teacher thinking have emphasized choice between alternative courses of action as the outcome of teacher decision making, based on models of cognitive information processing. See, for example, Richard J. Shavelson, “Teachers' Decision Making,” in *The Psychology of Teaching Methods, The 75th Yearbook of the National Society for the Study of Education, Part I*, ed. Nathaniel L. Gage (Chicago: University of Chicago Press, 1976), pp. 143–165; John Eggleston, ed., *Teacher Decision Making in the Classroom* (London: Routledge & Kegan Paul, 1979); and Christopher Clark and Robert Yinger, “Research on Teacher Thinking,” *Curriculum Inquiry* (1977), 279–304.

<sup>12</sup> *Funk and Wagnalls' Standard College Dictionary* (New York: Harcourt Brace and World, 1963), p. 372. For a psychological description of the contradictory imperatives that can arise within the person of the teacher, see Angelika C. Wagner, “Conflicts in Consciousness: Imperative Cognitions Can Lead to Knots in Thinking,” paper presented at the First Symposium of the International Study Association on Teacher Thinking, Tilburg University, The Netherlands, 26–28 Oct. 1983.

would not be giving the girls at least equal amounts of my attention. Instead of engaging in a decision-making process that would eliminate conflicting alternatives and lead to a choice of which problem to solve, I pursued a series of such losing arguments with myself as I considered the consequences of various alternatives. One element of the teacher's work is having an argument with oneself—a speculative argument that cannot be won. The thinking involved in this sort of work is quite different from the kind of thinking that might go into concluding that one can make the correct choice between dichotomous alternatives. My arguments with myself served to articulate the undesirable consequences of each of my alternatives in terms of potential classroom confrontations. In order to hold the conflicting parts of my job and myself together, I needed to find a way to manage my dilemma without exacerbating the conflicts that underlay it.

### Pedagogical Dilemmas and Personal Coping Strategies

My argument with myself resulted from a desire to do contradictory things in the classroom. My ambivalence about what to do was not only a conflict of will, however; it was a conflict of identity as well. I did not want to be a person who ignored the girls in my class because the boys were more aggressive in seeking my attention. I think of myself as someone who encourages girls to become more interested and involved in mathematical thinking. At the same time, I did not want to have a chaotic classroom as a result of turning away from the boys' behavior. But neither did I want to appear to have such a preoccupation with order that I discouraged enthusiasm: standing near the boys enabled me to keep them focused without attending to their misbehavior directly. Working out an identity for this situation was more than a personal concern—it was an essential tool for getting my work done. The kind of person that I am with my students plays an important part in what I am able to accomplish with them. Figuring out who to be in the classroom is part of my job; by holding conflicting parts of myself together, I find a way to manage the conflicts in my work.

The self that I brought to the task of managing this classroom dilemma is a complicated one. My personal history and concerns contributed to the judgment that it would not be wise simply to make a choice in this case. I felt sympathy for the girls who were seated in what had inadvertently become the "back of the room" because of the many pained moments I had spent with my raised hand unrecognized at the back of my own predominately male trigonometry class in high school. But I was not of one mind about that experience. Competing for attention with the more aggressive boys in my math class had not been wholly negative; a significant amount of the satisfaction which I derive from my work in mathematics is based on the knowledge that there are few women who are successful in this area. Although I believe girls are entitled to special encouragement in learning mathematics, this belief is entangled with my feeling of accomplishment from having developed an interest in the subject myself despite discouragement. Now, as part of my job, I had to accomplish a balance between these conflicting influences in what I chose to do about this classroom dilemma. There were similarly divergent personal concerns behind how I understood the actions I might take in relation to the boys in the class. In my teaching relationship with them I had to balance my own conflicting yet simultaneous desires for freedom and order.

My capacity to bring disparate aspects of myself together in the person that I am in the classroom is one of the tools that I used to construct an approach to managing my dilemma. Because a teacher is present to students as a whole person, the conflicting parts of herself are not separable, one from another, the way they might be if we think of them as names for categories of persons or cultural ideals, like child oriented versus subject oriented, or democratic versus authoritarian.<sup>13</sup> A teacher has the potential to act with integrity while maintaining contradictory concerns. I did not want to be a person who treated girls unequally, as my high school trigonometry teacher had done. Nor did I want to be someone who gave special attention to girls just because they were girls. I did not want to be a person who had such a preoccupation with order that I discouraged enthusiasm. Nor did I want to try to do my work in a disorderly classroom. The person that I wanted to be—this ambiguous self-definition—became a tool to enable me to accomplish my pedagogical goals.

### Constructing Solutions in the Face of Unsolvable Problems

When I met my class the morning after recognizing my dilemma, I had not resolved any of the arguments with myself about what to do, but I did have some sense of who I wanted to be. And that made a difference.

It happened that two of the more offending boys were absent that day, so I was able to leave everyone seated where they were, walk to the other side of the room, and do most of my teaching standing at the blackboard near the girls' table without any major disruptions occurring. I used this hiatus to construct a strategy for managing the conflict that did not involve stark choices.

While I taught the class, my thinking about the boys and the girls merged with my thinking about some other currently pressing matters in the classroom. I was about to begin a new instructional unit which involved using manipulative materials and had been wondering about how to organize the students' activities with those materials. I had also been talking with my student teacher, Sandy, about ways in which she might take on responsibility in the class. We had planned the next unit together, and she was prepared to do some of the teaching. So I divided the class into four small groups (two of girls and two of boys) and put Sandy in charge of instructing and managing one group of boys and one group of girls, while I took responsibility for the other two groups. This strategy depended heavily on specific elements in the context of my classroom. It enabled me to cope with the surface of my problem while keeping its more general conflicts submerged. It

<sup>13</sup> For example, such dichotomous categories are used to examine teachers' work in Harry L. Gracey, *Curriculum or Craftmanship: Elementary School Teachers in a Bureaucratic Setting* (Chicago: University of Chicago Press, 1972); George Spindler, "Education in a Transforming American Culture," *Harvard Educational Review*, 25 (1955), 145–156; and Mary Haywood Metz, *Classrooms and Corridors: The Crisis of Authority in Desegregated Secondary Schools* (Berkeley, CA: University of California Press, 1978). In contrast, views of the teacher derived from the social psychology of George Herbert Mead and others in "the Chicago School" present a more complex picture: for example, Willard Waller in *The Sociology of Teaching* (New York: Wiley, 1932); and Philip Jackson in *Life in Classrooms* (New York: Holt, Rinehart and Winston, 1968). The Berlaks in *The Dilemmas of Schooling*, p. 133, describe the teacher's job in the face of contradictions as "transformation," by which they mean the invention of a pedagogical process which joins opposing poles of a cultural contradiction; in their view, the teacher has the capacity to be a vehicle whereby "the contending presses of the culture at least for the moment are synthesized and thus overcome."

was not a general solution nor a permanent one; it was an act of improvisation, a product of adjusting my ambivalent desires to the particular circumstances in which I was working.

I moved one group of boys to the area near the girls' blackboard and one group of girls to the other side of the room. This helped to avoid the distractions that would result from grouping the boys and girls together, but without geographically dividing the class along gender lines. Furthermore, because there were now two groups of boys and two of girls, both the class and I could identify other criteria for group membership besides gender. Instructing in small groups also meant that neither the teachers nor the students would be performing in front of both boys and girls at the same time, so my attention would be less likely to be judged as preferential toward either the boys or the girls. Paradoxically, because I would be teaching boys only in the company of other boys, and girls only in the company of other girls, I would be able to respond to the children more as individuals than as members of one sex or the other, as I had done when I taught them all together while they were seated at opposite ends of the room.

What can we learn from this case about how a teacher works? I did not choose this strategy because it would solve problems. I managed my dilemma by putting the problems that led to it further into the background and by bringing other parts of my job further to the foreground. Although this meant that the problems remained, my strategy gave me a way to live with them, a temporary respite that would prevent the underlying conflicts from erupting into more serious, distracting discord.

### A Second Case: Conflicts over the Nature of Knowledge as Another Source of Classroom Dilemmas

The adversity in my situation arose because of contradictory social goals in my teaching. One might imagine that if I had been able to put problems of social organization aside and had defined my job only in terms of whether my students learned the subject matter, then the dilemmas I described would have disappeared. In fact, some scholars have argued that by using an impersonal "technology of instruction" (more often called a curriculum) teachers can produce subject matter knowledge in students without concern for social problems in or out of the classroom.<sup>14</sup> Others, who understand knowledge as a construction of the individual learner, leave social problems aside and focus on the teacher's work in fostering an individual child's understanding.<sup>15</sup> It may be true that if teaching and learning occur in a one-to-one encounter outside the classroom, the sort of dilemma I have described may not arise, but it is not possible in schools to separate social problems from subject-matter knowledge. In the teacher's job, at least as it is now understood, a clear distinction between tasks related to social organization and tasks related to instruction is unachievable. The following case study is intended to illus-

<sup>14</sup> See Carl Bereiter, "Schools Without Education," *Harvard Educational Review*, 42 (1972), 390-414; see also John D. McNeil, "A Scientific Approach to Supervision," in *Supervision of Teaching*, ed. Thomas J. Sergiovanni (Alexandria, VA: Association for Supervision and Curriculum Development, 1982), pp. 18-34.

<sup>15</sup> This position is characteristic of those educational reformers whose philosophy of learning is built on theories of individual cognitive development.

trate this point. Neither it nor the preceding case, however, is intended in any way to illustrate good or bad, skillful or skill-less teaching. Both cases presume a value in studying common teaching practice, however it may be evaluated, whatever its effects.

Rita Cerone is a fourth-grade teacher in a small, urban public school.<sup>16</sup> In the situation I am about to describe, she was faced with a set of problems which arose out of her use of a workbook to instruct students in science. Her concern for solving these problems led her into a pedagogical dilemma, and what she did to manage her dilemma raises issues about teachers' work that are similar to those already described.

Science lessons in Rita's classroom often consisted of students reading their workbooks, looking at the drawings and diagrams in them, and then answering questions and checking their answers with the teacher. The topic of one such exercise was "The Cycle of Water." The workbook presented the students with a picture of a cloud, and next to it a question: "Where does the water come from?" Rita said it seemed obvious to her from the illustration that the answer was "clouds," and so she had "marked it right" when students gave that answer. (She checked other answers which were not so obvious to her in the teacher's guide before she judged them right or wrong.) Rita was, therefore, a bit perplexed when one of the girls in her class, Linda, came up to have her work corrected and declared with unusual confidence that "the answer to where water comes from is *the ocean*." Rita indicated on the girl's paper that this answer was incorrect, but Linda was surprised by this judgment and insisted that she was right.

Rita was hesitant to contradict Linda because the girl was so confident about her answer. Although Rita disagreed with her, she sensed a conflict brewing and wanted to avoid it. So she tried to understand more about what Linda was thinking. "I said to her: 'Well, I don't understand. Explain it to me.' I was fumbling around and I was trying to figure out what she meant. It finally turned out that she knew, but she couldn't verbalize it for quite a while. After asking her questions and having her look at the workbook page, [Linda] said, 'The clouds pick the water up. I don't know how, but it puts the water from the ocean back in the clouds.'" Rita decided in this exchange that Linda "knew" what she was supposed to learn from the lesson even though her answer did not match the answer in the teacher's guide.

The potential conflict between perspectives on what it means to "know" something was momentarily resolved when Rita agreed with Linda that her answer was indeed correct. The equilibrium between Linda's understanding and the textbook's standards of knowledge was short-lived, however, when the other students in the class took an interest in Rita's judgment. As Rita recalled, "Linda went running back to the rest of the group and told them she wasn't wrong. The other kids started arguing with Linda because they saw it the way I saw it *and* the way the

<sup>16</sup> I had the opportunity to observe and work with Rita Cerone over three years as part of the Teacher Development Project in the Division for Study and Research in Education, Massachusetts Institute of Technology. This project is described in my "Teaching about Thinking and Thinking about Teaching," *Journal of Curriculum Studies*, 16, (1984), 1-18. Quotes of Rita's remarks are taken from transcripts of meetings of the teacher participants in that project and transcripts of my individual interviews with Rita, which occurred over a three-year period. The name "Rita Cerone" is a pseudonym, as are all student names used in this manuscript.

answer book saw it. But Linda could prove she was right." Rita had exacerbated an underlying contradiction in her classroom when she told Linda that her answer was correct. The conflict came to the surface because Linda was a member of a group of students studying the same material. Moreover, they had all been using the teacher's guide as the standard by which to judge the correctness of their answers. Their complaint was that Rita had applied a familiar standard to judging their answers but had used another standard to evaluate Linda's. Unless Rita did something to manage this conflict, it threatened to become a more difficult classroom problem.

One student, Kevin, confident that *his* answer was right because it matched the answer in the teacher's guide and because Rita had told him it was right, led the class in an argument with Linda and, by implication, with their teacher. In Rita's words: "One of the kids, Kevin, said Linda was really dumb because the ocean was where the water started out, and it ended up in clouds just before it rained. It wasn't that he didn't get her explanation, but he just dismissed it because I had told him earlier that his answer was right and he also knew that was the answer the book wanted. That's why she came up to me in the first place: to get confirmation that she was right because Kevin had said she was wrong." Like Rita, Kevin "got" Linda's explanation. Yet, her individual understanding of the matter was not his concern. He "dismissed" Linda's explanation (as Rita herself had done at first) because it did not match what the book and his teacher said was "right," and he began an argument in order to settle the matter. If the teacher and the textbook were to be taken seriously, he argued, Linda could not also be right.

Rita's job here, as in my situation, might be viewed as requiring a choice between dichotomous alternatives. If she were to practice "child-centered" teaching, she would favor defending Linda's way of thinking while rejecting the textbook's authority. If she were to practice "curriculum-centered" teaching, she would judge Linda's knowledge using the written curriculum in the teacher's guide as the standard. Those students whose answers agreed with the book's answer were pushing her toward the latter, while Linda was pushing her toward the former.

#### *Rita's Argument with Herself.*

Rita did not represent her work in this situation as making such a forced choice, however. Instead, she reviewed a series of complicated arguments she had with herself on the issues involved. She contended on the one hand that the question in the workbook was not very clear; its ambiguity made her less inclined to trust the answers in the teacher's guide. In addition, by reflecting on her conversation with Linda, she recognized that the girl really understood the "cycle of water," whereas those students who put down "clouds" might only have looked at the illustration in the book. Rita articulated this skepticism about impersonal measures of students' knowledge in a conversation she had with some other teachers about the incident: "I think too often kids get marked wrong for things that really aren't wrong. I mean, if you corrected Linda's paper and she wasn't around to explain her answer, she would never have had the chance to defend herself or say that this is the way I think. I mean, that's what happens on those Stanford Achievement Tests. They're not given any room for individuality of thought." Rita accepted Linda's answer as a valid representation of the girl's understanding. Yet, she also thought that both she and Linda should concur with the answer in the book. Rita

related her thinking about this incident to her first year of teaching; she had read the teacher's guides very carefully that year and "tried to stay one step ahead of the kids" because she was trying to teach material she had not learned before. Even later she relied heavily on the teacher's guide; she typically referred students directly to the "answer book" to check their own work so that she could spend time on helping others who were slower to finish their assignments. Rita argued that if she let Linda "get away with" her nonstandard interpretation of the question in the science book, she might be undermining her students' trust in these books as well as her own ability to guide her students' learning. For this teacher and her students, textbooks carry a great store of meaning about the nature of what is to be learned. So Rita was torn: she could produce good reasons for accepting Linda's answer as correct and she could also produce good reasons for marking it wrong.

Rita could not win this argument with herself about how to evaluate Linda's answer; like me, she was her own antagonist. Whether she announced to the class that Linda was right and thus implied that what the book said did not matter, or that Linda was wrong because she had interpreted the "cycle of water" in her own way, the consequences would be more overt conflict. While some might see such additional conflict as educationally productive, Rita, in her circumstances, clearly did not.

#### *Rita's Inner Tensions as a Tool of Her Trade*

Rita drew on her own conflicted concerns to arrive at her decision about what to do in this situation. Her conviction that she should not choose between Linda and the textbook was based on her personal capacity to value different, potentially contradictory kinds of knowledge. This was part of the "person she wanted to be." She had begun teaching and had been reasonably successful at it without much understanding of science. She had also grown up believing that the people who write books are smarter than she—even smarter than her teachers. The public knowledge she learned in school from books had allowed her to achieve the position of teacher. So she had reason to trust the "rightness" of the knowledge represented by the standard curriculum. At the same time, however, she believed that much of what she knew could not be contained in books or measured by tests. She knew that she understood things she had figured out for herself, and sometimes she saw these ideas more clearly than those she had read in books. Rita was, therefore, concerned about the limitations of standard measures of knowledge, but her concern was not unconflicted.

Several months later Rita expressed the same ambivalent view of knowledge that formed the basis of her deliberations in this case in a conversation about the way a standardized test had been used to assess her own knowledge. She thought the test was not a very good tool for measuring what would make her a successful learner, but she also recognized that the test had some meaning to people who did not know her. She believed it would be "unfair" to deprive students of the instruction they might need to do well on such tests, even while she argued that the tests do not necessarily measure one's capacity for understanding. "If they don't have a serious attitude about tests," she said, "they're never going to make it in college."

They have to have some respect for this information because it's controlling where they are going to go in life. I realize that society is not going to change before they get out of my classroom, and I don't want to put my burdens on the kids. You have to respect these tests, as I do, because I had to take them too. It's a ticket for the next place you want to go." Because Rita had not resolved her own feelings about the value of the sort of knowledge represented by scores on standardized tests, she had been in an effective position to use herself to mediate the conflict between conventional knowledge and individual understanding in the situation with Kevin and Linda. Her personal conflict about the value of standardized knowledge was a resource she drew upon in order to do her work in this classroom situation.

As the person responsible for settling disputes among her students about who is right, Rita represented the possibility of bringing these potentially contradictory ways of knowing together in the public arena of the classroom. Rather than siding with Kevin or Linda, she told them they were both right. She improvised. "I finally said to Kevin and Linda that they were both right. And I left it at that, and I let them handle it from there. (But I was kind of listening to what they would do.) Linda understood exactly what she was trying to get across. Kevin understood it also. But they understood on two different planes. I understood on a third one. I don't think there was any need for clarification, but there was a need for them to know they were both right."

Rita made no stark choices. She did not throw out the textbook and tell Kevin and Linda it didn't matter, nor did she tell Linda that she was wrong because she did not conform to the book's expectation. She accepted both of their answers on "two different planes" while putting herself on a "third plane," where she could value both Kevin's standards and Linda's divergence from them.

#### *Coping Rather Than Solving.*

Rita constructed a way to manage the tension between individual understanding and public knowledge without resolving it. Since she had some authority as the teacher in this situation, Kevin and Linda took her judgment seriously, even though it was ambiguous. Both of them came out with a different, more complex view of knowledge. Kevin was told that the answer in the teacher's guide is not the only right answer in the public setting of the classroom, while Linda was told that the textbook answer has validity even though she sees things differently. Rita managed to deflect the vehement competition between these two students by issuing a more complex set of rules for judging one another's answers.

In my math class, I made it more difficult to draw the line between teaching that favored girls and teaching that favored boys. By muddying the waters with small-group instruction, I pushed the social conflicts that this dichotomy suggested further into the background. Rita did a similar thing in the area of instruction when she said Kevin and Linda were both right. She confused their ability to judge one another's knowledge and thereby mediated the conflict between them. As in my situation, she did not eliminate the original conflict; rather, she avoided it so as to avoid additional conflicts. This way of submerging the conflict below an improvised, workable, but superficial resolution is, of course, quite different from what many cognitive psychologists or curriculum experts would advocate.

### Images of Teachers' Work and Their Implications for Improving It

These two stories portray the teacher as an active negotiator, a broker of sorts, balancing a variety of interests that need to be satisfied in classrooms. The teacher in each story initiates actions as solutions to particular environmental problems and defines herself as the locus of various alternative perspectives on those actions. Conflicts among these perspectives arise in the teacher both presently within the classroom and in the way she interprets her own past experience. In order to do her job, the dilemma-managing teacher calls upon this conflicted "self" as a tool of her trade, building a working identity that is constructively ambiguous. While she works at solving society's problems and scholars' problems, she also works at coping with her own internal conflicts. She debates with herself about what to do, and instead of screening out responsibilities that contradict one another, she acknowledges them, embraces the conflict, and finds a way to manage.

What does this image of the teacher as a dilemma manager suggest about the nature of teachers' work and how to improve it? Images of teaching frame our construction of the tasks teachers perform; our sense of the work involved in successfully accomplishing these tasks forms the basis for designing improvements. Whether the actions of the two teachers I have described here should be thought of as typical strategies or be promoted as expedient practices will remain open to question. These stories are intended only to illustrate an image of teachers' work which can help us think about the nature of classroom practice. In order to learn something from the image about how to improve practice, it is necessary to compare it with other images of teachers in the literature and to examine the influence these images have had on the kind of help we give teachers when they face classroom problems.

Most commonly, *teachers are assumed to make choices among dichotomous alternatives*: to promote equality *or* excellence; to build curriculum around children's interests *or* around subject matter; to foster independence and creativity *or* maintain standards and expect everyone to meet them.<sup>17</sup> These choices are thought to enable teachers to avoid dilemmas in their everyday practice. An example of this perspective can be found in the way Mary Haywood Metz analyzed the manner in which a group of teachers responded to the work tensions produced by the desegregation of their schools.<sup>18</sup> Metz defined keeping classroom order and promoting student learning as "contradictory imperatives" for teachers and concluded that those she observed could not both maintain standards of behavior in the classroom and nurture students' commitment to learning; instead, they divided themselves into opposing camps. Part of the work of these teachers, in this view, was to figure out whether classroom order or students' commitment was more important to their success as teachers, and then to choose between them. Thus it would seem appropriate that help from outsiders appear in the form of arguments to teachers about why they should pay more attention either to classroom order or to student commitment. Much preservice and inservice teacher education today takes this form. Professors and staff developers use evidence from research, rationales drawn from

<sup>17</sup> See, for example, Gracey, *Curriculum or Craftsmanship*; Jackson, "The Way Teachers Think"; Bidwell, "The School as a Formal Organization"; and Spindler, "Education in a Transforming American Culture."

<sup>18</sup> Metz, *Classrooms and Corridors*.

educational philosophy, or personal charisma to convince teachers that one approach is better than its opposite.

Another view of pedagogical work is illustrated by Gertrude McPherson's picture of the "small town" teacher.<sup>19</sup> She describes teachers' conflicts entirely in terms of contradictory external pressures. In this image, *the teacher is a person besieged by other people's expectations*. She cannot teach because of the need to defend herself against the inconsistencies in what students, administrators, colleagues, parents, and public officials expect her to do. Managing conflict is part of the teacher's job, in this view, but it is seen as a source of "unhappiness and frustration" rather than as a means by which the teacher defines herself. McPherson's view carries with it a sense of what must be done to improve teaching practice: there is very little worthwhile work that can be accomplished by the teacher "as long as the goals of our educational system are unclearly defined, . . . internally inconsistent, [and] inconsistent with dominant and often themselves inconsistent values in our larger society."<sup>20</sup> The more current literature on teacher stress takes a similar view: unless the goals of the teacher's job are redefined, the only positive steps a practitioner can take to reduce the harmful effects of the tension produced by conflicting expectations are engaging in regular physical exercise and maintaining a healthy diet.<sup>21</sup> These attitudes toward teaching regard the contradictions in teaching as problems to be solved by altering the way education is organized and conceptualized by society. In this view, society needs to become more consistent about its own goals and what it expects of teachers, and, thus, conflict will be eliminated.

Yet another way of portraying teaching, one which might be thought of as a response to this abstract hope for unified goals, arises out of the work of social science researchers and government policymakers. These problem-solvers have teamed up to find ways to help teachers increase student achievement. They turn away from conflicts that might arise in the classroom and assume that *the teacher is a technical-production manager* who has the responsibility for monitoring the efficiency with which learning is being accomplished. In this view, teaching can be improved if practitioners use researchers' knowledge to solve classroom problems.<sup>22</sup> The teacher's work is to find out what researchers and policymakers say should be done with or to students and then to do it. How much time should be spent on direct instruction versus seatwork? How many new words should be in stories children are required to read? If the teacher does what she is told, students will learn. Taking this perspective suggests that practical conflicts can be avoided if researchers' solutions are correctly implemented by teachers.

Some educational scholars reject this image of the teacher as a "black box"

<sup>19</sup> McPherson, *Small Town Teacher* (Cambridge: Harvard University Press, 1972).

<sup>20</sup> McPherson, *Small Town Teacher*, p. 215.

<sup>21</sup> Kathleen V. Hoover-Dempsey and Earline D. Kendell, "Stress and Coping in Teaching: An Integrative Review of the Literature," paper presented at the annual meeting of the American Educational Research Association, New Orleans, 25 April 1984.

<sup>22</sup> See, for example, Nathaniel L. Gage, "An Analytic Approach to Research on Instructional Methods," in *The Social Psychology of Teaching*, ed. Arnold Morrison and Donald McIntyre (Hammondsworth, Eng.: Penguin Books, 1972); Robert E. Slavin, "Component Building: A Strategy for Research-Based Instructional Improvement," *Elementary School Journal*, 84 (1984), 255-269; John D. McNeil, "A Scientific Approach to Supervision"; and Jere Brophy and Thomas Good, *Teacher-Student Relationships: Causes and Consequences* (New York: Holt, Rinehart, and Winston, 1974).

through which researchers' knowledge passes into the classroom.<sup>23</sup> In their view, *the teacher has an active role in deciding how to teach*; she makes decisions by putting research findings together with the information available in the classroom environment to make choices about what process will produce the desired objectives. Because cognitive information processing has been used as the model in these studies of teacher decision making, however, a "decision" is seen only as a process of mathematically ordering one's choices on the basis of unequally weighted alternatives.<sup>24</sup> At each point in the thinking process, the decider is assumed to see clearly which of two alternative routes is preferred to reach a given goal.<sup>25</sup> Therefore, improving teaching involves simplifying alternatives by screening out contradictory concerns so that any reasonable person would make the same correct choice using the same information. The process is mechanical, not personal; it is the sort of thinking one can imagine would be done better by unbiased machines than by people.<sup>26</sup> This theory, therefore, cannot help teachers to figure out what to do about the sort of unsolvable conflicts in their work that I have described.<sup>27</sup>

These images of teachers—as cognitive information processors, as implementers of researchers' knowledge about how to produce learning, as stressed and neurotically defensive, and as members of opposing camps—portray the conflicts in teaching as resolvable in one way or another. In contrast, the image of the teacher as dilemma manager accepts conflict as a continuing condition with which persons can learn to cope. This latter view does not replace the idea that the teacher plays conflicting roles in society, or the idea that it is useful to note patterns in the relationship between behaviors and their outcomes in order to make productive decisions; but it puts the teacher in a different problem-solving relationship to the social conflicts and behavioral patterns in her work. It suggests that, in addition to defending against and choosing among conflicting expectations, she might also welcome their power to influence her working identity. The major difference, then, between the image of the teacher as dilemma manager and the other images I have described is that the dilemma manager accepts conflict as endemic and even useful to her work rather than seeing it as a burden that needs to be eliminated.

There are, of course, many incentives for teachers and scholars to want to eliminate conflict and to think of classroom problems as solvable. If pedagogical problems could be separated one from another rather than entangled in a web of contradictory goals, then they could be solved in some sort of linear progression—shot

<sup>23</sup> Hilda Borko, Richard Cone, Nancy Russo, and Richard J. Shavelson, "Teachers' Decision Making," in *Research on Teaching: Concepts, Findings and Implications*, ed. Penelope L. Peterson and Herbert T. Walberg (Berkeley, CA: McCutcheon, 1979).

<sup>24</sup> See Shavelson, "Teachers' Decision Making" in Gage, *Psychology of Teaching Methods*; Eggleston, *Teacher Decision Making in the Classroom*; and Clark and Yinger, "Research on Teacher Thinking."

<sup>25</sup> This model is outlined in Clark and Peterson, "Teacher's Thought Processes," pp. 63–69.

<sup>26</sup> The problems with mechanical information processing as the ideal model for describing human decision making in situations fraught with conflict have been cogently outlined in David Braybrooke and Charles Lindblom, *A Strategy of Decision: Policy Evaluation as a Social Process* (New York: Free Press, 1963), pp. 246–247. More recently, Joseph Weizenbaum has argued against assuming that human judgment is comparable to even the most sophisticated computers, in *Computer Power and Human Reason: From Judgment to Calculation* (San Francisco: Freeman, 1976).

<sup>27</sup> Richard Shavelson and Paula Stern, "Research on Teachers' Pedagogical Thoughts, Judgments, Decisions, and Behavior," *Review of Educational Research*, 51 (1981), 471.

down like ducks coming up in a row at a penny arcade. Thinking of one's job as figuring out how to live with a web of related problems that cannot be solved seems like an admission of weakness. Sorting out problems and finding solutions that will make them go away is certainly a more highly valued endeavor in our society. Strategies which merely enable us to "cope" or "manage" go against our deep-seated hopes for making progress by gaining control over our interactions with one another. Many people—including teachers—believe that if only scholarship in psychology and the social sciences could come up to the levels achieved by the natural sciences, and if only, with the help of technology, individuals could achieve the ideal of control over the environment represented in such scholarship, then everyone could live happily ever after. The work of managing dilemmas, in contrast, requires admitting some essential limitations on our control over human problems. It suggests that some conflicts cannot be resolved and that the challenge is to find ways to keep them from erupting into more disruptive confrontations.

This connection of limitation with dilemma management needs to be clarified, because we have come to identify classroom management with the teacher's ability to control students' behavior and direct them in learning tasks. This common usage most closely parallels the nonschool definition of a manager as a person who controls or directs the affairs of others. Such control is certainly an essential part of the teacher's job. I use the term "manage" in a different sense, however. To manage to do something can also mean to contrive to do it, implying that the capacity for invention or improvisation is a necessary part of the manager's repertoire. This usage suggests that a manager is one who is able to find a way to do something and that action and invention are fused together in the management process. We might also think of people as managing when they are able to continue to act or even to thrive in adverse circumstances. The teacher's work involves just this sort of invention and action in situations where potential adversity makes solving some kinds of problems inadvisable.

In order to do the work of teaching, as I have portrayed it, one needs to have the resources to cope with equally weighted alternatives when it is not appropriate to express a preference between them. One needs to be able to take advice from researchers but also to know what to do when that advice is contradictory, or when it contradicts knowledge that can only be gained in a particular context. One needs to hold at bay the conflicting expectations of those who have the power to determine whether one can succeed as a teacher or not and at the same time use those expectations as references in self-definition. One can be committed to a particular ideology or its opposite while recognizing the limitations of taking any single-minded view of such complicated processes as teaching and learning in schools. One needs to be comfortable with a self that is complicated and sometimes inconsistent.

Perhaps it is our society's belief in the existence of a solution for every problem that has kept any significant discussion of the teacher's unsolvable problems out of both scholarly and professional conversations about the work of teaching. But there may be other explanations as well. It may be that many teachers are able to carry on with their work as if there were no conflicts in what they are expected to do, or that there are in fact no conflicts in the way they define their jobs. It also may be the case that the sorts of people who become teachers and stay in teaching

do not have the intellectual capacity to recognize the complications in the work that I have described.<sup>28</sup> These possibilities certainly deserve our attention.

But if dilemma managing is a significant part of the work of teaching, there are several questions that deserve further examination. First, there are questions about *frequency*. I have argued only that it is possible for teachers to work in ways that suggest that some classroom problems are better managed than solved. How much of a role does this sort of work play in what teachers do? How often do dilemmas of the sort I have described arise in classrooms? How often are they “managed” rather than “resolved”? What are the characteristics of teachers who do more dilemma managing than others? What are the characteristics of classrooms in which dilemma management is common?

A second category of questions can be grouped around understanding and evaluating what teachers actually do when they manage dilemmas. My emphasis in this essay has not been on the particular strategies used by the teachers but on the more general elements of the work involved. What different kinds of *strategies* are used in classrooms to cope with unsolvable problems? How could they usefully be grouped? Are there better and worse ways of keeping classroom conflict under the surface? How do the strategies teachers use compare with those used by other professionals who face dilemmas?

We also need to know more about what kind of *resources* teachers have available to cope with contradictions within themselves and in their work. How do they learn to cope, or that it is an appropriate thing to do? What characteristics of their working environment make dilemma managing more or less possible? How can teachers who have trouble coping with conflict get better at it? What role do supervisors, formal course work, other life experiences, and colleagues play in the development of the teacher’s capacity for actively tolerating ambiguity? How are the personal resources required to manage pedagogical dilemmas related to the skills that researchers and policymakers use to address educational problems or the knowledge that scholars use to analyze the tensions in the work of teaching? What resources besides skill and knowledge might teachers bring to this aspect of their work?

Our understanding of the work of teaching might be enhanced if we explored what teachers do when they choose to endure and make use of conflict. Such understanding will be difficult to acquire if we approach all of the problems in teaching as if they are solvable, and if we assume that what is needed to solve them is knowledge that can be produced outside the classroom. In order to pursue the questions I have listed here, we shall need to adopt an image of teaching which takes account of the possibility that the teacher herself is a resource in managing the problems of educational practice.

<sup>28</sup> Jackson proposes this possibility in *Life in Classrooms*, pp. 144–148.