

Preface

My original plan was to become a biologist, and so I focused on biology during my undergraduate years. Ecology interested me the most. My first postcollege job, however, was to teach 36 students in an eight-grade, one-room rural school. Since I also drove the bus, I was continuously with my age 6 through 14 students from the first pickup at 7:30 a.m. to the final drop-off at 4:00 p.m. The concept of a substitute teacher (let alone of an aide or custodian) didn't exist.

Overwhelmed, I came to peace with my situation by viewing it ecologically. I became fascinated by the related notions of a classroom as an ecological system of checks and balances and by a management focus on the logical consequences of behavior (rather than on punishment, the focus of my own schooling). I began a graduate program during my 9 years as an elementary teacher, but I veered from biology into education. Still, I increasingly focused on such biologically related educational issues as learning and behaving and on such ecological issues as space-time relationships and the distribution of power and resources in school. My doctoral dissertation focused on classroom management, a key ecological concept in education. Biological research focuses on organisms and their behavior, so I sought to discover how students view their own behavior—their view of what they do that annoys teachers, how teachers respond to such annoyances, and how fair and effective students consider teachers to be.

I discovered that even young students are keen observers of their situation. Well, why not? Their well-being during the school day depends on it. Most know more about their teachers than their teachers know about them because they only have to observe one teacher, while the teacher's observations are spread out among the entire class. I discovered that students consider fairness (the

viii A BIOLOGICAL BRAIN IN A CULTURAL CLASSROOM

ecologically equitable distribution of authority, effort, and resources) to be a critically important component of school life.

I translated my dissertation research and management beliefs into two professional books early in my college teaching career. I then continued my interest in classroom management through journal articles and a graduate seminar I regularly taught for more than 25 years. Our understanding of stress (and its effect on behavior and misbehavior) and of the brain systems that trigger stress and process cognition increased dramatically during this period, and so my focus on the biological and ecological substrate of educational policy and practice intensified.

I also always spent a lot of time in schools—working with practicum students, observing student behavior. Most student projects in my classroom management seminar gathered and analyzed behavioral and opinion data from students (generally their own). These informal investigations solidified my belief that K–12 students know and feel more about classroom management issues than we often realize and that the worst-behaved students (from the teacher’s perspective) often have the most astute opinions about what’s going on. K–12 students may be right or wrong, informed or uninformed, but it’s foolish for educators to be ignorant of and/or to ignore what students believe. If for no other reason, they outnumber us.

We’ve always used extrinsic rewards and punishments to prop up adult control of formal education, and we currently seem obsessed with the biologically quaint notion that we can precisely measure all the important forms of student learning and achievement—and in an increasingly competitive school environment, to boot. Furthermore, we’re not of one mind about what the schools should teach.

I thus thought it might be a worthy enterprise at this point in my career to revisit what I focused on first in my career, to see if the recent biological discoveries and my professional experiences have anything helpful to say to the current and continuing dilemma about how best to manage formal education in a democratic society. That was the original impetus for this book.

In partial preparation, I reread my dissertation and my first two books—for the first time in decades. I was so proud of them when I wrote them, and I’m so thankful now that they’re out of print. Still, the basic biological and ecological beliefs that began my professional and writing career continue to beat strongly within me: (1) students should learn how their own biological systems function (and

especially their cognitive systems), now that that knowledge and its relationship to behavior is becoming available; (2) students should collaborate in classroom management decisions as much as possible; and (3) it's difficult at best to separate classroom management from instruction.

In a complex democratic society, participation means that a student's views will sometimes prevail and sometimes not, but students at least ought to have an opportunity to participate in decisions that affect them if they're old enough to attend school. How else could they develop the requisite participation skills needed by citizens in a democratic society? This book will explore the key dimensions of these beliefs and suggest how educators might collaboratively involve students in the search for and the direction of their own education.

I wrote the preface to the first edition of this book on the day after Labor Day in 1999. On that day 50 years earlier, I drove the bus and taught my 36 students for the first time. I'm revising the preface for this second edition on September 11, 2002—a year to the day after the World Trade Center bombing. Folks were optimistic in 1949 (4 years after World War II) that perhaps the world had tired of war, and geopolitical misbehavior would wane. It hasn't turned out that way, and we're now all apprehensive about the future. Educators can't control world events, but we can demonstrate the value of collaborative management and of supportive social interaction. And if enough of us successfully focus on these issues, perhaps the next generation will effect what past generations were unable to do. What else can educators do but teach and hope?

For me, it's been a long and satisfying trip from bus to word processor, from behaviorism to cognitive neuroscience—and I have many folks to thank: (1) the research biologists who are actually doing what I originally set out to do and who now are dramatically expanding our understanding of our brain, body, and culture; (2) the thousands of students from ages 6 to 60+ who told me much about themselves—and much about me that I hadn't realized; (3) the many fine editors and colleagues who helped me to find my own explanatory and interpretive voice; and (4) most important, my very loving and supportive wife and children and grandchildren who helped me to find, live, and enjoy my own life.