2010

Reflections on teaching: dwelling in a third space

Sean William Buckreis
Louisiana State University and Agricultural and Mechanical College, sbuckr1@lsu.edu

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REFLECTIONS ON TEACHING: DWELLING IN A THIRD SPACE

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Philosophy

In

The Department of Educational Theory, Policy, and Practice

by

Sean William Buckreis
B. S., Northern Arizona University, 1992
M. A., Louisiana State University, 2006
May 2010
DEDICATION

To my parents, Bill and Marie Buckreis.
Without your love and support, none of this would have been possible.
Acknowledgements

Writing a dissertation can be an exhilarating as well as a maddening process. It is not possible without the spiritual, emotional, and intellectual support of numerous people. As I write these acknowledgements, I realize the impossibility of including all of those who have influenced me on this journey. To all of those unnamed students, teachers, friends, and colleagues who have played important yet unsung roles, thank you.

I wish to express my utmost gratitude to my parents. Their love, guidance, and never-ending support have nourished me throughout my journeys. Though we may live apart, wherever they are is home.

It was through a chance meeting with Elaine Riley-Taylor in Northern Arizona that I heard about the influential work being done in the Curriculum Theory Project at LSU. Without that fortuitous encounter, none of this would have been possible. I am constantly astonished by the rich, stimulating environment that has been created by members of the CTP. I would like to thank those who were on my committee as well as other faculty members who have nurtured me through this process. It was Denise Egéa-Kuehne, the co-chair of my committee, who stimulated my interests in continental philosophy. It is because of her mentorship that the work of Jacques Derrida and Michel Serres figures so prominently in my dissertation. M. Jayne Fleener, David Kirshner, and William Pinar have each shared their unique perspectives and strengthened my scholarship with their penetrating analyses and detailed critiques. Donna Trueit has been invaluable with her insightful comments, careful editing, and warm friendship.

Special thanks goes to my LSU family, especially Bruce Parker, Nicholas Ng-A-Fook, Sarah Smitherman Pratt, Laura Jewett, Molly Quinn, Hillary Procknow, and Jie Yu. Some of my most prized memories of grad school are when we shared our intellectual struggles, traveled to
conferences, and discussed life over happy hours. I am lucky to have such a wonderful group of people in my life. Additionally, I want to express my heartfelt gratitude to Chelsea Buras for keeping me sane through the daily ups and downs of writing a dissertation. She was always there for emotional support and a caring word.

Lastly, I would like to thank William Doll. It is difficult to articulate the influence he has had in my life over these last seven years. Bill’s generosity of spirit knows no bounds. Without his guidance, patience, and friendship this dissertation would not be.
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Abstract

What does it mean to teach well? What does it mean to be a good teacher? These are questions that have been asked for hundreds if not thousands of years; yet, an unequivocal answer has not been reached. Drawing on Thomas Kuhn’s (1962/1996) concept of a paradigm, it is easy to see that the field of curriculum is anything but paradigmatic. Competing philosophical, psychological, and sociological schools of thought, for example, all support differing ideas of what “good teaching” looks like, and teacher education programs often reflect this diversity of thought. The situation does not end at the borders of campuses, either. Not only must teachers aspire to live up to their own ever-evolving ideas of what it means to be a good teacher, but they must also grapple with often differing conceptions of what good teaching means to their coworkers, their school’s administration, their students, their students’ parents, and others.

This dissertation is a meditation on my experiences of teaching and being taught—it is about being caught between conflicting and sometimes incommensurable ideas about what it means to teach well and how teachers can find a space to work productively and sanely in the tensions that abound. It has both personal and communal aspects and fluctuates between the subjective and social. On the one hand, it is a way to work through curricular issues I have faced as well as a way to help me think about issues I encounter in daily life. On the other hand, it is a way to share some of my experiences and insights with those in the field of education and to engage with them in a conversation about teaching. While this dissertation focuses on a recursive analysis of my teaching-learning experiences over three decades, it also attempts more. It endeavors to place those experiences within a larger social and cultural frame. In this manner, I hope a deeper understanding of what each reader—teacher educator or practitioner in the field—believes constitutes “good teaching” may emerge.
Chapter 1

What Does It Mean to Be a Good Teacher?

Introduction

Teaching is tough—especially for new teachers. A survey conducted by The National Center for Education Statistics shows that teacher attrition in the United States nearly doubled between 1988-89 and 2003-04 (Planty, Hussar, Snyder, Provasnik, Kena, Dinkes, KewalRamani, & Kemp, 2008). Additionally, Richard Ingersoll’s (2003) research has shown that approximately a third of the teachers leave the profession in their first three years; by their fifth year almost half have left (p. 16). Obviously, many and various reasons for attrition exist, but one significant factor is the number of competing and sometimes incommensurable demands constantly heaped on teachers. Not only must they aspire to live up to their own ever-evolving ideas of what it means to be a good teacher, but they must also grapple with often differing conceptions of what good teaching means to their coworkers, their school’s administration, their students, their students’ parents, and others.

What does it mean to teach well? What does it mean to be a good teacher? These are questions that have been asked for hundreds if not thousands of years; yet, an unequivocal answer has not been reached. Drawing on Thomas Kuhn’s (1962/1996) concept of a paradigm, it is easy to see that the field of curriculum is anything but paradigmatic. Competing philosophical, psychological, and sociological schools of thought, for example, all support differing ideas of what “good teaching” looks like and teacher education programs often reflect this diversity of thought. Pre-service teachers can get caught between warring ideas about teaching and this can continue when they graduate and start to teach on their own.
This dissertation is a meditation on my experiences of teaching and being taught—it is about being caught between conflicting and sometimes incommensurable ideas about what it means to teach well and how teachers can find a space to work productively and sanely in the tensions that abound. It has both personal and communal aspects and fluctuates between the subjective and social. On the one hand, it is a way to work through curricular issues I have faced as well as a way to help me think about issues I encounter in daily life. On the other hand, it is a way to share some of my experiences and insights with those in the field of education and to engage with them in a conversation about teaching. While this dissertation focuses on a recursive analysis of my teaching-learning experiences over three decades, it also attempts more. It endeavors to place those experiences within a larger social and cultural frame. In this manner, I hope a deeper understanding of what each reader—teacher educator or practitioner in the field—believes constitutes “good teaching” may emerge. The methodology I will use to present this frame is eclectic, combining reflective autobiography with situational analysis, both embedded in a social/cultural milieu. All this seems natural to me, born of parents who were for decades public school teachers and, now retired, have entered into teacher education at the college level.

In 2002 I began the doctoral program at Louisiana State University, a major research university located in the Deep South of the United States, and started teaching courses as the instructor of record soon after. In the ensuing years I have taught over twenty courses. These years have been a time of growth for me, not only as a student but also as a teacher. Teaching and taking courses at the same time has allowed me to intricately tie together practice and theory. Often something I read or discuss with my professors directly influences changes I make in the courses I am teaching; conversely, experiences I have in the courses I am teaching influence my readings of theory or the conversations I have with professors. Graduate school has been a place
where I can not only work through my ideas on education, but also where I have been exposed to other viewpoints and constantly challenged to suspend the belief that any one viewpoint is the best. As the years have passed I have become much more comfortable in my role teaching at the university. I still struggle, however, with curricular issues, the way I believe any reflective practitioner should. I see this “struggle” as a choice, a responsibility, and as an almost therapeutic way to deal with the aforementioned conflicting ideas about teaching. Based on my experiences, my reflections, and synthesis of the theoretical perspectives, I offer in and through this narrative a way to move beyond the “one best way” approach to teaching.

In this chapter I reflect not only on my varied, multicultural educational experiences as an elementary, middle school, and university teacher, but also on formative events from my childhood that helped shape who I was when I finally did become a teacher. In reflecting on these past experiences I search for threads of meaning to come to a better understanding of my experiences. As John Dewey (1922/1988) wrote, “conflict is the gadfly of thought” (p. 207), and it is the struggles and conflict I have had throughout my life that incite my thinking. What I come to better understand is that whether as a teacher or as a student, most of the curricular issues with which I have struggled revolve around the interwoven conceptions of control and comfort with ambiguity that play themselves out in the classroom.

In her ethnographic study of learning to teach, Deborah Britzman (2003) writes that three cultural myths are endemic to teaching in the United States: “everything depends upon the teacher, teachers are self made, and teachers are experts” (p. 7). Control and ambiguity play a role in each of these three myths. The myths, according to Britzman, “situates the teacher’s individuality as the problem and proffer a static solution of authority, control, mastery, and certainty as the proper position. They seem to explain competency as the absence of conflict” (p.
Although too much conflict in the classroom can be harmful, it cannot be erased. Not only would the effort to erase it require draconian measures, leading to conflict itself, but without conflict, learning would be limited (I write about this issue in more depth in chapter five). Unfortunately, some teachers and administrators seek to insulate themselves from the complexity of education with a reliance on controlling methodologies. Too often those methods become inflexible and uncompromising, and other ways of thinking about education become marginalized. Michel Serres (1991/1997) notes the problematic nature of this hegemonic relationship. He writes, “As judicious as an idea might be, it becomes atrocious when it reigns alone” (p. 122; emphasis added).

As I write this chapter I seek autobiographically to set the stage for the subsequent chapters in which I call for new ideas about teaching. Serres’s aphorism about possibilities arising when one is fearful of a unitary solution forms a cornerstone of this dissertation in which I develop the idea of teaching in a third space as a means of dealing with control and ambiguity. I suggest that the pressures and demands placed on teachers can be effectively reduced by learning to teach in a third space.

My Story Begins

In the following stories I pull through threads of my experiences of racism, self and other, control and resistance, and cultural diversity which inform my understanding of good teaching. The story of my experiences with teaching begins with my birth in Michigan in 1968. As the only child of parents who were both public school teachers, in many ways my life revolved around school. Before my birth my mother was a fourth grade teacher. She stopped teaching for a while after I was born, but soon started back and has taught every grade level except eleventh. Altogether, she taught for thirty-sixth years in public schools before retiring. My father was a
high school mathematics teacher and coach for years before going into administration as the
director of curriculum for mathematics in several school districts. Even when he was an
administrator, however, he still taught high school mathematics classes. In 1999 he finished his
Ph.D. in Mathematics Education and started teaching at the university level. He is currently the
Department Chair of a college in the Northeast. As one might expect with parents such as these,
stories about teaching were common in my household and part of my everyday life. Teachers and
administrators from schools I attended were often family friends and this, too, afforded me a
unique look into life as a teacher.

While growing up we moved quite a bit and by the time I graduated from high school I
had attended schools in seven states. From a suburban city on the outskirts of Baltimore,
Maryland to a ranching and farming town in Idaho within sight of the Continental Divide; from
the physical isolation of a windswept island in Alaska in the middle of the Bering Sea to the sun-
soaked desert city of Las Vegas and a school located less than a mile from the strip, my
educational experiences have been nothing if not varied. By my 35th birthday I had lived in 11
states in the United States and three prefectures in Japan. Perhaps the most important aspects of
living in so many places were my experiences with a wide variety of people. Each move allowed
and sometimes even forced me to reexamine my understanding of fundamental concepts such as
race, class, culture, and identity. Moving as much as I have, I am used to feeling like an outsider.
In hindsight, growing up as a straight, white, middle-class man who was a good athlete, it was
valuable for me to feel like an outsider. I wanted to fit in and be accepted in the places I lived,
but it did not take long for me to understand that “fitting in” depended on context. Yes, there
were shared features and commonalities between and among circumstances, but I realized early
on that the search for a “universal” way of acting that would work in all situations was futile. It
was never about “remaking myself” in order to be accepted, it was about coming to appreciate contextualized ways of acting (which I could then choose and accept). For all of the difficulty involved, it empowered facets of my personality to shine through that might never have had the chance otherwise and kindled new interests. It was through this interplay of ideas that I have come to better understand myself and what is important to me. Former ways of knowing are never abandoned to the new, but rather, constantly thrown back into the mix in a recursive, non-linear way. These unique experiences often come back to inform my teaching and studying.

If there is one thing my experiences have taught me it is the danger of ideas that are inflexible and un-evolving. In the following sections I examine experiences that have helped me come to this conclusion. The first of the two chronicle experiences related to identity, specifically the issue of self and other. In the second of the two, I recount stories revolving about methods of teaching and how sometimes teachers cling dogmatically to certain methods without considering alternatives.

**Issues of Self and Other**

Perhaps the most influential experience of my childhood was when I lived on the Pribilof Islands in Alaska during my seventh and eighth grade years. The Pribilofs are a group of four islands located in the Bering Sea and they remain the home of the largest Aleut Indian community in the world (Corbett & Swibold, 2000). Considering they are nearly 200 miles north of the Aleutian Islands, over 200 miles from mainland Alaska, and only 500 miles from Siberia, I think the word “isolated” is perhaps the best way to describe them. St. Paul Island is both the largest and, with 532 people, the most populous. First brought to the islands to hunt Northern Pacific fur seals in the mid-1700s by Russian trading companies, the Aleut Indians of the Pribilofs have a long history of oppression that did not end when the United States purchased
Alaska from the Russians in 1867. Much like in the Indian Boarding Schools of the lower 48, the government tried to “Americanize” the Aleuts by making them give up their language and customs.¹ Their place as second class citizens was cemented during the Second World War when the Japanese attacked and occupied Kiska and Attu, the islands farthest west on the Aleutian Chain. Under the banner of national security, armed forces commandeered the Pribilofs and inhabitants were interned in decrepit fish canneries in southeastern Alaska until the end of the war. Due to the appalling conditions many died. Although the U.S. government eventually paid reparations, hard feelings and distrust was still evident when I lived there from 1980 to 1983. In many ways, the history of the Pribilof Aleuts created a self perpetuating cycle from which it was hard to break away.

During the time I spent in St. Paul there were never more than a handful of non-Aleut students in the school, and most of them were the children of teachers or administrators (who without exception were non-Aleut when I was there). It was my first time as a minority² and it was profoundly influential. The teachers of St. Paul ran the gambit from those who were innovative, empowering, and caring to those who were set in their ways and unwilling to question the racial inequality that existed. Some, like my parents, had the benefit of working in other culturally diverse schools and were able to see not only the uniqueness of the students but also the ways in which the Aleut students were the same as students from the other places where

¹ The Carlisle Indian Industrial School of Carlisle, Pennsylvania is perhaps the most infamous of the Indian Boarding Schools. Captain Richard Henry Pratt, a veteran cavalry officer of the Western Indian Campaigns, founded the school in 1879 and it soon became a model on which other schools were based. Its motto, “from Savagery into Civilization,” (Wilson, 2000, p. 316) hints at the cultural genocide that took place. Unfortunately, due to his position Pratt exerted a substantial influence on federal Indian policy in the late 1800s and early 1900s. He notoriously remarked: “A great general has said that the only good Indian is a dead one. . . . I agree with the sentiment, but only in this: that all the Indian there is in the race should be dead. Kill the Indian in him, and save the man” (Pratt, 1892, p. 46).
² Although I was one of only a few non-Aleut students, the power structure of the school was dominated by the non-Aleut teachers and administrators so my experience being a minority was atypical.
they had taught; others saw only difference and could not imagine it otherwise. To top it off, due to the extreme isolation of the Pribilofs, few teachers stayed for more than a couple of years.

Although it was much less intense, some of the legacy from the boarding school mentality still permeated the school. Some teachers harbored preconceived notions of what the children could do based solely on their race. Those teachers simply did not think that the Aleut children could learn to the same extent as White children and argued that vocational training would better serve them. Success was defined in terms of the world outside of the island and few teachers questioned the commonplace assumption that if you follow the prescribed path it will lead you to success. Part of that prescribed path included emulating the (White) teachers who could exist comfortably in the outside world, rather than the adults of the community who, for the most part, could not. At the time, most Aleut men on the island worked only in the summer for the seal harvest (now outlawed); alcohol and drug problems were rampant. It was a dreadful legacy of their past oppression that viciously reproduces itself and sadly, many of my close childhood friends have become caught in that cycle. Those men and women who went off the island and were successful rarely came back for more than a visit. When they did it always seemed to me that they were anxious to get back to “civilization.” Like most of the teachers, those who transitioned to the outside world seldom attempted to live with a foot planted in each culture—to embrace both simultaneously.³

³ Born on the Spokane Indian Reservation in Eastern Washington, Sherman Alexie often writes about issues of identity, socioeconomic class, and race relations. His novel, The Absolutely True Story of a Part-Time Indian, won the 2007 National Book Award for young people’s literature. In it, Alexie writes about Junior (a.k.a. Arnold) and the struggles Junior has as he seeks to carve out his own path in life. In ninth grade Junior decides to transfer to a school with higher level academics. The trouble is that he has to leave the reservation school and travel 22 miles each day to a neighboring farm town where the only other Indian is the school mascot. The community on the reservation simultaneously praises him for his courage and castigates him for his betrayal while his all-white classmates look at him as an outsider and novelty—Junior is caught between two worlds.
Moving back and forth across the country as a child allowed me to realize that the cultural idea of “Whiteness” means different things in different places to different people. Even though we might all have had the same skin color, the people on the island who were not Aleut had extremely diverse cultural identities. For all our similarities there were profound differences just under the surface that often went unrecognized. Likewise, despite the differences between those from off the island and those who had lived on the island all of their life, there were also profound similarities. When one ceases to think about Whiteness in monolithic terms, one begins to realize that the idea of “race” is much more fluid than was once imagined and that White people, too, are ethnic. This unsettles ideas about “us and them” to which a person might have been habituated to while growing up and causes issues of self and other take to on a whole new importance. This brings me to my next story. Realizing the fluidity of race along with the concomitant points of intersection and disjunction is unsettling. It does, however, hold the promise of going beyond fixed and static ideas of self and other.

For my senior year of high school I moved to Flagstaff, Arizona, a hub city on famous Route 66 close to the Grand Canyon. Flagstaff is situated close to both the Navajo and Hopi Indian reservations and many of those students come to Flagstaff and stay with relatives or in the reservation sponsored dorms so they can go to school in town. The diversity of Flagstaff showed in the demographics of my high school where over 20% of the students were Hispanic and over 30% were Native American. Long ago the Flagstaff School District realized that the diversity of the city was in no way mirrored by the public school teachers and made an effort to address the issue. This was helped along by grants obtained by Northern Arizona University’s College of Education specifically aimed at recruiting Native Americans into their teacher education program.
Over the years I came to know Lisa, one of the few Native Americans teaching at Thomas Elementary School. Lisa’s childhood was spent on the Hopi reservation but she went to high school in Flagstaff and stayed to attend Northern Arizona University for her undergraduate and master’s degrees. She is full-blooded Hopi, but she married a Caucasian and chose to teach in Flagstaff rather than on the reservation. During one of our many conversations she explained to me that in some ways she felt caught between worlds. “I am too Indian for the white people, but too white for the Indians,” she told me with a sigh. Lisa’s cultural heritage was important to her and she always made an effort to stay connected to her tribe and the customs they followed. She also had a connection to the world outside the reservation about which she was interested. I met Lisa on a trip home during the first year that I was living and teaching in Japan and I could empathize with her. By the time I moved back to the United States to start graduate school my empathy was even deeper. During the five-and-a-half years I lived in Japan and subsequent years back in the United States I, too, felt caught between worlds. No matter how good my Japanese became, no matter how much I understood the culture and customs, I would always be thought of as an outsider. It was not simply because of the way I looked, but also because of the way I thought. Conversely, the longer I stayed in Japan the more I felt out of touch in the United States. The opportunity to view the United States from another perspective opened my eyes and changed my thinking.

I reflect on the importance of intellectual flexibility when it comes to teaching in diverse classrooms as I work with my university students. In my first year living in the Deep South I realized that when discussing matters of race in class with my students, the default is Black/White. Although some Southern states have significant Latino/Hispanic, Asian, or Native American populations and the concomitant racial issues and inequalities, those problems have
rarely been discussed by my students. With the civil rights legacy of the South, this is hardly surprising. Slavery was a primary issue for the fledgling United States and it continued to be the “central and defining problem” (Ellis, 2000, p. 88) in American history until it culminated in the Civil War which pitted the North against the South. One does not have to look far to see that Black/White racial inequality continued not just after the Civil War, but remains commonplace today. Although all Americans are affected by the cultural inheritance of slavery, its legacy runs especially deep in the South.

My experiences of diversity while growing up have been multifarious, but living in the Deep South with the prominent Black/White stereotypes brought to class by my students has afforded me the opportunity to investigate racial issues in a way that I never had before. One of the first discrepancies I noticed when I began teaching at the university was the lack of diversity in the College of Education, especially in Elementary Education. It is not rare for me to teach an Elementary Education class without a single man enrolled nor is it rare to have two or fewer students of color per class (most classes I have taught have between 18-28 students). This is surprising considering that the racial makeup of the parish is 51% White, 45% Black or African American, 2% Asian, 2% Hispanic or Latino, and less than 1% Native American (U.S. Census Bureau, 2006). Most of the classes I teach at the university involve field experience components in which my students observe and/or participate in classes throughout the district. Over the course of the semester I visit local schools to observe my students and in doing so have come to know many of the schools well. Of the over 50,000 students in the parish public school system,

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4 It must be noted that to speak of the North and the South in such broad terms is problematic. Issues of prejudice and intolerance are in no way regional. Racial inequality and violence occurred in the North as well as the South and many of the rationalizations Northerners made for fighting the Civil War would hardly be considered altruistic. To further complicate matters, cases exist in which Southerners believed in and took a stand for the “certain inalienable rights” of those of African origin. (See Pinar, 2001 & 2004)
79% are Black or African American and 17% are White, with the remaining 4% divided between Asian and Hispanic. Over 75% of these students were on free or reduced lunch during the 2005-6 school year (Tang & Sable, 2009, p. A-21).

It does not matter if my students become teachers in public schools or private schools, it does not matter if they stay in the parish or move throughout the state, it might be to differing degrees, but they are all going to have to face issues of diversity in the classrooms in which they teach. As we discuss issues in class it often feels as if the “us and them” mentality many bring is difficult to disrupt. Many fall into the missionary trap of trying to “save” the other and are blind to the biased hierarchy it assumes. Part of my role as a teacher has been to expose my students to issues that have not been part of their life experiences, or at least not consciously reflected upon, and to get them to think about those issues in a rigorous, critical, and imaginative manner. They need to be open enough to imagine that things could be other. Hongyu Wang (2004) writes:

> the willingness and capacity of the self for relating to the other . . . in such a way that the other’s alterity is acknowledged through a loving relationship is necessary for initiating an educative process. In such an expansive process, one risks feeling uncomfortable even among the familiar, but it inaugurates the very possibility of education. (p. 8)

Being a teacher in a diverse classroom can be an unsettling experience, especially when one critically examines and (re)imagines difference.

**Method and Dogma**

Often conceptions of “good teaching” revolve around teaching methods and control of the learning environment. When Paulo Freire (1968/2003) writes about the “banking concept” he describes a “good teacher” as one who treats his or her students as passive receptacles for knowledge. “The more completely she fills the receptacles, the better a teacher she is” (p. 72).
Certain beliefs come into play with this method of teaching. For example, “the teacher knows everything,” “the teacher disciplines,” “the teacher chooses and enforces his choice,” “the teacher confuses the authority of knowledge with his or her own professional authority” (p. 73). Freire describes this as education for indoctrination. It is about the teacher imposing his or her way of thinking onto the students.

For Alfred North Whitehead (1954/2001), what is often held up as exemplar teaching is really “too good.” Too good teaching also treats the students as passive receptacles rather than active participants. He writes, “I have a horror of creative intelligence congealing into too-good teaching—static ideas . . . passive acceptance of polite learning, without any intention of doing anything about it” (p. 60). By focusing primarily on precise knowledge—skills, procedures, and facts—too-good teaching “dampens the students down” (p. 22). It fails to recognize a creative element in the sense-making process and by doing so “It can perpetuate a tradition and lose the spirit” (p. 43).

Fifth grade was the first time I was exposed to tracking. At the beginning of the semester everyone was given a mathematics test in order to determine their ability and students were broken up into four groups accordingly. I realized that I had been placed in the highest group when I noticed the other members. It did not take long before I became frustrated with the class. I can remember coming home and explaining to my mother that I was going to stop working hard. When questioned why, I described my irritations—“the harder and faster I work the more she makes me do,” I said with exasperation. It was not that I was adverse to hard work, it was just that my teacher believed “practice does not make perfect, perfect practice makes perfect.” So worksheets came one after the other, and the faster you worked the more you had to do. I caught on quickly in math classes and one worksheet was more than enough, I thought. My teacher took
what could have been an exciting, imaginative topic and turned it into an assembly line of facts and rote procedures. She did not appreciate the aesthetics of the mathematics nor did she think of mathematics as being inventive or imaginative. For her mathematics was about rules and following those rules diligently.

Upon reflection I realize that my teacher fit the behaviorist mold so common at that time (the late 1970s). Her objectives were clear—proficiency with mathematical facts and skills—and, as long as one did not question the foundation for those objectives, it could be said that she was efficient and effective in her teaching. For her this was the way of teaching mathematics and she was unwilling to question it. I have seen it again and again in my experiences, teachers who have dogmatically held onto certain methodologies and failed to allow the experiences their students had to influence the pre-planned course. Looking back, I realize that a common trait among my favorite teachers from elementary school up through college was that of intellectual flexibility. Those teachers were not afraid to look at issues from different angles, not afraid to open up spaces in which they were not the sole source of knowledge, not afraid to allow teachable moments (Garrison, 1997) to influence the direction of the lesson.

In 1997 I moved to Japan as a participant in the Japanese Exchange and Teaching (JET) Programme sponsored by the Japanese government. The JET Programme recruits college graduates from over 40 countries to fill various international relations positions; the most common is that of assistant language teacher (ALT). As an ALT, I was placed in a small port city in Kagoshima Prefecture on the southwestern island of Kyushu about 110 km due south of Nagasaki. When I lived there, Akune had a population of roughly 30,000 and I was the only non-Asian, foreign resident. As an ALT, I became a member of the Board of Education and, by association, a member of the Akune City Hall. My job consisted of giving international relation
talks and assisting the Japanese middle school English teachers with their lessons. On Monday I visited elementary schools where I gave talks and interacted with the students; Tuesday through Friday I taught English at one of Akune’s four middle schools.

I had applied to the JET Programme because I was excited about the prospect of living and teaching abroad. I had read about the Japanese culture and knew about their affection for routine and organization, but knew next to nothing about teaching in Japan. What I found was a shock. In Japan, ability based tracking begins at the high school level. Students are either tracked into a college-prep high school, a mid-level high school from which less than half attend college, or a vocational high school focusing on agriculture, fishing, or industry. Middle school students must score well on school-specific aptitude tests in order to be accepted into a college-prep high school. English is one of the subjects tested, but the focus is primarily, if not entirely on vocabulary, parsing sentences, and reading comprehension rather than communication skills, although listening comprehension is becoming a part of many tests. This showed in the classes I taught. Often in my first year I was used much in the same way one uses a tape recorder, as a model of correct pronunciation rather than a partner with whom to talk. The teachers and students were extremely organized in their study techniques, but in the end it inevitably came down to the teacher transmitting the knowledge needed to score well on the test. As you might expect, English was rarely connected to the students’ lives and few found classes enjoyable. In turn, this sapped their interest in the language. It seemed that I was the only one who questioned using this method of instruction.

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5 The overriding focus on reading and writing is an unfortunate holdover from Japan’s past. Even though the Tokugawa Shogunate had an isolationist policy articulated in the early 1800s, the government was never really isolated from foreign intercourse. Emissaries obtained Western books in the hope of keeping abreast of scientific and technological advancements. Consequently, the need for foreign language communication skills was far surpassed by the need for reading comprehension skills. This lopsided balance continued up through the Second World War.
Since my time was spread over so many schools, my students would typically have only two classes or so a month with me. Once I realized that, I made a concerted effort to make those times count. I spent a lot of time thinking about how to make class more fun and persuaded the English teachers to do non-routine lessons when I came. I have always enjoyed playing games, so I often created or adapted games to fit what the students were studying. While those games were exciting and students came to enjoy my visits, I could not help but think of the limitations of what I was doing. Although some of the activities did allow for imagination and creativity, the majority of them focused on recall. Most times I did not “take the [information] and develop it within the range and scope of the child’s life,” as John Dewey (1902/1976) suggests; rather, I “covered it with sugar-coating; to conceal [the material’s] barrenness . . . to get the child to swallow and digest the unpalatable morsel” (p. 290).

I held my JET position for three years, which was the maximum at the time, and then got a job teaching a new pilot program sponsored by the prefecture. Unlike in Akune, where I was an itinerant member of the Board of Education traveling to different schools daily, when I moved to Kanoya I became a faculty member at a single elementary school and was the only English teacher. Additionally, when the principal found out about my background in mathematics, he urged me to work with the fourth grade mathematics classes.

Working with the fourth grade mathematics classes caused me to reflect upon my ideas about teaching and affected the way I taught English. Much like the Japanese mathematics classes described by James Stigler and James Herbert in their book titled *The Teaching Gap* (1999), the teachers with whom I worked thought about mathematics more in terms of “structured problem solving” (p. 27) than “learning terms and practicing problems” (p. 27). For the most part, my colleagues and I did not seek to dominate the thinking of our classes; instead,
we took a less active role and valued the opinions and ideas of our students. It was common for us to allow time to struggle with ideas before intervening, and as we planned lessons together we were sure to create space where imagination and inventiveness could come through. This, however, did not mean that there were not times when information was transmitted. The difference was that we were aware of the problematic nature of transmitting ideas, so the times we used that method we used it judiciously and sparingly.

These ideas also found their way into my English classes. Because English was not yet mandatory for elementary school students, I was given freedom and took the opportunity to focus my attention on communication. I was able to experiment with and explore many different ways to teach. As I planned lessons, I took care to create situations where the students could connect what we were doing in class to their lives. I also sought to highlight the imaginative, creative, and playful aspects of communication. To truly learn a language one must learn about culture as well, and that was also a point of focus. Although looking back I see many things I would change given the chance, I think one of my strongest points was that I was reflective in my teaching and always actively questioned what I was doing.

One of the turning points in my teaching career came about three years ago when I was teaching two mathematics education courses for pre-service elementary school teachers. From early in the semester, I noticed that the reactions of two sections of the same class were vastly different. Although the classes were back-to-back, the interactions in them were worlds apart. I had experienced students’ frustrations when I challenged traditional methods of teaching before, but that semester was different. By mid-semester each class had a markedly different feel to it. Never before had the difference between two classes been so crystallized. The students from one class wanted to be told how to teach while the students from the other class wanted to think for
themselves. Consequently, the students from the first class seemed to dismiss everything I said without pausing to reflect on it while the students from the other class were open to new ideas yet still actively critiqued those ideas. Interestingly, the class which rejected new approaches was a cohort devoted to just that topic—teaching in different, more reflective ways.

Another influential experience took place the following semester, also in a mathematics education course for pre-service elementary school teachers. During the second half of the semester I received an angry email from one of my students. “I’m upset because I don’t feel like I’m learning how to teach” she wrote, “I’m only learning how to think!” To say I was taken aback by this comment would be an understatement. In what way is teaching not intellectual work? (Pinar, 2004). Are teachers merely installers of “best methods” handed down to them by the administration? As I discuss in chapter two, the methods movement has such a long history and so thoroughly pervades Western thought that Jacob Bronowski (1978) goes so far as to write, “the ‘naturalness’ of this method’s cause-effect procedure, hence its reductionism and predictability, is so strong that we cannot conceive of another way of thinking—it has become our natural way of looking at problems” (p. 59). One might well say that method has become the sine qua non of all teaching: without method there is no teaching.

Over my years at the university what I have come to realize is that many of my curricular struggles have revolved around my students’ desire to be passive participants, simply told what they needed to know. Clearly, the “teaching as telling” pedagogy is intimately connected to the past learning experiences of my students and for that reason it is often difficult to go beyond. Ironically, even when students aspire to break free from traditional methods of teaching they still want me to tell them how to teach using better methods. While it is an important and valuable part of pre-service teacher education to have veteran teachers such as myself share their
experiences, ideas, and activities, I believe that veteran teachers must take teaching as telling down from its pedestal as the way of teaching so that other possibilities can be explored. I believe we need to subvert the traditional role of the teacher as the expert and giver of knowledge in order to support pre-service education students in an exploration of learning.

Troubles are not simply relegated to those who believe in the teaching as telling method, however. Teachers who focus on other issues, such as social justice, can also struggle. Television and movie portrayals of teaching overwhelmingly minimize the struggles teachers have as they come into a new classroom. Novice teachers often get overwhelmed by the competing conceptions of what it means to be a good teacher. I remember an ex-student who was deeply influenced by our class readings of Paulo Freire and bell hooks. For her final project she planned out a series of lessons that would bring up important issues of social justice. She was so excited when she got her first job offer. She could not wait to put those ideas to work. I caught up with her during the winter break of her first year. She explained with tears in her eyes how hard her first few months had been. How she had come in with all these grand ideas of teaching and seemed rebuffed at every turn. Her fellow teachers and administrators felt she was naively idealistic and her students seemed to take every chance they could to rebel against her. We met for coffee a few times over the break and together came to realize that she, too, had come in with a pre-figured and inflexible way to teach. Although I resonated deeply with the theories behind her pedagogy, she still got caught thinking in terms of the one best way. The second half of her year went much better. Social justice was still a focal point, but she stopped trying to force her students into a pre-set framework and instead was more sensitive and responsive to how they were reacting to the things she had planned.
Methodological Considerations

It may seem conflicting to talk about the methodologies I have used in this inquiry considering that I speak out against methods elsewhere in my dissertation. This affords me a timely opportunity for clarifying a distinction. When I speak out on methods, I am speaking out against the uncritical use of step-by-step methods. All too often methods are used as short-cuts to prescribed ends and are used unquestioningly. Dogmatic adherence to a method takes away from the intellectual act itself. Like John Dewey (1916/1980), I believe that too often people use methods mindlessly, without thinking about them critically. My call against methods is in many ways a call for the judicious use of methods. The methodologies I use for this dissertation are autobiographical and historical/philosophical.

Historical methods have traditionally been left out of educational inquiry and research (Kliebard, 1970a) and this has diminished some of the force of that inquiry. William Pinar (1988) points out, “so-called innovations in curriculum tended to be fads because innovators failed to take into account historical antecedents. Historically uninformed, many curricular reforms simply ‘reinvented the wheel,’ and little knowledge seemed to accumulate in the traditional field” (p. vi). Educators need to take an historical view because of the importance of placing ideas in context. Knowledge that is not contextualized, that is not related to other ideas, is “dead” and “inert” (Whitehead, 1929/1967). An historical frame situates ideas in a contextual way. That said, there are many competing views on historical inquiry and it is important to make clear the historiographical influences that inform my reading and writing of history.

The Historical/Philosophical. It was in the early 1800s that history became the academic discipline we know it as today. As one might expect, with its professionalization, historical methodology became a central issue (Iggers, 2005, p. 23). One of the leading voices of
historiography at that time was the German historian Leopold von Ranke. Born at the end of the 18th century, Ranke was highly influenced by the scientific ideas of his day and believed that by turning history into a rigorous science it would confer to it heightened legitimacy. As in science, value judgments must be suspended and the historian must strive for objective knowledge. In the preface to a book he published in 1824 Ranke wrote, “History has assigned to it the task of judging the past, of instructing the present for the benefit of the ages to come. To such lofty functions this work does not aspire. Its aim is merely to show what actually occurred” (quoted in Gooch, 1913, p. 78; emphasis added). One obstacle in the way of objectivity, Ranke realized, is that cultural standards and mores (such as conceptions of right and wrong) can contaminate the way the past is viewed. What might seem exotic at first glance might be common in another time or place; therefore, one must not judge the past by present-day or culturally influenced standards. Historians must begin their research as a tabula rasa, a blank slate, free from the presuppositions of their own experiences. Only by thoroughly immersing themselves into the primary sources of a time period could historians assess events and actions on their own terms. By controlling methodology in such a way, Ranke believed that historians could claim their story as the truth—as what actually occurred.

Ranke’s ideas became the accepted norm for generations of historians who followed him and his work is still influential in historiography today (Tosh, 2000; Iggers, 2005; Munslow, 2006). Over the years, however, many have questioned the central tenants of Ranke’s methodology (whether or not they were commenting specifically on Ranke). Perhaps the most

6 While historians have always held primary sources in high regard, debates over which primary sources to include has raged since the 1800s. Ranke’s contemporaries held that government documents from state institutions and/or leaders were the most important source for historical narratives. Although Ranke recognized the significance of those sources, he also searched for more “mundane” documents such as diaries, personal communications, and first-hand accounts of eye-witnesses (Tosh, 2000).
sustained attack has come from post-foundational thinkers such as Friedrich Nietzsche, Martin Heidegger, Hans-Georg Gadamer, Michel Foucault, Jacques Derrida, and Hayden White.

Nietzsche was trained as a classical philologist and was well versed in historical interpretations of ideas and events. In his book *Human, All-Too-Human* (1878/1959), Nietzsche affirms the importance of historical study\(^7\) and declares that “lack of a historical sense is the original error of all philosophers” (p. 51). Nietzsche vigorously disputes the idea of objective knowledge and distrusts overarching narratives that pretend to provide a God’s-eye view. As he points out, whether or not one is cognizant of it, one necessarily views ideas from perspectives. While one’s perspective might be unique, it cannot be purely subjective because of the communal experiences that influence it, such as growing up in a particular society or culture. In place of mistaken notions of objectivity, Nietzsche advocates perspectivism. “There is only perspective seeing,” Nietzsche writes, “only perspective ‘knowing’; and the more affects we allow to speak about one thing, the more eyes, different eyes, we can use to observe one thing, the more complete will our ‘concept’ of this thing, our ‘objectivity’ be” (Nietzsche 1887/1989, p. 119; original emphasis). Thus, instead of showing what “actually occurred” Nietzsche asserts that the historian puts forward one among a number of possible perspectives.\(^8\) Nietzsche’s own

\(^7\) In a collection of four essays Nietzsche published, entitled *Untimely Meditations*, the second concerns historical studies. In this work, “On the Uses and Disadvantages of History for Life” (1874/1997), Nietzsche derides his generation’s enthusiasm for historical knowledge, asserting that when one places too much value on history and fails to consider what affects it can have on current thinking then one depreciates the present. This is an idea that Nietzsche returns to often in subsequent writings. As he makes clear again and again, his philosophy is life affirming and concomitantly he urges living in the present rather than living in the past or constantly looking to the future. While Nietzsche’s works are almost all historical in nature, they are also intricately tied with issues in his life at the time.

\(^8\) In his article titled “Chaos, History, and Narrative” (1991), George Reisch argues that the chaotic nature of history prevents historical writing from being “scientific.” One of the fundamental tenants of chaos and complexity is that dynamical systems are sensitive to initial states. In the spirit of Laplace, he believes chaotic systems are still governed by laws, and if one were to know the law(s) and the initial state one could figure out the product. History, Reisch argues, is quite sensitive to the initial states of the (historical) system. If Archduke Franz Ferdinand was not assassinated, for example, it would have changed history dramatically. Historical writing that tries to claim scientific objectivity then must claim
work provides a good illustration of this. For example, in *Daybreak, Thoughts on the Prejudices of Morality* (1881/1997), *Beyond Good and Evil* (1886/1990), and *On the Genealogy of Morals* (1887/1989) Nietzsche closely examined the historical roots of morality from perspectives that had not been shown before. As one might expect, these perspectives were often considered polemical (if not downright blasphemous), but whether people agreed or disagreed with Nietzsche’s position they were forced to at least confront his alternate readings of the historically grounded ideas. Indeed, although Nietzsche would agree that some perspectives are more worthy of merit than others, he was steadfast in asserting that our use of the past would be diminished if one particular perspective were taken as the perspective from which to view an event.

Another point of Ranke’s that has been found problematic is his Cartesian notion that historians can, and must, free themselves from their individual experiences in order to truthfully assess ideas and events from the past. Martin Heidegger and his student Hans-Georg Gadamer were adamant that one can never get into the minds of historical figures nor can one ever really bracket out his or her experiences and presuppositions when thinking. For them, “fore-understanding” is an essential part of interpretation (for example, Heidegger, 1953/1996, p. 143 or Gadamer, 1960/2004, p. 269). As Gadamer writes, “a person who is trying to understand a text is always projecting” (p. 269). Presuppositions cannot be eradicated, they insist; instead, presuppositions must be taken from the shadows and reflected upon in the light of the work being done. “It is the tyranny of hidden prejudices that

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that it has found both the law and the precise initial state of the system. There are countless agents that might cause an event, though, and one can never know the historical details to such an extent that this knowledge is possible. Historical writing must be looked on not as the “Truth” but rather as one of many possible interpretations.

For Edmund Husserl, the father of phenomenology, bracketing plays an important role. This is one of the points where Heidegger broke away from the Husserl’s intellectual work.
makes us deaf to what speaks to us in tradition” (p. 172; emphasis added), Gadamer insists. Rather than contributing to myopic vision, putting our presuppositions, our prejudices, forward can serve as a foundation from which to strive toward deeper understanding.

Drawing from both Nietzsche and Heidegger, historian/philosopher Michel Foucault brings forward the imaginative and creative aspects of historiography, connecting his historical work with the arts more than with the objective tendencies of science. For example, he considers his works about mental illness (Madness and Civilization [1961/1988]), the development of the medical profession (The Birth of the Clinic [1963/1994]), and penal systems (Discipline and Punish [1975/1995]) fictions rather than the “truth.” Yet he believes it is possible “to make fiction work inside truth” (Foucault, 1975/1980, p.193) What he means by this is not that he is making up “facts” or “events;” rather, he is acknowledging the creative aspects his histories. If one breaks free from the assumption of history as a fixed picture of things as they “actually occurred” then one realizes that subjectivity must come into play. The histories Foucault presents are ones he “invented”—he chose what people and events to highlight and he chose the manner in which he would lay them out (sometime non-linearly and often filled with lacunae). Like Nietzsche, Foucault believes that historiography must have an activist element—it must be useful to the present and have an effect on its readers—it must seek to create change. If written history can be an instrument for the implementation of power, then by showing hegemonic relationships, history can also help break taken for granted ways of thinking and can introduce discontinuity into what was thought fixed and stable (Foucault, 1977, p. 154). It is the creative aspects of historiography which allow this.

Like Nietzsche and Foucault, Jacques Derrida is also incredulous toward proclamations of objectivity and overarching metanarratives that seek to neatly encapsulate complex histories.
Derrida is well known for his concept of deconstruction but would be the first to object to defining (or confining) it. Deconstruction is a way of demystifying the Western philosophical tradition’s search for an origin, truth, epistemological certainty, a God’s-eye view. Derrida questions the logocentric belief that language can authentically represent reality and that fixed meaning can be endowed independent of language. Deconstruction examines cultural foundations and assumptions, which in turn destabilizes and complicates issues. As Derrida (1994/2002) points out, “the task of a historical and interpretative memory is at the heart of deconstruction” (p. 248; original emphasis). Deconstruction shies away from simple, unitary explanations and instead leads one to see the complexity, temporality, and lack of certainty inherent in issues such as exclusionary practices which seek to marginalize the Other. It challenges historicity, and in so doing calls one to reexamine one’s own thoughts, compelling one to think in terms of difference. Again and again, Derrida professes that “deconstruction is mainly affirmation” (Derrida, 1992/2001, p. 180; original emphasis). It is not simply a matter of reconstructing what was deconstructed; instead, it is a process of “going further, displacing, changing” (p. 180; original emphasis). Additionally, deconstruction cannot be reduced to a method. In fact, Derrida (1976/1991) stresses that there is a danger of deconstruction “becoming an available set of rule-governed procedures, methods, accessible practices” (p. 209) for that would diminish much of its inventive component and, Derrida writes, “Deconstruction is inventive or it is nothing at all” (p. 218).

Hayden White is an historian who follows along with the post-foundational thinkers I have previously examined. He rejects the notion of causality and affirms the literary aspects of historiography. White posits that history is a form of fiction that is written with attention paid to aesthetic and ethical (rather than scientific) considerations (White, 1975 & 2000). He explains:
History is not and never can be a science in the current acceptation of this term. It would be better to recognize this and to consider the political and ethical implications of different modes of interpreting history than to hang on to a standard of objectivity and impartiality that has been more honoured in the breach than the observance throughout the history of historical writing. (2000, p. 402)

Historical writing, therefore, can never be value-neutral or ideology-free.

White (2000) uses the terms narrativization and fictionalization when describing historical writing. By narrativization he means “a way of representing the world and its processes as if they possessed the structure and meaning of a story” (p. 399) and it is through this narrativization that history becomes fictionalized. Fictionalization, however, does not imply making up people or events, or inserting made up characters into an historical time-period (as is common in popular historical fiction novels by authors such as Umberto Eco, Iain Pears, and Ken Follett). There is a distinction between factualization and fictionalization, White asserts, and the historian does both. Factualization is when the historian “tried to get the story straight, separate truth from the distortions, falsification, and lies contained in received accounts of the matter” (p. 403). Fictionalization, on the other hand, occurs when the author “had to translate real persons, places, and events into the kind of ‘figures’ and ‘tropi’ that would allow his readers to follow the story he wished to tell” (p. 403). Histories are fictionalizations because they deal with the past—history can only be “a hypothetical construct and an ‘as if’ consideration of a reality which, because it was no longer present to perception, could only be imagined rather than simply referred to or posited” (p. 398). Like Nietzsche, White asserts that there should always be

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10 In his book, *Metahistory: The Historical Imagination in Nineteenth-Century Europe* (1975), White examined literary tropes in connection with historical writing. White asserts that these stylistic elements of discourse make up historians’ writing whether they intend it to or not. The four tropes he describes are metaphor, metonymy, synecdoche and irony. For White “tropes may thus be regarded as being at the heart of every historical period *and* in its description” (Munslow, 2006, p. 205).
competing interpretations of events. But unlike Nietzsche, White equates the necessity of competing interpretations to democracy rather than a will to power. He writes, “If historiography is to serve democratic rather than hegemonic goals or ends, it would do well to work for diversity of interpretations rather than towards ‘consensus’ on what is the best interpretation of the past” (p. 402).

Although many of these alternative views on historiography have influenced the field greatly, they have not necessarily become part of the cannon (Tosh, 2000; Iggers, 2005; Munslow, 2006). Over the years, pluralism has become more widely accepted and there has been a move from macro to micro histories and comparative intercultural studies. This entails an ethical/political commitment in historiography to listen to voices that have traditionally been marginalized (non-Westerners, women, people of color, the poor and working class, etc.). The traditional desire to model history on the natural sciences still occupies a place in historiography, though, and many historians still search for a norm against which competing interpretations of history can be judged. While many historians have come to recognize that there are creative and imaginative aspects involved in historical writing and that it shares some qualities with literature, most would still bristle at the thought of history being fiction rather than fact (Iggers, 2005, pp. 139-140).

**The Autobiographic.** The No Child Left Behind legislation focuses on “scientifically based research,” and uses the phrase more than 100 times in the document. The call for “scientifically based research” is a call for objective research. Of course, one does not have to look far in the history of science to realize how problematic the concept of objectivity is. In education the subjective is often depreciated and marginalized. If, however, one believes as Jim Garrison (1997) does, that “practice always involves theory, and theory is a form of practice (p.
13) or as Foucault (1977) does, that “theory does not express, translate, or serve to apply practice: it is practice” (p. 208) then one can see that autobiographic experiences, one’s practice, have the possibility to become an invaluable part of educational inquiry and research. Madeleine Grumet (1990) asserts that “autobiography becomes a medium for both teaching and research because each entry expresses the particular peace its author has made between the individuality of his or her subjectivity and the intersubjective and public character of meaning” (p. 324).

**Dissertation Overview**

In this introductory chapter my intent has been to explore some of the autobiographic underpinnings that led me to search for a third space. Using examples from childhood experiences as well as my teaching experiences at the elementary, middle school, and university levels, I have sought to shed light on why the topic of teaching in a third space emerged the way it did and why it means so much to me. I have also explained the methods I use to approach my inquiry.

In chapter two, The Methodization of Teaching, I begin to explore the long and storied history of methodization. Starting with the work of Peter Ramus, I trace out the connections between method and the pursuit of scientific “truth.” As the strength of science grew so did its influence and by the nineteenth century the search was on to find the most scientific ways—the best methods—so that success in business, industry, and technology could be guaranteed. Many in education were captivated by the idea of “best methods” and put scientific principles to work in the service of schooling. This business model of education, complete with the methodology it inspired, remains with us in education today.

Since the time of Ramus there have been debates on efficient and effective teaching methods but beginning with the Cold War they have increased substantially as have the varieties
of teaching methodologies espoused. Chapter three is an abbreviated history of curriculum in the later half of the 20th century and the beginning of the 21st century in which I explore the proliferation of ideas about what constitutes “good” teaching. Not only do I discuss commonplace methodologies such as behaviorism and constructivism, I also delve into alternative ideas of teaching that came about during the reconceptualization of the curriculum field beginning in the 1970s.

The third space is a concept used by theorist Homi Bhabha to describe the fluid place where the negotiation between incommensurable ideas occurs. In chapter four I frame the concept of a third space by drawing on the work of Bhabha, as well as other theorists who have written about kindred ideas such as Friedrich Nietzsche, William James, John Dewey, Gloria Anzaldúa, Jacques Derrida, Michel Serres and Gilles Deleuze. I also use the work of Ted Aoki, Charles Bingham, and Hongyu Wang in order to show how they have connected the concept of a third space to education.

In chapter five, A New Vision for Teaching, I bring together the thoughts from the first four chapters in order to articulate my ideas on teaching.
Chapter 2

The Methodization of Teaching

Introduction

In 1989 the National Council of Teachers of Mathematics (NCTM) published its Curriculum and Evaluation Standards. In the section summarizing changes in emphasis in instructional practices they call for “decreased attention” to be placed on “rote practice,” “rote memorization of rules,” “one answer and one method,” and “teaching by telling.” This was one of the first times that a national organization spoke out against the overuse of teaching as telling.

Teaching as telling is perhaps the first educational “method” and it still commands allegiance in certain educational circles. Many prospective teachers were taught using that method, so it is not difficult to imagine why they might use it as a fall back when they have their own classroom.

Teaching as telling is a perfect example of how instructional “methods” can become pervasive and taken-for-granted. Methodization in education has a long, complex history. In this chapter I seek to explore its roots.

In his work titled The Measure of Reality (1997), Alfred Crosby points out that from the 13th through the 16th centuries there was a turn from a qualitative to a quantitative model of inquiry in Europe. Certainly, teaching as telling had been around for millennia, however, the shift toward the quantitative went hand-in-hand with the focus on methodization. This, in turn, took teaching as telling to a whole other level. I begin my exploration of the methodization of teaching by examining Peter Ramus (1515-1572), one of the fathers of the methodization movement, and the historical time period in which he worked. From Ramus I move on to others scholars associated with the movement toward methodization; notably, philosophers Francis

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11 Although decreased attention on teaching by telling is only explicitly stated in the K-4 standards, it is implicit in the 5-8 and 9-12 standards as well.
Bacon, René Descartes, and Auguste Comte who have each left their indelible mark. Next, I turn my attention across the Atlantic to the United States where the methodization movement was gaining steam at the turn of the 20th century. I trace its effects on business, science, and education by exploring the educational connections of Fredrick Taylor’s conception of scientific management to educational psychology, specifically behavioral psychology.

**Intellectual Change in the Renaissance: Peter Ramus**

As William Doll (1993, 2001, 2002, 2005) points out, “methodization” has a long history in education, dating back at least to the sixteenth century with Peter Ramus. As with any thinker, Ramus was a product of this time. In order to better contextualize his work, it is important to go back to the latter part of the Middle Ages to see the intellectual ground from which he sprang.

In the European Middle Ages, the Christian church dominated intellectual thought. Lucien Febvre and Marc Bloch, French historians and co-founders of the highly influential scholarly journal “Annales d'histoire économique et sociale,” point out that in medieval times the structures of thought and language were so thoroughly interconnected with religion that it was difficult to think in terms outside of religion (Febvre, 1942/1985). Saint Augustine (354-430) pursued ideas through a Christian perspective but also considered a Platonist-inspired view of ideas. His work reveals a tension between the religious and philosophic concepts of the day and resulted in rethinking these concepts. This Christian philosophy exerted immense influence on the intellectual landscape for a millennium and still continues to exert an influence today (Spade, 1994).

Latin was the language of the church, and European intellectual thought during the Middle Ages was characterized by the hegemony of the Latin language. Ong (1958/2004) points out that as late as the 16th and 17th centuries “the scholar’s entire career, elementary, secondary,
and university, was to be lived through in Latin” (p. 11). Although significant advances in thought from the Middle East, Asia, and other parts of the world trickled into Europe, it often took many hundreds of years before these works were translated into Latin and thus they failed to make much of an impact until the Renaissance. The literary and philosophical background that many medieval “scholars” of the times had was thus quite sparse. For example, Plato’s dialogue *Timaeus* had been translated into Latin by the Roman philosopher Cicero (Russell, 1945) and influenced St. Augustine. It also was available in Medieval Europe; other works were available only in Greek and, thus, unapproachable by all but a few. *Timaeus* exemplifies Plato’s cosmology and in many ways fits in well with medieval Christian thought; it was not, however, representative of his body of work. The writings of Augustine and Cicero ensured that Platonist ideas (particularly those brought forth in *Timaeus*) continued to be felt throughout the Middle Ages although the readers of these thinkers did not recognize the connection between their work and that of Plato. They had not and could not read Plato, who wrote in Greek.

It was not until the 12th century that the extant works of Aristotle were translated into Latin. Interestingly, Aristotle’s books had survived in the Eastern Roman Empire (also known as the Byzantine Empire) and Arab scholars spread his teachings, and their development of his ideas, throughout the Islamic world (which at that time included parts of Spain and, in the 9th and 10th centuries, Sicily). Additionally, the Crusades (the first of which began in the latter part of the 11th century) engendered commerce and communication with Constantinople, the capital of the Eastern Roman Empire and a center for trade with Asia and the Islamic Empire. For the most part, Aristotle’s texts, and those of the Greek and Hellenistic thinkers who expanded on his work, was translated not from the original Greek but from Arabic translations of the Greek (and
sometimes Arabic translations of Syrian translations of the Greek). As one would expect, these translations were suspect and not completely trustworthy (Spade, 1994; Russell, 1945, p. 423).

It is in the 12th and 13th centuries that Aristotle became “increasingly accepted as the supreme authority” in intellectual matters (Russell, 1945, p. 435). Much of this is due to the Medieval Scholastics who sought to reconcile Christian theology with the philosophy of Aristotle and his commentators. The 13th century Italian philosopher-theologian Saint Thomas Aquinas (1225-1270) is probably the best known of the Scholastics. His work centered on the synthesis of Christian doctrine and Aristotelian thought (though it also contained some Neo-Platonic elements). Due to the work of the Scholastics, Aristotle’s philosophy was so entrenched in later medieval and early Renaissance scholarship that he was simply known as *Ille Philosophus*—“The Philosopher” (Crosby, 1997; Gottlieb, 2002). Indeed, medieval universities in Europe were steeped in Aristotelian thinking and this did not change for hundreds of years.

By the 15th century (the century before Ramus) the later part of the Middle Ages had given way to the Renaissance and the intellectual landscape of Europe was shifting. Literally meaning “to be born again” (OED), The Renaissance was a period of time characterized by a revival of classical learning as well as scientific and artistic advances including an interest in the investigation of the natural world. By 1440 Johannes Gutenberg (1400-1468) had invented movable type printing in Europe which greatly increased access to books (especially books in the vernacular) and, in turn, literacy. By the end of the 15th century the number of books in circulation had grown by leaps and bounds and printing presses were springing up all over Europe. Gutenberg’s printing press was truly an invention that revolutionized scholarship and learning (Crosby, 1997; Gottlieb, 2000; Man, 2002). In the second half of the 15th century, Gutenberg’s invention had a great impact on many authors. One such author was Marsilio Ficino
Ficino was a priest who sought to fuse Platonist thought with that of Christianity. It was his Latin translations and commentaries on Plato that brought Plato to the forefront of intellectual thought in Europe during the Renaissance. Thanks to movable type printing, Plato’s work was disseminated by means never available before. Similarly, scientific and philosophic teachings of other Greek, Hellenistic, Muslim, and Indian thinkers also became influential thanks to Gutenberg’s invention.

Peter Ramus was a French philosopher who lived from 1515 through 1572. It was during his early childhood that polymath Leonardo da Vinci (1452-1519), the archetypical “Renaissance man,” died. Michelangelo (1475-1564) and Nicolaus Copernicus (1473-1543), however, were carrying the intellectual torch, exerting enormous influence in shaping the thought of the day. In many ways, Ramus seems an odd choice to place beside such intellectual heavyweights, especially considering his deficiencies. As Walter Ong (1958/2004) points out, many have criticized Ramus’s (mis)readings of classical authors, have noted that he often contradicts himself, and accuse him of being an intellectual opportunist. Nevertheless, Ramus’s work and the intellectual movement of Ramism which it fueled have been tremendously influential in education and, through education, into other fields as well. With his generalized taxonomy of knowledge, he attempted to lay out “not only the structure of knowledge but also the structure of acquiring knowledge” (Doll, 2002, p. 31; original emphasis). Ramus proposed that there is a “best” way to teach, a short-cut that if followed marks the most efficient and effective course to a prescribed end. Indeed, Hardin Craig remarked that Ramus was “the greatest master of the short-cut the world has ever known” (Craig, 1936, p. 143; quoted in Ong, 1958/2004, p. 3).

Ramus was born into an age in which the teachings of Aristotle and Plato were at odds with each other. By virtue of its connection with Thomas Aquinas, Aristotelian thought exerted
sway over the church\textsuperscript{12} and many people advancing Neo-Platonist thought were having difficulties. Ramus himself was a self-avowed “anti-Aristotelian” (Ong, 1958/2004) and his early condemnation of Aristotle led to many problems, chief among them being that the King of France banned him from teaching or publishing. Only with the accession of Henry II to the throne in 1547 was he able to resume these activities. This is interesting because much of his “anti-Aristotelian” blustering was just that, blustering. It looks as though it was not so much that he disagreed with Aristotle, it was that he did not like the way Aristotle organized his work (p. 24). He also suggests that it is the translators and commentators who have misread Aristotle against whom his anger is directed (p. 40, 45, etc). As I have mentioned earlier, troubles with the translations of Aristotle and his commentators have proven sticky. Additionally, in those days (as well as in contemporary time) many, including Ramus, relied on Aristotle’s commentators rather than reading Aristotle’s work themselves.

First and foremost, Ramus was a teacher, and what anti-Aristotelian leanings he had “developed as a result of a practical pedagogical situation rather than as a result of intellectual insight” (p. 39). As a result of his teaching experiences he was dismayed by the fact that Aristotelian logic was not only difficult to teach but also difficult to apply to real life and learning and Ramus made his mark in academia by questioning it. He did not, however, seek to discard syllogistic logic; rather, he wished to supplement it. Influenced by Plato, Ramus thought that “Socratizing” (p. 43) Aristotle’s logic would lead to better results. Yet, it is the rhetorician Cicero, one of Rome’s greatest orators, rather than Socrates or Plato to whom Ramus really turns. In other words, he wished to put a rhetorical spin on philosophical logic. Indeed, all accounts seem to indicate that Ramus was truly gifted as a rhetorician and naturally drew people to

\textsuperscript{12} \textit{Summa Theologica}, the most famous of St. Thomas Aquinas’s works, contains over 3,500 quotes from Aristotle (Crosby, 1997, p. 57). Thomism, a philosophic school of thought following the work of Aquinas, is still highly influential in the Roman Catholic Church today.
himself. One biographer even went so far as to write that “Ramus was ‘by far the leader of his whole age’ in both writing and speaking Latin. . . . [and that] no one could be compared to him in Latin eloquence except Cicero” (p. 21). This highlights an important feature of Ramus’s dialectic: namely that he was less concerned with proof than with persuasion. He felt it important not to argue a case via Aristotle’s syllogism but to persuade via Cicero’s rhetoric.

Working from the traditions of rhetorical and liberal arts, Ramus sought a method for efficiently systemizing education and he believed that his logic, his dialectic suited the task. As Ramist Johann Heinrich Alsted (1609) wrote, “Logic is the art of knowing. . . . Therefore, dialectic [i.e. logic] is the art passing on skill in knowing, and consequently teaching the instruments of knowing” (Ong’s translation of the Latin work of Alsted, p. 160). The rhetorically oriented dialectic Ramus proposed was composed of two parts, dialectic invention and dialectic judgement, both of which played themselves out on the pedagogic stage. Dialectic invention is “the art used for discovering any and all evidence . . . employed to deliver a discourse” (Triche & McKnight, 2004, p. 44). In other words, one gathers all of the needed information and thinks of how best to transmit said information (whether through making persuasive arguments, citing numerous examples, speaking in a way that captures the students’ attention, etc). Importantly, Ramus felt as though each subject had its own unique way in which the information could best be transmitted. Therefore, subjects should be taught as discrete units, carefully separated from one another.

Dialectic judgement, on the other hand, is the art that provides “the teacher with the rules for deciding what [is] appropriate and inappropriate in any situation” (p. 44). Ramus further splits judgement into two parts, syllogism and method. Syllogism concerns Aristotelian logic and deciding on questions of truth while method is used to organize the information in such a way
that it can be easily understood and retained. Ramus maintained that by properly organizing information into a concise progression arguments would become clear. In this logical arrangement one must start with the antecedents and move to the consequences, breaking information into smaller and smaller parts so that it could be presented in the most logical (natural) way (see figure 1). This method, what Ramus calls the “Law of Wisdom” (p. 45), is critical in his pedagogy and it is his legacy. He argued that to any subject there is a key, and he felt as though his dialectic was the key with which to unlock all knowledge (p. 33).

For the students, being able to efficiently analyze a text was of prime importance. As Triche and McKnight (2004) point out,

The ability of the students to learn did not depend on their ability to reason through complex questions for themselves or their ability to understand the metaphorical relationships among the various concepts presented in the text. Instead, a good learner became defined as one best able to analyze (i.e. dichotomize) a text. (p. 49)

When asked to dichotomize information there was only one way that Ramus felt was the best for the students— the teacher’s way. Whether the information was less open to interpretation, such as parsing sentences in Latin, or more open to interpretation, such as taking notes and arranging them, the student was still expected to conform to the teacher’s way—a way that was clear and unambiguous. Thus, students became concerned with making sure they understood the material the way the teacher wanted them to. The more the students were able to know what the teacher wanted the better. However, “by privileging organization and precluding students from learning anything beyond the diagram” (p. 48) it also cut off alternative ways of thinking—it essentially promulgated a status quo way of thinking.
A central part of this dialogic is the visual/graphical representation of the information which plays out spatially rather than verbally. Among the reasons Crosby (1997) lists for the European turn to the quantitative is the focus on the visual. Ramus’s reductionist-like break down of information and then the spatial representation of the information exemplifies the trend of the time (see fig. 1) Ramus’s dialectic was fortuitous in its timing. Because movable type printing was well established by the 16th century, Ramus’s visual organization could not only be accurately reproduced but also widely disseminated. In fact, “Ramus’s knowledge diagrams became the organizing structure of the textbook, which, in turn, became the curriculum” (Triche & McKnight, 2004, p. 52). Ramus “textbookized” knowledge.

Although one can point to negative effects of Ramism, such as the continued reliance on prescriptive teaching, there are also positive aspects which must be addressed. One of Ramus’s most significant contributions to education was that he helped make education more accessible to the masses. The Europe of the Middle Ages and Renaissance was one of hierarchical stratification (Marx & Engles, 1848/1988). People of lower status rarely transcended their class

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**Tabula Artium, Qvas In hoc Volumine continebimus.**

**Fig. 1 Ramist Map**
and formalized education of the time was for those entering the priesthood or those from well-to-
do families. Through his methodization, Ramus believed that anyone could learn and learn well.

This is in sharp contrast with the standard thought of the day which often equated social standing with academic potential (something which, unfortunately, is still widely believed). Although he was ahead of his times, Ramus was far from being the first to espouse such thoughts. Nearly 2,500 years ago Confucius argued for social mobility based on virtue rather than heredity (Lau, 2000). At nearly the same time Socrates and Plato were also arguing for social mobility, but their arguments were based on merit (talent & ability) rather than family status or wealth. In *The Republic*, Plato famously argued that men and women should be educated together and that women could be guardians and rulers (an idea so far ahead of its time that it did not become commonplace in the West until the 20th century). That others before Ramus put forth similar ideas should in no way diminish the power of what he had to say. He was going against the grain of educational thought in his time and should be praised for championing an aspect of social justice so central to educational thought today.

One other significant factor in making education more accessible to the masses was his particular method of breaking down the ideas the teacher wanted to transmit. Ramus was concerned with the “usefulness” of his method (although useful for him could mean that it was useful to help one memorize things separated from daily life). In the Middle Ages and Renaissance, students were inundated with dense, difficult to understand texts and his method offered a useful alternative to brute memorization. One way or another, Latin and other subjects needed to be committed to memory, and if they were going to be memorized and analyzed, then Ramus provided a good method with which to do so. Indeed, the fault of his method lies more in its inflexibility—in the fact that it closes one off from other possible connections and
relationships—than in the method itself. I agree with Triche and McKnight (2004) who argue persuasively that “Ramus’s method became an intellectual short cut that suppressed the metaphor of education as an intellectual journey characterized by lengthy, rigorous study and inquiry from which knowledge of the world would emerge” (p. 39).

The popularity of Ramus’s method was immense—by 1650 there were hundreds of editions of his works and Ramism had expanded well beyond Europe. As Triche and McKnight (2004) point out, Ramism “provided the dialectical (logical) preconditions underlying the subsequent refinements to method propagated by . . . Bacon . . . Descartes [and Comte] (among others)” (p. 41). Early Protestant settlers in America brought methodization with them. During the 17th and 18th centuries it was *de rigueur* to follow Ramus’s method in most universities in New England.¹³

**The Making of Modern Philosophy: Bacon, Descartes, & Comte**

According to the Oxford English Dictionary the word “method,” with its connotations of an inflexible, systematic procedure, first came about in the 16th century. Certainly the work of Ramus had much to do with the modified meaning the word was taking on, but so were others, especially those involved in the scientific movement. The scientific movement often found itself at odds with religion, so I begin this section by examining those connections. Indeed, the tensions between science and religion form a thread that runs throughout this section. From there I move on to explore the work of three intellectuals who have done much to advance science: namely, Francis Bacon, René Descartes, and Auguste Comte. Each in his own way¹⁴ made an

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¹³ In this dissertation, I will not pursue the issue of Ramist thought in Puritan New England and hence its subsequent effect on later American education, but it is a story I believe needs to be told.

¹⁴ That each of these formative thinkers was a man is a point not to be overlooked. See Carolyn Merchant (1983): *The Death of Nature: Women, Ecology, and the Scientific Revolution*. 

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indelible contribution to the idea of methodology that has since become commonplace in education.

The time surrounding the life of Ramus was dynamic in that there was a great amount of conflict in ways of thinking not only in philosophy and science but also in religion. The Protestant Reformation was underway and Martin Luther (1483-1546) was protesting what he saw as malpractices and false doctrines espoused by the Church. Like the others who followed him such as Ulrich Zwingli and John Calvin, Luther looked toward the Bible as the source of authority rather than the papacy. Widespread violence ensued as Catholics were pitted against Protestants in events such as the French Wars of Religion (which happened from the mid-to-late 16th century). Peter Ramus himself lost his life during the French Wars of Religion when the wave of anti-Protestant violence known as the Bartholomew's Day Massacre swept through the city of Paris where he was teaching (Ong, 1958/2004, p. 29).

The Reformation also caused a backlash in Western universities. The majority of medieval universities in Europe had a close connection to the Catholic Church, in fact the term Studium Generale—virtually synonymous with the term medieval university—was used to designate those institutions that were registered by the Holy Roman Empire. The Universities of Bologna, Paris, Oxford, and Cambridge were all examples of Studium Generale. In the Middle Ages the university had focused on training clergy but by the sixteenth century the children of aristocrats and merchants became the primary students and were essentially trained to be teachers. For example, a student at the University of Paris receiving a master’s degree was required to spend at least two years as a teacher, a common practice at the time (Ong, 1958/2004, p. 153). Even though the make-up of its students had changed, the course of study charted by the
scholastics at universities had not. Subsequently, generations of students and teachers struggled to carve out a new curriculum more applicable for the increasingly secular student body.

The connections between philosophy/science and religion, a traditionally touchy area, were especially tense in this time period. Galileo’s condemnation by the church during the Inquisition was a turning point in science. In one way, Galileo’s ideas spurred on further research, yet his troubles with the church also restricted further investigation in many cases. Russell (1945) points out that scientific inquiry in Italy took many years to recover from the blows inflicted during the Inquisition (p. 534). Due in part to Luther’s protest against the immense power the papacy held in the countries that became primarily Protestant, the clergy was able to exert less power over the state than in their Catholic counterparts, and hence had less power to curtail scientific teachings that went against the church. As Russell writes, “Protestant clergy were at least as bigoted as Catholic ecclesiastics; nevertheless there soon came to be much more liberty of speculation in Protestant than in Catholic countries” (p. 529). It is worth noting that for the most part the philosophers and scientists who were affected by ecclesiastical censure were devoutly religious. Unlike the church leaders, however, most philosophers and scientists were able to see that their ideas were not mutually exclusive with their religious views. Those thinkers such as Bacon and Descartes who “modernized” their fields of study were often at odds with the Church.

Francis Bacon (1561-1626) was among the first of the vocal proponents of the scientific revolution and exerted influence in the move toward methodization. Bacon was a philosopher from England, a country that in the 16th and 17th centuries vacillated between being Protestant or Catholic as the King or Queen’s whims changed. Like Ramus, Bacon also revolted against Aristotle and the scholastics. In some ways Bacon’s reaction against Aristotle had less to do with
Aristotle’s work than with the conciliation of Aristotle’s work in the Catholic Church via the scholastics. Similar to many of his scientifically-minded contemporaries, Bacon “unfairly branded him with the sins of his slavish and inferior followers,” such as the scholastics (Gottlieb, 2002, p. 223). It is not surprising to see this backlash against the Church since it was the Church leaders who had used Ecclesiastical censure as a method for keeping philosophers and scientists in line with Church teachings. At the time, the compilation of Aristotle’s work on logic titled Organon (The Instrument) was required reading in all Western universities and one of the books with which every educated Westerner was familiar (Gottlieb, 2002, pp. 349-356). Bacon intended for one of his later works, The Novum Organum (The New Instrument), to supplant it and become the dominant treaties on logic.

Bacon was disturbed by what he saw taught in universities. Not only did the philosophy of the day conflate religion and science (what at that time was called natural philosophy) it also emphasized rhetoric over reason (something Ramus did not find problematic). Bacon wished to change the medieval relationship between knowledge and nature and sought to place knowledge on firmer footing than mere persuasive argumentation and/or dogmatic capitulation. For him that bedrock was made up of inductive reasoning (coupled with experimentation) and it allowed him to ground knowledge in the evidence of nature and to determine truth from the particulars of nature. Induction was hardly unknown at the time, Aristotle himself understood the importance of induction (Gottlieb, 2002, p. 224; Russell, 1945, p. 199), but with his focus on induction Bacon was able “to prompt scientific research to move beyond the inherited and prevailing emphases on description and classification into the realms of theorizing, hypothesis testing, and creative exploration” (Davis, 2004, p. 68).\(^{15}\) Importantly, for Bacon any results must be

\(^{15}\) To say that Aristotle did not advocate theorizing, hypothesis testing, and creative exploration would be a misrepresentation. One must remember the difficulties of translation, misinterpretations by
repeatable and verifiable. It is in this emphasis on verifiability that quantification gains a prominent foothold previously unknown (Crosby, 1997).

Bacon’s concern was with “useful” knowledge rather than knowledge for knowledge’s sake. Practical application was fundamental and essential for him. If human suffering and/or well being is intricately tied with nature, one must exert control over nature when possible to mitigate against damaging effects, he thought. Although Bacon is often given credit with the saying _scientia potentia est_, “Knowledge is power” (also translatable as “science is power” or “scientific knowledge is power”), he was far from being the first to make the connection. What he did do, however, was give the aphorism much more emphasis than his predecessors—for the benefit of mankind nature must be controlled (through scientific knowledge).

Interestingly, although he was a key instigator of the scientific movement, by all accounts Bacon did not have a natural proclivity for science. Anthony Gottlieb, author of _The Dream of Reason_ (2002), writes that Bacon “frequently did not know what he was talking about [when it came to science] and had a remarkable ability for looking the wrong way when something interesting was going on” (p. 223). Gottlieb points out that for a so called “prophet of the scientific revolution” Bacon overlooked, condemned, or ignored a surprising number of ideas that went on to become highly influential such as William Gilbert’s theory of magnetism and William Harvey’s description of systemic circulation. Nevertheless, what we now call “scientific method” was highly influenced by Bacon and this emphasis in his work was critical in the development of science. In fact, it was through Bacon’s urging, although after his death, that The Royal Society was formed (formally known as The Royal Society of London for the

commentators, and complex intermingling with church doctrine that influenced Bacon’s thoughts on Aristotle. Although Bacon did indeed move Western thought toward the goal Davis states, it is important to realize that the scientific thought of Medieval and Renaissance Europe was quite imbued with Aristotelianism. Our current notion of scientific (experimental) procedures came about in the 19th century. (Doll, 2002)
Improvement of Natural Knowledge; established in 1660) to advance scientific knowledge in England.

The next major thinker I would like to connect to the idea of methodization is René Descartes (1596-1650). Descartes was a French polymath who did groundbreaking work in the fields of philosophy, mathematics, and physics. He is widely thought of as the father of modern philosophy (Russell, p. 557) and has been linked by Jean-François Lyotard (1979/1984) and others with the rise of modernism. As we saw with Ramus and Bacon, Descartes was also highly critical of the scholastic’s comingling of philosophy and science with religion, and unfortunately his teachings caught the attention of the Church. Descartes was so worried about the possibility of censure that he put aside the book that he had finished in 1633, titled *The World*, and it was not published until after his death. He also felt the need to dedicate his book *Meditations on First Philosophy* (1641/1996) to the “sacred Faculty of Theology at Paris” (p. 3) asking that they give it (and him) their “protection” against possible Church retribution. He goes on for four pages defending why he believes his ideas are compatible with Catholic teachings. Significantly, Descartes spent almost the last twenty years of his life in Holland, a Protestant country where the freedom of conjecture and hypothesis were more tolerated than in his native France (Russell, 1945, p. 559).

Unlike Bacon, Descartes was an accomplished mathematician. Perhaps it is this grounding in mathematics that caused him to search for philosophical underpinnings which would guarantee the same certainty as the one he saw in mathematics. In *Discourse on Method* (1637/1996) he describes how he found those underpinnings in the form of a thought experiment. He began with doubt, *de omnibus dubitandum*, “everything is to be doubted,” and came to realize that the one thing that he could not doubt was that he was thinking. From these fertile
grounds springs his famous saying, *cogito ergo sum*, “I think, therefore I am” (p. 21). The method Descartes sets out for coming to “truth,” his “Cartesian doubt,” is laid out in four steps that are surprising similar to mathematics methods espoused since at least the time of Euclid. They rely on an appeal to reason rather than authority. First, beware of your own presuppositions and accept only those clear and distinct ideas that are self-evident. Second, break down difficulties into the smallest possible problems so that they can be resolved easily. Third, order your reflections from simple to complex, “assuming an order, even a fictitious one [if needed]” (p. 13). And lastly, as one might expect, check your work thoroughly.

As one realizes from his method, Descartes’s philosophy is mechanistic in nature, following chains of self-evident reasoning. By creating the distinction between mind and body he essentially breaks them apart and in turn places the mind above matter. He also implies that there is a constituted subject, the “I” of “I think, therefore I am.” Descartes’s subject is rational and, because he believed that all rational thinkers using the correct method would agree, universal in scope. Therefore, knowledge claims do not get caught up and filtered through untrustworthy sensory organs; rather, through reason they can be objectively assessed in regards to standard criteria. Additionally, this dichotomization of the mental and physical allows one to equate the body with a machine. As Doll (1993) writes, “mind now became associated with a particular part of the body, usually the brain. Ironically, Descartes’ dichotomous separation of mind and body resulted in the mind becoming another organ” (p. 113). In education, this led to faculty psychology, a belief that the mind is a muscle and needs to be developed using heavy

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16 For all of Descartes’s belief in the validity of mathematical “long chains of reasoning,” it was ultimately his faith in God which grounded his assertions of certainty. See Michel Serres’s play on Descartes reasoning in “Knowledge in the classical age: La Fontaine and Descartes” (1977/1983).

17 Again, the “maleness” of right reason is not to be overlooked. See Louise Anthony and Charlotte Witt’s *A Mind of One’s Own: Feminist Essays on Reason and Objectivity* (2002) and Rita Copeland’s *Pedagogy, Intellectuals, and Dissent in the Later Middle Ages* (2001)
“weights” such as Latin and mathematics. Although faculty psychology was discredited in the early 1900s by psychologists such as William James (Kliebard, 1986/2004, p. 6) it continued to influence education through the mechanized, linear concept of teaching it inspired.

Although grounded in deductive rationalism rather than the inductive empiricism of Bacon, Descartes was also highly instrumental as a proponent of the scientific movement. Indeed, the full title of his most influential work is *Discourse on the Method of Rightly Conducting the Reason and Seeking for Truth in the Sciences* (1637/1996), a rather long-winded title but nevertheless one that succeeds in describing the purpose of his book. Unfortunately, followers of both Descartes’s rationalism and Bacon’s empiricism have used their arguments in a quasi-Darwinian sense to demonstrate that nature is in essence an object that can be exploited.

Thanks to intellectuals such as Ramus, Bacon, and Descartes the seventeenth century became known as the Age of Reason and this showed in the two major philosophic schools of thought at the time—rationalism and empiricism. Following Descartes, rationalists such as Baruch Spinoza and Gottfried Leibniz used mathematics as the model for their knowledge. For example, in his highly influential work, *Ethics* (published posthumously in 1677), Spinoza lays out his ethical arguments mathematically, complete with (in order) definitions, axioms, propositions, and proofs. At the beginning of his first chapter Spinoza goes as far as to declare that his argument has been “Demonstrated in geometric order,” (1996/1677, p. 1) as if that confers on it the definitive stamp of truth. Influenced by Bacon, empiricists such as John Locke, George Berkeley, and David Hume took the physical sciences as their model for knowledge, seeking experience as the base for knowledge.

Although some rationalists and empiricists were at odds with each other, fiercely debating tenets of their views, many held that both views were compatible. Issac Newton (1643-
1727), an English member of The Royal Society, was one such thinker. Trained both as a mathematician and a scientist, Newton seamlessly blended inductive and deductive reasoning in his intellectual work. His prodigious three-volume work, *Philosophia Naturalis Principia Mathematica* (*The Mathematical Principles of Natural Philosophy*), was published in 1687 and contained Newton’s three laws of motion, his law of universal gravitation, and laws for the motion of the planets—all of which created a paradigm in physics that would last until the time of Albert Einstein (Kuhn, 1996/1962).

It is in the Age of Reason that the belief that knowledge is cumulative and necessarily creates progress came into vogue. This ushered in the 18th century era of thought known as the Enlightenment. The Enlightenment was a time of departure from the medieval approach of the scholastics and overarching control by the Church. Science was making huge strides in deciphering the natural world and this was partly due to quantification and measurability, which were taking on a previously unheard of importance. The common educated person of the time believed that with the right methods the secrets of the natural world would be laid bare. German philosopher Immanuel Kant (1724-1804) is perhaps the best known of thinker of the Enlightenment, yet in many ways Kant’s philosophy contained ideas that would cause a break away from the Enlightenment. By positing analytic and synthetic propositions Kant sought a middle ground between the rationalists and empiricists. Kant believed that through modern science and mathematics we can gain objective knowledge of the physical world, but unlike most thinkers of the day, he believed that the success of math and science was not necessarily transferable to other areas such as ethics (Kant, 1781/1998).

It is important to point out that many of the ideas on science and nature espoused during such time periods as the Age of Reason and the Enlightenment had dramatic ramifications.
outside the realms of science. The 17th, 18th, and 19th centuries were times of intense colonialism when, among others, the Ottoman Empire, Britain, Spain, France, the Netherlands, and the United States (after being a colony itself) were heavily invested overseas. The belief that the morals and values of the colonizer were superior to those of the colonized was very much a part of the prevailing thought and this was especially evident in the fledgling United States. On the one hand, Enlightenment ideals were espoused when Thomas Jefferson wrote that “all men are created equal, . . . endowed by their Creator with certain unalienable Rights, [and] that among these are Life, Liberty and the pursuit of Happiness.” Yet on the other hand, slavery and the hegemonic control over the indigenous populations were also authorized by those same Enlightenment ideals.

The next major thinker I will investigate in this abbreviated genealogy of methodology is the French philosopher Auguste Comte (1798-1857), a person many consider the father of sociology and founder of positivist philosophy. He was highly influenced by the scientific movement and was a firm believer of progress through science. Although relatively unknown in his time, his work proved highly influential after his death. As Robert Kanigel (2005) remarks, since “Comte came along in the mid-1800’s, the notion that human activity might yield its secrets to science as obediently as did nature had entered the very spirit of the age” (p. 217).

Comte is perhaps best known for his hierarchical law of three stages, a linear progression of stages he believed both society and individual branches of knowledge necessarily go through. "The law is this:" he writes, “that each of our leading conceptions—each branch of our knowledge—passes successively through three different theoretical conditions: the Theological, or fictitious; the metaphysical, or abstract; and the scientific, or positive" (Comte, 1853/1997, p. 71). As Comte explains, the theological stage is characterized by personified deities such as in
animism, polytheism, and monotheism where truth rests on revelations from the deity. In the metaphysical stage, phenomena—such as essences, existence, and substance—are explained by abstract forces. For Comte, this stage is only quasi-scientific and lacks maturity. The final and most advanced stage is the scientific stage. It is exemplified by a focus on the study of natural laws (the connections between observable facts) and the abandonment of metaphysical searches. Whereas Bacon had carved out a niche where other knowledge could exist apart from scientific knowledge, for Comte in the scientific stage the only legitimate knowledge can come from science, specifically analytical science. Therefore, the scientific method, with its emphasis on quantitative, mathematical decision making becomes paramount. In a sense, science replaces religion in this third stage.

The positivist philosophy Comte outlines has its roots in the empirical, rationalistic, and practical. In many ways it combines the thought of Bacon and Descartes while discarding any metaphysical “rubbish” they had left behind. It focuses exclusively on that which is observable and therefore testable and empirically verifiable. Hence, it looks only at facts and uses only the scientific method (a combination of observation, inductive and deductive logic, and theories). Comte argued that Western society had just entered the scientific stage and that a positivistic approach would be pervasive outside the hard sciences (of mathematics, physics, chemistry, etc). Indeed, Comte’s development of positivistic sociology proved highly influential to the burgeoning social sciences such as psychology. For example, the psychological school of thought exemplified by behaviorism is positivistic in nature because one focuses on describing behaviors scientifically without recourse to things that cannot be tested such as constructs of mind or internal physiologic events. Comte saw “engineers, builders, planners,” in other words, men with a firm grounding in science and mathematics, as the ones who would extend positivism
into other fields. In fact, the subject of the next section, Fredrick Taylor the father of scientific management, was one such man.

The Western world during the time-frame from Ramus to Comte had made leaps and bounds in science and technology in way never done before in history and a change in methodology was responsible—a change Alfred North Whitehead (1925/1967) believed to be the West’s greatest intellectual achievement. In many ways it was the philosophers and scientists of the West who struggled against the church’s control over ways of thinking who must be given credit. This change in scientific thinking is explained by Russell (1945), who writes, “it is not what the man of science believes that distinguishes him, but how and why he believes it. His beliefs are tentative, not dogmatic; they are based on evidence, not on authority or intuition” (p. 527; original emphasis). In many ways, by focusing solely on scientific knowledge Comte takes the philosophical trend of methodology to its extreme. Although science had thrown off the shackles of control by the church, some like Jean-François Lyotard (1984) would contend that science and method became the authority, the metanarrative, they sought to dispel. Indeed, this is one fault I find in all four of the thinkers I have examined. To quote Nel Noddings (2007a), “the individual knower with all her or his desires, allegiances, projects, and concrete history is reduced to a method. From the Cartesian perspective, it is not a full-body subject who creates knowledge; it is, rather, an epistemological subject—a mental mechanism” (p. 217; original emphasis).

Ramus, Bacon, Descartes, and Comte each posits specific methodology and confers a sense of universality to rational thinking, believing that every person does, indeed will, rationalize the same way. Noddings continues,
An epistemological orientation that seeks one right view through one right method induces a form of madness, the key characteristic of which is the delusion that one’s own views and conclusions must necessarily be those of every other rational thinker. Those who do not conform to the standard view and/or have not learned the right method are excluded. (p. 122)

It is the idea of the “excluded” ones that inspires much of my writing in the next chapter.

In hindsight, it is possible to see the “family resemblances” (Wittgenstein, 1958) between and among Ramus, Bacon, Descartes, and Comte. Although each was unique in his philosophical outlook, all four are intricately connected to the methodization movement that became central to American education in the twentieth century. Compte’s had asserted that a “new breed of men would arise” (Doll, 1993, p. 21), that of “‘engineers, builders, planners,’ and these technocrats would not only follow Nature’s Laws but actually improve them” (p. 21). This was taken to an extreme with Fredrick Taylor. The late 19th and early 20th century, with its host of mechanical inventions, mostly American, was in many ways a time of practical efficiency. The apex of this movement came with Fredrick Taylor and his application of scientific methods to industry and management.

**Fredrick Taylor and Scientific Management**

In 1868 Horatio Alger published his famous and influential novel, *Ragged Dick*. The book chronicles Dick, a young boot-black living in New York City. Orphaned and alone to take care of himself, Dick survives, prospers even, while his fellow boot-blacks live from day-to-day wasting their money on alcohol and petty amusements. Through a series of events showing off his wit, diligence, hard work, and virtue, a well-to-do businessman sees potential in Dick and gives him a chance to be something more than just a boot-black. Dick’s dispositions serve him
well and he quickly rises up through the ranks and becomes a well respected member of society. By the end of the novel, Ragged Dick begins introducing himself as Richard, a name more befitting the gentleman he has become.

*Ragged Dick* was a novel that exemplified the optimistic, idealistic thought of the day—one that had its basis in the Protestant work ethic and its particular sense of morality—that through wit, diligence, hard work, and virtue anyone could pull himself up by his boot-straps and become a wealthy, well respected person in society (unfortunately, this thought applied only if you were the right color and gender). Stories of the day often chronicled those individuals who had overcome meager beginnings to achieve success (as defined in terms of wealth). It was in the United States rather than Europe that such rags-to-riches stories thrived—so much so that they became known as the “American dream.” Although Fredrick Taylor (1856-1915) was born into a wealthy family and was lucky enough to have a cosmopolitan upbringing, the dispositions embodied by Ragged Dick were imprinted on him—wit, diligence, hard work, and virtue (loyalty to certain ideals)—and it was what he demanded from those working under him (although wit was only really needed at the managerial level).

Even though he came from a wealthy background and had been accepted to Harvard, Taylor chose to begin an apprenticeship in a factory. In 1879, when he was twenty three, he became a gang boss and from there his rise up the managerial ranks was swift. He was in his early twenties when his proclivity toward efficiency bubbled to the surface. Both as a worker and as a manager he had witnessed a tremendous amount of waste and corresponding lack of productivity. Taylor sought to optimize efficiency and profits in industry by controlling the details of every part of production. Taylor’s task was to get the most out of his men—to make sure that they, too, held true to the attributes of diligence, hard work, and virtue—that they would
become “first class.” It was only when he began methodizing the work and offering higher pay as an incentive that men began to work up to Taylor’s expectations. It is in the methodization of the work that scientific methods came into play. Taylor was dismayed that every worker seemed to have a different way of getting his work done. Not only did this lead to widely differing qualities of product, but it was also an inefficient use of time. With stopwatch in hand, Taylor broke down and timed each individual act that made up the larger act of production. Once he found the most efficient use of movement and time for each individual act, the “one best method,” he was able to extrapolate to determine how much time the larger act of production should take. From there he applied those best methods uniformly across the factory floor. Indeed, uniformity was the key to Taylor’s system.

Taylor’s method of scientific management called for developing a bureaucracy of managers to determine best practices and make sure that the workers were diligently following those practices. It rested on three principles. First, the managers of a factory must assume the role of gathering the knowledge essential to their purpose and “then of classifying, tabulating, and reducing this knowledge to rules, laws, and formulae”18 (Taylor, 1911/1947, p. 36). “Effective practices” became the buzzword and short-cuts were to be found so that time was not spent needlessly. The next principle sought to concentrate intellectual thought within the management. As Taylor wrote, “all possible brainwork should be removed from the shop and centered in the planning or laying-out department” (Taylor, 1903/1947, pp. 98-99). In this break between theory and practice, the workers were not expected, nor encouraged to think. Lastly, every part of the process, every task of the worker was laid out in meticulous detail. Each “task

18 Kanigal (2005) recounts a story in which after a day and a half of timed measurements Taylor figured out that working at full speed a man could lift 71 tons of pig iron per day. For no apparent reason he rounded it up to 75 tons per day and then “lopped off 40 percent, to allow for rest and unavoidable delay, and set forty-five tons per day as each man’s daily stint” (pp. 319-320). Interestingly, Taylor’s calculations often combined precise measurements with what seem to be personal whims.
specifies not only what is to be done, but how it is to be done and the exact time allowed for doing it” (Taylor, 1911/1947, p. 39). Since management controls the vital knowledge, they use it to regulate the workers precisely, and managers with stopwatches in hand patrol the factory floor on the lookout for inefficiency.

Harry Braverman (1975) remarks that while the notion of the management developing the “science of work” to the exclusion of the worker was intensely debated in its day, today it appears “natural” and “undeniable” (p. 114). Importantly, “a belief in the original stupidity of the worker is a necessity for management” (p. 108) and a central point underlying Taylor’s theory. Thus, craftsmen were degraded to unskilled laborers and the need for “best methods” became paramount.

Although Taylor does not have the name recognition of other industrial giants of the time, in many ways his influence was even greater. Take for example Henry Ford’s assembly line for the Model T in the early 1900s. From an early age children in the United States read about Ford’s famous innovation in their history textbooks, as well they should. The assembly line was revolutionary in the world of factories and helped put American industry on the international map. For many commentators, however, Taylor’s method of scientific management ranks even higher. Not only did Taylor’s ideas influence Ford’s assembly line design, but Taylor’s ideas had applicability outside industry, whereas for the most part Ford’s assembly line was confined to industry\(^\text{19}\) (Kanigel, 2005, pp. 11-12). Indeed, in the time following the publication of his monographs, Shop Management (1903/1947) and The Principles of Scientific Management (1911/1947), Taylor’s ideas were applied to such diverse areas as household work, the running of

churches, and, of course, education. As Jeremy Rifkin (1987) points out, Taylor “made efficiency the *modus operandi* of American industry and the cardinal virtue of American culture” (p. 106; original emphasis). Taylor’s ideas were not limited to the United States, however; his influence was international in scope. Only a few years after its release, *The Principles of Scientific Management* was translated into more than 11 languages including Japanese, Chinese, and Russian (Callahan, 1964; Kanigel, 2005). One European commentator declared that “the Taylor system is to Europe not only ‘an American lesson,’ it is the American lesson” (quoted in Kanigel, 2005, p. 11; original emphasis). Due to the deep international influence of Taylor’s ideas of efficiency and universal applicability, Jeremy Rifkin (1987) goes so far as to say that Taylor “has probably had a greater effect on the private and public lives of the men and women of the twentieth century than any other single individual” (p. 106).

Taylor’s work was relevant to schooling because the American educational system at the time was moving toward uniformity. By the mid-1800s teacher education at institutes of higher learning was becoming prevalent. From its inception, proper organizational techniques, efficient teaching methods, and uniformity were central to teacher education in the United States. With the rise of scientific management these points became even more of a focus.

**The Rise of Teacher Education**

In 1837 Horace Mann was appointed the first secretary to the Massachusetts State Board of Education, a governing body he had helped create. Under the direction of the Board, his duties were to “collect information of the actual conditions and efficiency of the common schools and other means of popular education; and diffuse as widely as possible . . . the most approved and successful methods of arranging the studies and conducting the education of the young” (Massachusetts State Board of Education and Secretary Horace Mann, 1838, pp. 5-6). During his
tenure as secretary, which ended in 1848, Mann tirelessly inspected school facilities and observed classrooms throughout the state. His recommendations were numerous and he oversaw sweeping institutional reforms. One issue that concerned him from the beginning of his placement, was how ill-prepared many teachers were. At the time, one did not need higher education in order to teach. In fact, even if one did attend a college or university, pedagogy was rarely, if ever, addressed. Instead of lobbying to incorporate teacher education into existing institutes of higher education, Mann fought to create a new institute whose sole focus would be training teachers—normal schools (Messerli, 1972).

Modeled on Prussian normal schools and influenced by the French École Normale, Mann opened the first state funded normal school in the United States in Lexington, Massachusetts in 1839. Like its Prussian counterparts, the curriculum of the American normal schools focused heavily on pedagogical methods and, for efficiency’s sake, confined content knowledge to the subject matter covered in the primary schools in which they would teach (Messerli, 1972). Focus on how to teach and what to teach superseded questioning what should be taught and why. In short, training competent technicians was more of a priority than educating critically-minded scholars.

One reason for the push toward teacher/technicians was that many involved in creating normal schools did not think their students had the same intellectual abilities as other students in higher education (Lagemann, 2000, p. 6). Teaching was not highly thought of as a career (and unfortunately still is not) and, prior to the proliferation of normal schools, many who became

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20 French priest and theologian Jean-Baptiste de la Salle (1651-1719) is widely considered to have created the first normal school in Reims, France in 1685. Because of his pioneering and selfless devotion to teaching, especially the education of the poor, he was canonized by Pope Leo XIII in 1900 (Graham, 1910). In 1950, Pope Pius XII proclaimed de la Salle the Patron Saint of Teachers.

21 In 1853 the school moved to Framingham, Massachusetts and, since 1968, has been called Framingham State College. It is also, incidentally, where my father now teaches.
teachers did so, not because they were called to it, but as a means of income while they pursued more respected and higher-paying professions. Class, gender, and race often played a role in who became career teachers—many did not have other options when it came to white-collar jobs. Those from lower socioeconomic status did not have access to university preparation education nor the financing on which those from more affluent families could count. Regardless of socioeconomic status, access to higher education for women in the mid-to-late 1800s was rare. As an advocate for women’s rights, all of the normal schools Mann helped create were either specifically set up for women or were at least coeducational. It was not surprising that women flocked to them. During Mann’s tenure as secretary of the board of education, the number of female teachers in Massachusetts increased 35 times as much as their male counterparts (Messerli, 1972). Race was another issue for which Mann was ahead of his time. As the first president of Antioch College (founded in 1852), Mann insisted that admissions be open to men and women of all races. Olivia Davidson, a graduate of Framingham State College (then called the State Normal School in Framingham) in 1881, helped Booker T. Washington open the Tuskegee Normal and Industrial Institute and later became the assistant principal (as well as his wife).

Unfortunately, for all of the gains in terms of class, gender, and race, there were also losses. One was the prevailing belief that teachers, especially female teachers, were not as academically competent as needed to be self-governing (Lagemann, 2000, p. 6). Because of this, supervisory positions (held by white men) proliferated over the ensuing years. By the late 1800s

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22 The list of notable graduates from the Normal School in Lexington (now Framingham State College) is long and distinguished. It includes: Rebecca Pennell Dean, the first woman professor in the United States (Antioch College in 1853); Lucretia Crocker, professor or mathematics and astronomy as well as first woman supervisor of the Boston Public Schools (1873); Anna C. Brackett, first woman named as principal of a normal school (St. Louis Normal School in 1861); Maria Eaton, first professor of Chemistry at Wellesley College (1877); and Olivia Davidson, wife of Booker T. Washington who, with him, ran the Tuskegee Normal and Industrial Institute (1881).
teaching had become uniform and mechanized in many districts and schools. As early as 1885 (Taylor’s sixth year in the managerial ranks) educational commentator John Philbrick wrote about his belief that the educational system must be perfected by finding the one best way of doing everything. As he wrote, “Modern civilization is tending to uniformity and unity. . . . The best is best everywhere” (quoted in Tyack, 1974, p. 40; emphasis added). In his book, The One Best System (1974), David Tyack clarifies the thinking behind the educational structure at the turn of the century. He writes, “to make the one best system work the schoolmen also had to design a uniform course of study and standard examinations. Since promotion and grading depended on examinations and examinations upon the curriculum, all learning had to be carefully structured” (p. 45). Because of the focus on what was included in the examinations, textbooks (written by subject specialists) increasingly became a source of authority in the curriculum. Many teachers bristled at this centralization. Massachusetts high school teacher Horace Willard spoke for many when he addressed the New England Association of Colleges and Preparatory Schools in 1890. He explained that he felt “Teachers lived lives of ‘mechanical routine’ and were subjected to a ‘machine of supervision, organization, classification, grading, percentages, uniformity, promotions, tests, [and] examinations.’ Nowhere in the school culture was there room for ‘individuality, ideas, independence, originality, study, [or] investigation’ ” (quoted in Powell, 1976, p. 4). For most in the profession, it would only get worse when Taylor’s method of scientific management was applied to education in the early 1900s.

The Making of “Scientific” Education

By the 1900s there was a move toward making teacher education more rigorous and scientific, in short, to make it more professional. As a result, many normal schools eventually evolved into state colleges or state universities while other institutions, especially private
universities, started their own teacher education programs. Ellen Lagemann (2000) reminds us that “as the university study of education became professionalized, its association with—‘woman’s work’—came into play. Especially at the elite eastern universities, the association of education with “woman’s work” marginalized the new ‘ed schools’ relative to other facilities” (pp. 15-16). In order to gain the respect of their peers from other departments and colleges at the university, those from the “ed school” focused on the “scientific” (objective) investigation of education. Using methods from scientific management was one way they sought to increases the credibility of education as a scholarly endeavor. Another was to enlist help from the burgeoning field of psychology. Both ways became intricately tied together and depended on the other for support.

Three people who were highly influential in bringing scientific management into education were Frank Spaulding, John Franklin Bobbitt, and Ellwood P. Cubberley. As part of the Social Efficiency movement, they looked on schooling as the lubrication used to keep society running smoothly—a response to the social forces put in motion by industrialization. Society was changing dramatically at that time and it was thought that “the school with a scientifically created curriculum at its core could forestall and even prevent calamity” (Kliebard, 1986/2004, p. 24). Importantly, the science they were talking about was different from the way John Dewey talked about science—it was less flexible and more dogmatic. For people involved in the social efficiency movement, science meant using “exact measurement and precise standards in the interests of maintaining a predictable and orderly world” (p. 76); a thought that still echoes in the 2000s. In fact, it is thanks in part to the work of Frank Spaulding, John Franklin Bobbitt, and Ellwood Cubberley, that the dominant educational metaphor of the twentieth century was taken from corporate management (Kliebard, 1970b, pp. 51-52).
Spaulding, Bobbitt, and Cubberley all came from administration and had found Taylor’s method applicable to education, but each went about applying it in different ways. Spaulding was more concerned with cost accounting; Bobbitt was more concerned with the mechanization of teaching; and Cubberley fell somewhere in the middle. Disturbingly, all used industrial vocabulary when speaking of educational topics. Spaulding often referred to schools as “plants,” i.e. “plant number 9 represents an investment of $131.00 per pupil . . .while that of Number Eleven represents an investment of $411.00 per pupil” (Spaulding, quoted in Callahan, 1964, p. 70). Bobbitt repeatedly used the term “workers,” interchangeably with teachers; i.e. “Directors and supervisors must keep the workers supplied with detailed instructions as to the work to be done” (Bobbitt, 1912, p. 8). And Cubberley spoke of students as raw products and materials to be shaped by teachers and administrators (Cubberley, 1916, p. 338).

As a superintendent, Spaulding had studied Taylor’s writings and applied Taylor’s method to the schools in Newton Massachusetts (Callahan, 1964, p.66). He summarized the important components of their application in three points. First, the results of assessment are measured and compared. Next, the methods of instruction and time taken for instruction are analyzed in connection to the results. And lastly, those results which prove most efficient and effective are adopted (p. 67). Each of these components became integral to schools working in Spaulding’s district, but he also took it a step further and compared what he deemed to be the “quality of education” of each school among schools in his district.

In order to assess the quality of education not only did he need to know the results of tests but also needed to place a numerical value on the subjects taught—“5.9 pupil-recitations in Greek are of the same value as 23.8 pupil-recitations in French” (p. 73). As a superintendent he was concerned with the quality of education in his schools but also, importantly, with the district
budget. When he compared the quality of education among schools in his district he correlated it to school expenditures. By analyzing cost/product he intricately connected industry and education. In fact, as Raymond Callahan points out, Spaulding was as much if not more of an industrial accountant as he was an educator:

[In the end,] Spaulding’s conceptions of scientific management obviously amounted to an analysis of the budget. . . . His scientific determination of educational value turned out to be a determination of dollar value. His decisions on what should be taught were made not on educational, but on financial grounds. (p. 72; original emphasis)

In 1920 Spaulding went on to become the chair of Yale University’s fledgling Department of Education and there introduced generations of educators and administrators to the cost accounting of scientific management (p. 67).

John Franklin Bobbitt, on the other hand, was not as concerned with finances as he was with the nuts-and-bolts of teaching. In 1918 he published one of the most influential books of its time, simply titled, The Curriculum. As Pinar, Reynolds, Slattery, and Taubman (1995) write, this “book crystallized a field that had been developing for many years” (p. 70). Bobbit’s interest in Taylor’s ideas was evident early in the 1910s when he wrote “The Elimination of Waste in Education” (1912) and “The Supervision of City Schools: Some General Principles of Management Applied to the Problems of City-School Systems” (1913). As one might expect from a professor of educational administration (at the University of Chicago), Bobbitt concentrated educational power in the administrative ranks.

In Bobbit’s conception, the curriculum was to be determined without any collaboration with teachers. Standards and objectives were set based upon what administrators and other specialists thought to be most important. So too were those methods deemed most efficient and
effective. “The burden of finding the best methods is too large and too complicated” he emphasized, “to be laid on the shoulders of the teachers” (Bobbitt, 1913, p. 52). He searched for the best methods by varying instruction and setting time specific objectives (à la Taylor), such as “the ability to add at a speed of 65 combinations per minute, with an accuracy of 94 per cent” (pp. 14-15). Once those best methods were found, teachers were obligated to follow them. “Teachers cannot be permitted to follow caprice in method” he asserted. “When a method which is clearly superior to all other methods has been discovered, it alone can be employed” (p. 95; emphasis added). Without regard to myriad possible problems associated with discovering a “best method,” it was a teacher’s duty to apply it unquestioningly. “Proclaiming the value of the freedom of the teacher was perhaps justifiable under our earlier empiricism” (p. 95), he writes, but now it is “a cover for ignorance and indolence [on the part of the administrator]” (p. 95). This took away teachers’ freedom, Bobbitt conceded, but because the best methods were found using scientific principles, teachers’ “limitations are those of [scientific] law and not the limitations of personal arbitrary authority” (p. 93). Indeed, this appeal to the authority of science was found in other thinkers such as Bacon, Descartes, Comte, and Taylor (to mention just a few).

“Best methods” were not only good for determining the students’ proficiency, Bobbitt thought, but also the teacher’s expertise in following the method (rather than the teacher’s expertise in teaching). When a “best method” was discovered, the assessment, for Bobbitt, would not be a reflection on the teacher’s subject knowledge or ability to connect with his or her students but rather, for all practical purposes, the teacher’s deviance from that method. As you can imagine, this led to standardizing the qualifications required to be a teacher as well as the development of other schemes to measure teacher effectiveness. Although assessing teachers
certainly has its place, Bobbitt took it to a whole new level. For Bobbitt, Callahan (1964) remarks, educators are “to be machines, not philosophers” (p. 84).

Like Spauling and Bobbitt, Ellwood Cubberley also began his foray into scientific management as a school administrator. In 1898 he moved to California to teach at Stanford University and would eventually become Dean of Education there from 1917-1933 (Lagemann, 2000, p. 76). He is well known for writing extensively on the history of American education and for his 1916 book, *Public School Administration*, a standard text of which administrators across the country were familiar (Callahan, 1962, p. 96). In *Public School Administration* he strongly recommended that the job of administrator become a profession rather than occupation. The difference, for him, meant the change “from a job dependent on political and personal favors to a scientific service capable of self-defense in terms of accepted standards and units of accomplishment” (p. 328). Certainly, the move away from “political and personal favors” as criteria for employment is important, but just how far toward science must one go? Can one move away from cronyism and still think of running a school as an art rather than a science?

Social efficiency was a primary concern of Cubberley and he advocated democratic ideals. Democratic ideals, for him, were connected to meritocracy. This meant that everyone is given equal opportunities at first, but as individuals distinguished themselves they will naturally rise higher than their peers. As they rise, they move on to more specialized courses. It is in this way that those who will eventually become leaders are distinguished from those who will become followers. Schools are the places, Cubberley thought, where students must be trained to fulfill their role in the social order. He also thought that schools must be the places where immigrants are assimilated into “American” culture. The administrator’s job is to use scientific
principles (à la Spaulding and Bobbitt) to help ensure this process takes place. It is worth quoting at length from a passage from *Public School Administration*:

> Our schools are, in a sense, factories in which the raw materials (children) are to be shaped and fashioned into products to meet the various demands of life. The specifications for manufacturing come from the demands of twentieth-century civilization, and it is the business of school to build its pupils according to the specifications laid down. This demands good tools, specialized machinery, continuous measurement of production to see if it is according to specifications, the elimination of waste in manufacture, and a large variety in the output. (Cubberley, 1916, p. 338)

In this conception of schooling, teachers simply follow the administrators lead and let them dictate educational policy.

In education one can see Taylor’s influence in different contexts. From Spaulding, Bobbitt, and Cubberley’s perspective the administrators and specialists become the management while the teachers become the workers. From another perspective, the teachers become the management while the students become the workers. Both of these perspectives are influential in American education. Tetsuo Aoki (1986) writes about the former conception and calls it “curriculum-as-planned.” According to Aoki, curriculum-as-planned usually originates outside of the classroom, perhaps in a school district or state department of education, and inevitably includes the planners own presuppositions and assumptions of what knowledge is of most worth and the best way to pass on said knowledge. It relies on managerial techniques such as programs of study, curriculum guides, and pre-made lesson plans, and the danger is that teachers have the possibility of being looked on as instruments and reduced to merely installers and reproducers of the curriculum. One can see the connections between “teacher-proof” curricular materials in the
1960s and 1970s and the role of the worker in Taylor’s management system. When teaching is looked upon not as an intellectual act but rather as one of installing or reproducing, it de-humanizes teaching.

The latter conception has connections to the behaviorist teaching methodology Paulo Freire decries in his book *Pedagogy of the Oppressed* (1968/2003). In this method of teaching, what he calls the banking concept, the dynamic between the teacher and students is one primarily concerned with the transfer (or depositing) of knowledge from the former into the latter. Freire’s primary concern with this methodology is an ethical one because the main focus of this type of teaching is on preserving the status quo (one filled with inequalities). The analogy to banking is apt because, with this way of teaching, the knowledge or ways of knowing are simply deposited to be withdrawn at another time (test time). Once deposited, the information is not changed or modified, it stays the same. Therefore, students are indoctrinated into ways of knowing and types of knowledge without being given the chance to think critically and creatively about them.

From the methodization of how to teach efficiently and effectively to the bureaucratic hierarch it inspired, the implications for Taylor’s methods of scientific management to the field of education are numerous. His ideas were not only appropriated by school administrators but also by many of the professors in teacher education programs as well.

**Educational Psychology Takes Root**

*James, Dewey, and the Questioning of Dogmatic Science*. It was in the mid-to-late 1800s that psychology broke away from philosophy and became field unto itself (Menand, 2001, p. 259). Philosophers often discussed matters of the mind, but one of the reasons that necessitated the break was that psychology relied on scientific experimentation rather than introspection. At that time, psychology was dominated by empirical (quantitative) and
positivistic ideals. Before discussing the educational psychology of those whose theories resonated well with those ideals, I would like to discuss the theories of two scholars whose ideas were often in discordance with positivism—William James and John Dewey. One reason they must be included is because of just how different their ideas on “scientific” education and educational psychology were from most of those researchers who would lead the field in the new century. Both had widely diverse intellectual backgrounds and were closely associated with philosophy as well as psychology. Both were also among the first presidents of the fledgling American Psychological Association (APA, founded in 1892). James held the office twice, in 1894 as well as 1904, while Dewey’s term was in 1899 (APA, n.d.).

William James was one of the first Americans to study psychology in Europe and became the first to establish a psychology laboratory in the United States when he did so at Harvard in 1875 (Menand, 2001, p. 260). His book, *The Principles of Psychology* (1890/1918), was groundbreaking in the field. He did, however, often clash with his colleagues over the scope of psychology. Daniel Bjork (1982) reminds us that mental disorders did not always fit under the umbrella of scientific psychology. “James’s attempt to define experimental psychology, particularly his insistence that the underworld of subliminal consciousness, and even pathological mental forces, be treated as scientific psychology, troubled and often infuriated fellow psychologists” (pp. 6-7). Again and again, one realizes that James’s beliefs about what constitutes the “scientific” were not the standard thought of the day in the United States.

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23 James irritated many “scientific” psychologists with his interest in religion and other “mystical” ideas. An example of significance is when the renowned Buddhist Dharmapala visited Harvard to attend one of James’s lectures in the early 1900s. When James recognized him, he is reported to have said, “Take my chair. You are better equipped to lecture on psychology than I.” After Dharmapala outlined a few of the major Buddhist doctrines, James turned to his colleagues and said, “This is the psychology everyone will be studying twenty-five years from now” (Quoted in Fields, 1992, pp. 134-135).
James was one of the first to connect education and psychology when, in 1892, he gave a series of public lectures to teachers from Cambridge, Massachusetts. Those lectures, *Talks to Teachers on Psychology: and to Students on Life's Ideals*, were subsequently published in 1899. Although he discusses much in the 300+ pages, I would like to focus here on his conceptions of science and objectivity because of the connections and divergences they have with the scientific ideas that influenced education. Early on in the lectures, James elaborated on his idea of objectivity. “The truth is too great for any one actual mind” he wrote, “There is no point of view absolutely public and universal. Private and incommensurable perceptions always remain over, and the worse of it is that those who look for them never know where” (1899/1916, p. v; original emphasis). This pluralistic belief that any singular point of view is limited is similar to Nietzsche’s belief in perspectivism (both of which I will discuss in further detail in chapter four). Closely aligned with pluralism is the idea that science is fallible—that our best justified claims to knowledge can be mistaken. Both pluralism and fallibilism are opposed to the positivistic science espoused by Comte and others.

It is perhaps in James’s essay *The Will to Believe* (1897/1921) that his attack on positivism is most severe. For James, science is socially and historically situated. In other words, he believes scientific inquiry is informed by one’s experiences and aspirations. Tastes, values, hopes, these things all play a role in what is studied and, to some extent, the conclusions reached. Not surprisingly, he advises caution when interpreting scientific results. Instead of passively accepting them because they bear the stamp of “science,” one must take those results as provisional and imperfect. As Menand (2001) writes, for James “the mistake is not simply

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24 This point is put forth by other pragmatists such as John Dewey. For example, see Dewey’s *The Reconstruction in Philosophy* (1920/1988), *The Quest for Certainty* (1929/1988), and “Sources of a Science of Education” (1929/1988). It was also taken up by Karl Popper in the mid-1930s in his book *The Logic of Scientific Discovery* (1934/1959) and later in *Conjectures and Refutations* (1963/1969).
endowing science with an authority it does not merit. It is turning one belief into a trump card over alternative beliefs. It is ruling out the possibility of other ways of considering the case” (p. 143). Moreover, James questioned the applicability of psychological studies directly to education. “You make a great, a very great mistake,” he wrote, “if you think that psychology, being the science of the mind’s laws, is something from which you can deduce definite programmes and schemes and methods of instruction for immediate schoolroom use” (James, 1899/1916, p. 7). Because teaching is an art, it cannot be directly generated out of science. The role science can play, however, is to lay down the lines of the playing field for the art, “laws which the follower of the art must not transgress; but what particular thing he shall positively do within those lines is up to his own genius. One genius will do his work well and succeed in one way, while another succeeds as well differently” (p. 8). He concludes, “To know psychology, therefore, is absolutely no guarantee that we shall be good teachers” (p. 9). Many administrators and educational psychologists would disagree with his assessment.

Like James, Dewey was concerned with the unquestioning acceptance of scientific findings. In fact, in one of his early essays, “The Reflex Arc Concept in Psychology” (1896/1972), he challenges the mechanistic approach of the reflex arc concept, a well established psychological theory at the time.25 It is not a reach to consider his essay a critique of the connectionist/behaviorist psychological school of thought before that school of thought was even established. Dewey was also worried about the split that was enlarging between psychology and

25 The reflex arc is a stimulus-response interaction—a reflex action—in which events unfold in a linear fashion. A classic physiologic example is the patellar reflex. If the patellar tendon is struck just below the kneecap it causes the quadriceps to flex and extend the lower leg. The failure of this reflex is sign of possible neurological disorder and/or nerve damage. Many early psychologists appropriated this physiologic theory, proposing behavior to be mechanistic chains of causal relations. Dewey, however, questions the linearity of the reflex arc, contending instead that stimulus and response are mutually constituted. He writes, “This circuit is more truly termed organic than reflex, because the motor response determines the stimulus, just as truly as sensory stimulus determines movement (Dewey, 1896/1972, p. 102).
philosophy. He saw an intricate relationship between the two that was being torn asunder with each becoming more isolated. The laboratory school he created while teaching at the University of Chicago could not be classified strictly as a psychological laboratory because he never let it lose its deep connections with philosophic theories.

Dewey was a proponent of scientific “methods,” but his ideas on methods were much more holistic, adaptable, and emergent and less dogmatic than was typically common. In “Sources of a Science of Education” (1929/1988) he writes, “the existence of scientific methods protects us also from a danger that attends the operations of men of unusual power; dangers of slavish imitation partisanship, and such jealous devotion to them and their work as to get in the way of further progress” (p. 5; emphasis added). In fact, for Dewey, scientific methods “militates against … the transformation of scientific findings into rules of action” (p. 9). Tradition in the field is important, but one must not be lulled into acquiescence. For Dewey, science itself, like teaching, is an art—one that necessarily invokes an individual’s personality and “unique gifts.” Methods need to be flexible and emergent in order to attend to this subjective element.

One worry Dewey had about “scientific” education was that “those who recommend science sometimes urge that uniformity of procedure be its consequence” (p. 5). He wrote,

When, in education, the psychologist or observer and experimentalist in any field reduces his findings to a rule which is uniformly adopted, then, only, there is a result which is objectionable and destructive of the free play of education as an art. . . . This happens not because of scientific method but because of departure from it. (p. 6)

When rules and recipes are forced onto teachers it basically turns them into “unskilled day laborers” (p. 6) rather than the critical and creative thinkers they should be. Unfortunately, many prospective teachers come into education looking for scientifically based “recipes” because
science is thought to put “a stamp of final approval upon this and that specific procedure” (p. 7). What is forgotten is that the complexity of the classroom works against inflexible rules and methods. Educators must contend “with situations that never repeat one another. Exact quantitative determinations are far from meeting the demands of such situations, for they presuppose repetitions and exact uniformities” (p. 33). Again, the danger with “scientific” education is that the subjective elements of the classroom are either forgotten or else educators think they need to be oppressively controlled.

James’s and Dewey’s ideas prefigure a similar argument Thomas Kuhn would make in the early 1960s about science and scientists. As a physicist and historian of science, Kuhn was concerned with the way science develops. One might think that science and objectivity go hand-in-hand, but in his work titled, “The Function of Dogma in Scientific Work” (1961/1963) Kuhn shows that this taken-for-granted assumption is often far from the case. He explains that “though the scientific enterprise may be open-minded . . . the individual scientist is very often not” (pp. 347-348). Individual scientists are sometimes too involved with the work they are doing to question the social, historical, and subjective aspects of their work. Too often the scientist seems to know, before his research project is even well under way, all but the most intimate details of the result which that project will achieve. If the result is forthcoming, well and good. If not, he will struggle with his apparatus and with his equations until, if at all possible, they yield results which confirm to the sort of pattern which he has foreseen from the start. (p. 348)

In other words, scientists can get trapped within a tradition or way of thinking and almost unconsciously resist ideas that call their dogmatic beliefs into question.26

26 A quarter of a century earlier, Heidegger (1938/1977) made a distinction between scholar and researcher that had similarities to Kuhn’s thoughts on scientists. One fundamental difference, Heidegger
Although James was one of the first to connect education and psychology, it is really through Dewey that many educators came to know his work (whether they knew it as his or not). During the first part of the 20th century, Dewey was widely read and highly influential in educational circles (as well as in philosophic circles). After World War I, however, his influence in education waned and the influence of Edward Thorndike grew. In her historical study on educational research, Ellen Lagemann (2000 & 1989) explains that it was Thorndike and his followers who were instrumental in shaping educational research rather than Dewey and his followers. She writes, “one cannot understand the history of education in the United States during the twentieth century unless one realizes the Edward L. Thorndike won and John Dewey lost” (Lagemann, 1989, p. 185; see also Lagemann, 2000, p. xi, & p. 22). Similarly, David Cohn and Carol Barnes (1999) remark that “Dewey’s ideas never became a regular part of the research and graduate education mainstream . . . [These] were instead largely defined by Thorndike’s views, his agenda for inquiry, and his graduate students” (p. 20). That is not to say that Dewey and his followers faded into the background, their influence would wax and wane over the years, but Thorndike’s would stay consistently strong. What were Thorndike’s ideas and why were they so pervasive in education?

**Connectionism, Behaviorism, and Educational Psychology.** At the end of the 1800s one of the dominant ideas in education was the classical liberal idea of faculty psychology. Faculty psychology is the belief that the mind is made up of distinct faculties (such as memory, reasoning, etc.) and if one “exercises” these faculties using heavy “weights” such as Latin, mathematics, and literature the training would transfer over to other subject areas. Most often,
this training consisted in rote memorization. Although called “psychology,” it was actually associated more with moral philosophy. Furthermore, it was not “scientific” because its claims were not supported by measurements or quantification (Bjork, 1982, p. 6). As a professor at Harvard, James and his students sought to demonstrate the limitations of faculty psychology. One of those students, Edward Thorndike, was working on his master’s degree with James before moving onto Teachers College for his Ph.D. under James Cattell (who became president of the American Psychological Association after James in 1895). While at Teachers College, Thorndike’s psychological interests took a different path than those of James.

From early on Cattell was committed to developing psychology into a quantitative science. In an article for *Philosophical Review,* he wrote about the interrelated natures of science, quantification, and measurement. He wrote:

> The history of science is the history of measurement. Those departments of knowledge in which measurement could be used most readily were the first to become sciences, and those sciences are at the present time the furthest advanced in which measurement is the most extended and exact. Mathematics is concerned entirely with number and quantity, and has always been allowed a position more secure and permanent than the physical sciences. (Cattell, 1893, p 316)

Because of their connection with mathematics, mechanics and physics have an esteemed place in the sciences, one to which psychology should aspire. “Psychology cannot attain the certainty and exactness of the physical sciences,” he wrote, “unless it rests on a foundation of experiment and measure” (1890, p. 373). It is unsurprising that under the tutelage of Cattell, Thorndike focused his interests on psychometrics, the quantification of mental capacity, thought processes, etc. through the design, administration, and interpretation of psychological tests. Like Cattell, he
became a pioneering figure in the measurement movement in psychology. One reason Cattell’s and Thorndike’s ideas were so pervasive was because they fit nicely with the empirical (quantitative) and positivistic ideals of the time.

Both Cattell and Thorndike were concerned with the ambiguity James and Dewey allowed for in science. The more something could be quantified, the better it could be understood, they thought. “Whatever exists at all exists in some amount.” Thorndike (1918) wrote, “To know it thoroughly involves knowing its quantity as well as its quality” (p. 16). The aspects of human consciousness with which James was so interested was precisely what Thorndike wanted to do away with. In fact, Thorndike wrote of his hope "that psychology may be, at least in part, as independent of introspection as physics" (Thorndike, 1911, p. 5).

Thorndike played an instrumental role in the formation of behavioral psychology and psychometrics and his influence was felt throughout the field of psychology and science. Like James, Cattell, and Dewey before him, Thorndike became president of the American Psychological Association (in 1912). In 1935 he helped establish the Psychometric Society and was its second president (1936-1937). Additionally, like Cattell, served a year as president of the American Association for the Advancement of Science (Cattell in 1924 and Thorndike in 1934). Thorndike is best known for the psychological theory of connectionism, one he derived primarily from his work with chickens, cats, and other animals. The foundation of connectionism is the stimulus-response theory. Simply put, learning is fundamentally strengthening the relationship between stimulus and response. There are three primary laws of Thorndike’s connectionism: the law of effect, the law of exercise, and the law of readiness. He discusses them in his 1911 book titled *Animal Intelligence*. The law of effect describes responses strengthening when accompanied by satisfaction and weakening when accompanied by discontent. The law of
exercise states that when repeated, stimulus-response connections are strengthened; when not
used, they weaken. Lastly, the law of readiness states that when ready to achieve some goal, it is
satisfying to do so; when one is interfered with when pursuing a goal, frustration results
(Thorndike, 1911, pp. 244-250).

Unlike faculty psychology, which suggests training from one subject can transfer to
another, Thorndike contended that academic subjects are beneficial only because of the specific
skills and facts that they can confer. In other words, the transfer is particular rather than general.
This gelled nicely with educational thought, because at the time many parents, educators, and
students were arguing that the classical curriculum (composed of Greek, Latin, ancient and
medieval history, etc.) was not applicable to 20th century life. This led some educational
psychologists to take the extreme view that because training is specific to job at hand, what is
taught at school only has value if it is used in the future. Among other things, this led to the idea
that students should be tracked based, not on their interests or aspirations, but on what an
objective measurement of their intelligence says they have the aptitude to be. Indeed, the fact
that Thorndike was adamant in his genetic determinism was much of the reason why he
championed the fledgling intelligence-testing movement. As his career progressed, Thorndike
applied his theories to “meaningful” academic subjects such as spelling and reading (Thorndike,
1921) and mathematics (Thorndike, 1922b).

It is important to note that as Thorndike developed and applied his theories, he did not
like to visit classrooms. For Thorndike, educational research did not necessarily have to be done
in schools. In fact, “Thorndike felt confident that he could enhance a teacher’s performance

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27 Dewey was more influenced by evolutionary theory than the mechanistic approach of Thorndike. As
Eric Bredo (1998) points out, “Dewey gave priority to activities rather than to entities. A psychology
based on activity depicted organisms as acting to alter their own stimuli rather than being prodded from
behind to respond” (p. 447). It is in this way that Dewey’s critique of the reflex arc concept can also be
seen as a critique of connectionism and behaviorism.
without ever watching that teacher teach” (Lagemann, 2000, p. 234). Why spend time in school when what the educational psychologist (the psychometrician) should be doing is spending “arduous years in devising, testing, and standardizing units of measurement, in searching for convenient arbitrary zero-points, and eventually for . . . the errors of measurement” (Thorndike, 1905, p. 446). Teachers play a strictly subordinate role in Thorndike’s conception of the educational hierarchy. They install the curricula given to them by the educational psychologist rather than collaborate in its creation. In *The Principles of Teaching Based on Psychology* (1906/1922a), Thorndike asserted that the administrators of a school must decide the aims and objectives for the school. “Having decided what changes are to be made they entrust to the teachers the work of doing them. The special problem of the teacher is to make these changes as economically and as surely as is possible” (p. 6). It is no wonder Thorndike’s ideas were so readily picked up by the followers of Taylor’s scientific management. Taylor’s three principles seamlessly fit with Thorndike’s conception of the roles of administrators, educational psychologists, and teachers. Although theory and practice have historically been separated in American education, the conflation of scientific management and connectionism/behaviorism helped to further widen the gulf (and concerned John Dewey greatly). Besides the problematic nature of distancing teachers from educational theory, Thorndike’s ideas never really took seriously the lives of the students or the teachers. Their experiences, interests, etc. seem irrelevant (yet a key aspect of Dewey’s educational thought).

Thorndike’s connectionism served as the groundwork for the theory of behaviorism developed by John B. Watson. Perhaps surprisingly, Watson was a former student of John Dewey when working on his Ph.D. at the University of Chicago. He, too, would become president of the American Psychological Association (in 1915). Although there are certainly
points of departure between Thorndike and Watson, each had some important similarities in their theories. Chief among them was that psychology should be concerned with behavior related to stimulus and response rather than human consciousness. In fact, Watson began his influential 1913 article with the following words: “Psychology as the behaviorist views it is a purely objective experimental branch of natural science. Its theoretical goal is the prediction and control of behavior. Introspection forms no essential part of its methods” (p. 158). He went on to write:

I believe we can write a psychology . . . [and] never use the terms consciousness, mental states, mind, content, introspectively verifiable imagery, and the like. . . . It can be done in terms of stimulus and response, in terms of habit formation, habit integration and the like. . . . In a system of psychology completely worked out, given the response the stimuli can be predicted; given the stimuli the response can be predicted. (pp. 166-167)

This led to a mechanistic view of people that dominated educational thought after World War I. A corollary theory is that if the students are not learning, the teacher must be doing something wrong. In his 1924 best-seller, Behaviorism, Watson infamously advocated, with a few provisos, that the nurturing one receives is much more important than one’s nature. He wrote,

Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might select—doctor, lawyer, artist, merchant-chief and, yes, even beggarman and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors. (Watson, 1924/1997, p. 82)

Although this was a different take from Thorndike’s genetic determinism, both would agree that with the proper objectives and methods of instruction (followed diligently, of course) anyone should be able to teach well, and any “healthy,” “well-formed” student should be able to learn
well. Again, it is easy to see why the theories of Thorndike, Watson, and their followers fit so easily with Taylor’s methods of scientific management proposed by Spaulding, Cubberley, Bobbitt, and others. It is also easy to see how such modern-day buzzwords as “data driven,” “evidence based research,” “best practices,” and “performance outcomes” could spring forth during this time.

**Concluding Remarks**

In this chapter I sought to trace out some of the historical roots of the American educational system’s obeisance to strict methods. From Ramus to the instigators of the scientific revolution such as Bacon and Descartes, from Comte’s positivistic science to Tyler’s scientific management, “method” has played a crucial role in Western intellectual, social, and economic thought and development. It is not surprising, therefore, that education would also be a place where “methods” would have a strong impact. These impacts became pronounced at the turn of the 20th century, and from that time on, educational reforms have overwhelmingly revolved around methods from science and business, with a myopic vision of each.

As teacher education began to take root in American universities rather than normal schools, the professors associated with those universities sought to put education on the same level as other academic disciplines. In order to strengthen the perception of educational studies, they endeavored to make it more scientific, and the burgeoning fields of scientific management and educational psychology provided that foundation. Universities, therefore, became the grounds from which such educational theory was promulgated. Well respected research universities such as Columbia University’s Teachers College (where Thorndike taught for over 40 years), the University of Chicago (where Bobbitt and Watson taught), Stanford (where Cubberley taught), Yale (where Spaulding taught), and Johns Hopkins (where Watson taught
after Chicago) were hotbeds for turning out administrators, psychologists, and researchers steeped in scientific education. So sweeping was this conversion that before long the majority of educational research fit into this mold. Ellen Lagemann (2000) describes the situation well. When one looks back, she writes, one finds that the field “was really quite shapeless circa 1890 and quite well shaped by roughly 1920. By that date research in education had become more technical than liberal. It was more narrowly instrumental than genuinely investigatory in an open-ended, playful way” (p. 236). Knowledge was defined in utilitarian terms and scholarship that did not fit into the accepted discourse was marginalized. Lagemann continues,

Equally important, the psychology that had come to stand at the core of educational scholarship was not only excessively and narrowly behavioristic, but also distinctly more individualistic than social. It simply ignored the degree to which multiple factors, including subtle interactions between and among individuals, groups, cultural traditions, and social structures, all combine to influence teaching and learning. (p. 236)

Because of the dominance of the discourse it would be years before marginalized topics could exert sustained influence.

In chapter three I investigate education after World War II. Cold war politics set the stage for much of the educational change that would happen from the 1950s through the 1980s. Not only would the federal government begin to play an increasingly significant role in reform, but new psychological schools of thought began to challenge behaviorism’s control over educational psychology. It was in the social unrest of the 1960s and 1970s that issues of equity, politics, race, gender, and identity became increasingly more prevalent in educational debates and policy.

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28 It is because of such long-standing connections with the American Psychological Association that educational research is written using the APA guidelines rather than those used in other academic disciplines such as the Chicago Manual style (CMS), Modern Language Association Style (MLA), or Council of Science Editors Style (CSE, previously CBE).
Chapter 3

Curriculum Thought after World War II: Contending and Contentious Voices

Introduction

In chapter two I sought to delve into the roots of the methodization movement that runs rampant in American education. My purpose for this chapter is to give a feeling of the contending and contentious voices present in American educational discourse since World War II.

World War II was a primary factor in the educational reform that took place in the second half of the 20th century. Although the post-war 1940s and 1950s are often thought of in nostalgic terms as a time of prosperity and stability in the United States, it was also a period of social and political upheaval. The seeds for the Cold War were sown with Soviet expansion in Eastern Europe and the Berlin Blockade (1948-1949). Then, in 1950, North Korea crossed the 38th parallel to attack South Korea, initiating the Korean War. Under the orders of President Harry S. Truman, the United States intervened almost immediately on behalf of South Korea. A few months later, Communist China (with aid from the Soviet Union) came to the support of the North Koreans. The Korean War was the first in a line of proxy wars between the United States and the Soviet Union that included the Soviet War in Afghanistan, the Angolan Civil War, and the Vietnam War. The fear of communism would reach a fevered pitch between the Soviet’s launch of Sputnik in 1957 and the Cuban Missile Crisis of 1962. This fear would instigate many of the curricular reforms in the second half of the century.

The time following World War II was also rife with social unrest. The civil rights movement for African Americans gained steam with the Baton Rouge Bus Boycott (1953), the Supreme Court’s landmark decision of Brown v. Board of Education (1954), the Montgomery
Bus Boycott led by Rosa Parks (1955-1956), and the desegregation of schools in Little Rock, Arkansas (1957). Activism for Hispanic and Latinos, Native Americans, and Women (to name just a few groups) would also be prevalent. Additionally, there was a growing sense of dissatisfaction from middle class Americans. Movies, such as James Dean’s Rebel without a Cause, and books, such as Jack Kerouac’s On the Road, portrayed the ennui many were feeling. Although this social unrest influenced educational theory, its affects were not nearly as widespread as those influenced by the Cold War.

By World War II, “scientific” education was deeply entrenched in American schools, and the Cold War ideology would feed into it. In this chapter I examine post-war educational reform and the people and events that influenced it. I begin with Ralph Tyler, whose Basic Principles of Curriculum and Instruction (1949/1969) has been called “the Bible of curriculum making” (Jackson, 1992, p. 24). From there I examine the psychological theories that challenged behaviorism’s dominance of education. Next, I investigate recent reform efforts such as the No Child Left Behind Act of 2001. Finally, I step back to consider some of the alternative discourses that have had an effect on educational theory, especially those stemming from the reconceptualization of the curriculum field in the 1970s.

**Ralph Tyler and the Principles of Curriculum and Instruction**

In the mid-1800s, English evolutionary philosopher Herbert Spencer (1860/1883) argued that the role of education is to prepare one for life. He called for the knowledge valued in school to be applicable and integrated into daily life, and insisted that children “should be told as little as possible and induced to discover as much as possible” (pp. 120; original emphasis). Spencer began his influential book, Education: Intellectual, Moral, and Physical (1860/1883), with the
question, “What knowledge is of most worth?”29 (p. 1). Groundbreaking for its time, the book became influential in the curriculum debates of the late nineteenth and the twentieth centuries. Spencer’s ideas have since become reified and numerous lists have been made over the last 150 years explaining, sometimes in painstaking detail, exactly what knowledge should be taught. The connection between what people think is of most worth and educational objectives is what brings us to Ralph Tyler. As his biographer comments, for Tyler “what a school ought to teach and what a student ought to learn . . . determine and legitimate all aspects of teaching and learning” (Finder, 2004, p. 17).

Ralph Tyler was a major influence on education in the United States during the mid-to-late 1900s. Among his extensive accomplishments, he directed numerous influential educational studies, helped found the National Assessment of Educational Progress (NAEP—the Nation’s Report Card), formulated the Tyler Rationale for assessing teaching, and even counseled presidents on educational matters (p. 6). Born in 1902, Tyler grew up at a time in which the international influence of the United States was greatly expanding. American industrial and scientific technologies were admired worldwide and, thanks to people such as Henry Ford and Frederick Taylor, so were industrial practices.

As the son of a doctor-turned-minister, Tyler came from a modest background. Although money was tight at times, the minister did have influential friends and it was because of family contacts that Ralph was given many of his early opportunities (Finder, 2004). Tyler came upon teaching in a circuitous way. After he graduated with his bachelor’s degree in science in 1921, a family friend suggested that he become a high school science teacher in order to save for medical

29 To the questions of What knowledge is of most worth?, Spencer (1860/1883) answers: “the uniform reply is—Science. This is the verdict on all the counts. . . . The question which at first seemed so perplexed, has become, in the course of our inquiry, comparatively simple. . . . [T]he study of Science, in its most comprehensive meaning, is the best preparation for all these orders of activity” (pp. 79-80).
school. During his first year Tyler became so engrossed with the challenges of teaching that he decided to switch his plans from medical school to graduate school in education. As he progressed in his master’s studies at the University of Nebraska, he continued to teach science classes to high school students and war veterans until the fall of 1926 when he moved to Chicago to begin his doctoral studies. After only a year, he had completed his Ph.D. (Finder, 2004, p. 10).

It was at the University of Chicago that Tyler was influenced by professors involved with the social efficiency movement such as Charles Hubbard Judd and Werrett Wallace Charters (among others). Judd conveyed to Tyler that empirical science is important to bring “scientific respectability to the study of education” (Kliebard, 1986/2004, pp. 178). He also asserted the need to attend to practice rather than theory (Finder, 2004, p. 10). Charters, who called himself a “curriculum engineer” (p. 10), enlisted Tyler’s help on a study into “scientific curriculum construction” (p. 11). He helped teach Tyler to value “clear, systematic procedures for leading large projects” (p. 12). The year after Tyler graduated, he was hired by the University of North Carolina to teach extension classes and work with teachers on improving the state’s curricula. After two years, he followed Charters to Ohio State University where he was in charge of the Bureau of Educational Research’s Division of Accomplishment Testing (Finder, 2004).

By this time Tyler was convinced an important aspect of testing was not getting the attention it deserved—educational objectives. As he wrote, “Each subject which is taught is offered with the expectation that each student who takes it will undergo certain desired changes” (1933, p. 197). One must, therefore, know what the desired changes are beforehand so that one can efficiently assess the degree to which those changes occurred.30 Although changes could be affective rather than cognitive, Tyler was firm in his belief that they should be defined “rather

30 This is quite different from Dewey’s primary aim of education—“growth.” See chapter four of Democracy and Education (1916/1980).
specifically in terms of student behavior” (Tyler, 1932, p. 2). He believed the comprehension of facts and skills, as well as the ability to apply them to be of primary importance and tests need to be “objective and highly reliable” (p. 1) in order for their results to be trustworthy.

It was Tyler’s experiences with large scale research projects that led to him being tapped to become the research director of what would later be known as the Eight-Year Study (1934-1942). The Eight Year Study was a project taken on by the Progressive Education Association (PEA) to spur curriculum reform (Kliebard, 1986/2004, pp. 178-186; Pinar, review of Kridel & Bullough, 2007). In it, students from thirty high schools, selected for their willingness to experiment with curricula, were tracked for eight years; their academic success at colleges and universities was compared to that of students from high schools with traditional college-entrance curricula (many colleges and universities cooperated by waving their entrance test requirements for students from the study). In the end the results were mixed, but in general the students from the study came out slightly ahead (p. 185). The most compelling finding of the study was that the traditional college-entrance curriculum did not ensure college success, nor did any of the other curricula developed by the schools involved in the study. This, however, would not deter many educators from the Tayloresque search for the “one best way” to teach. The study also called into question the validity of the college-entrance courses and tests at the time, an issue to which Tyler would come back many times. These issues were a focal point for him in the mid-1960s when he was the chairman of the Exploratory Committee on Assessing the Progress of Education (NAEP).

In 1938 Tyler moved from Ohio back to Illinois to become the chair of the Department of Education at the University of Chicago. While he was chair he continued to work with pre-service teachers. It was in the 1940s that Tyler dictated to his assistant what would become one of the most influential and best selling educational books of all time—Basic Principles of
Curriculum and Instruction. The book began as the syllabus to a course he was teaching and, after years of mimeographing, the demand increased enough so that it was finally published in 1949 (Finder, 2004, p. 21). The heart of the book revolves around the four steps in planning or assessing curriculum that would come to be known as the Tyler Rationale.

The Tyler Rationale came into being because of the experiences Tyler had, not only teaching, but also observing teachers during his various studies. One issue that kept coming to the forefront of Tyler’s mind was that teachers were preoccupied with the immediacy of their teaching and not clear about their objectives. The teachers knew what material they had to teach, but few “had a clear idea of what abilities their students were to gain, or why” (p. 21). Tyler thought this disassociation of means and ends would result in an inefficient waste of time for both the teachers and the students. In order to remedy this situation, Taylor encouraged teachers and administrators to ask four questions as they were planning or evaluating curricula:

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively organized?
4. How can we determine whether these purposes are being attained?

(Tyler, 1949/1969, p. 1)

It is these four straight-forward questions that have become pervasive in educational planning. In 1970, Herbert Kliebard commented that the Tyler Rationale is “the most persistent theoretical formulation in the field of curriculum” (1970a, p. 70) and many agree that it still continues to exert considerable influence today (see for example: Doll, 2005; Finder, 2004; Pinar, Reynolds, Slattery, & Taubman, 1995).

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There are many critiques of the Taylor Rationale (for example: Cherryholmes, 1988; Doll, 1993; Kliebard, 1970a; Pinar, Reynolds, Slattery, & Taubman, 1995; Pinar, 2009, 2010), but I would like to focus my attention on its connections to the movement toward methodization that has been so prevalent in American education in the late 1900s and early 2000s. Much like the systematic and commonsensical appeal of Ramus’s dialectic, the Tyler Rationale is attractive because it is so straight-forward, simple, and linear. That is essentially why it has been so readily accepted and put into use. The Rationale itself is a system of procedures that has become the method to good teaching, and its lack of specificity has allowed it a broad scope. Henry Louis Gates Jr. is not alone in his assessment that education “can be usefully Tylerized” (Gates, 2004, p. viii). Unfortunately, many adopt the Rationale unquestioningly, simply adding their own objectives. In fact, part of my critique of the Rationale is that it fits so neatly into the test-driven society in which we are living (thanks to legislation such as No Child Left Behind and Race to the Top), that few question its basic assumptions. Even though Tyler is reluctant to specify objectives, something he believes “are matters of choice, and they must therefore be the considered value judgments of those responsible for the school” (p. 4), never do the objectives themselves come into question in his rationale nor does one question, as Elliot Eisner (1967) did, whether educational objectives are a help or hindrance. One can imagine first year teachers promptly given a set of objectives in their new school and dutifully (unquestioningly) running through Tyler’s four steps as they plan their lessons.

The Tyler Rationale is called so for a reason—it focuses on rationality in each step. Although Tyler encourages teachers to “examine other rationales and develop [their] own conception of the elements and relationships involved in an effective curriculum” (Tyler, 1949, p. 1) it is a half-hearted suggestion at best because, as he states, other rationales (alternatives) “do
not seem rational to me” (in Finder, 2004, p. 23). Much like the scientific methods of Bacon, Descartes, and Comte that I previously examined, the prevailing thought here is that all rational people think the same and will come to the same (“correct”) conclusion.

Another major event in Tyler’s life occurred in 1964 when he became the chairman for the Exploratory Committee on Assessing the Progress of Education (what would become the National Assessment of Education Progress [NAEP] in 1969), a position he would hold for four years. The Russians had launched Sputnik in 1957 and the ideologic shockwaves reverberated throughout the world. The United States, in particular, was distressed by the turn of events. How could the Russians have gained the technological upper hand over us? The media, influenced by the thoughts of Vice Admiral Hyman Rickover, responded that schools must be responsible (Kliebard, 1986/2004, p. 266). Unlike their stringent counterparts in the USSR, American schools were considered to be soft. For the sake of national security, it was thought that the American educational system must be made more rigorous. With this goal in mind, the National Defense Education Act was passed in 1958. It called for attention to be focused on those subjects thought to be most important in the newly emerging Cold War era; namely, mathematics, science, and foreign languages. With this new change in focus came the need for accountability.

In order to avoid appearing as if the federal government were taking power away from the states, the committee sought funding from the Carnegie Corporation and began a plan to assess American students (later it became funded by the federal government, specifically the National Center for Educational Statistics, beginning in the first part of the 1970s). First on the agenda was to determine what knowledge was of most worth—something very much in line with Tyler’s Rationale. The exploratory committee had to deliberate on “what the ‘thoughtful public’ expected the schools to teach before it could find out what competencies the project should
assess” (Finder, 2004, p. 28). As one can imagine, concern over test results prompted curricular reform and has since been tied closely with state standards.³²

I find much of what Tyler did to be contradictory. For example, in stating that schools and school districts should choose their own unique objectives (Tyler, 1949/1969, chapter one) he seems to suggest that schooling is contextual and local; yet, his work with the National Assessment of Education Progress (NAEP) is universal in scope, effectively saying “this is what we want all Americans to know.” He “regarded the federal pressure for national tests, standards, and curricula as unsuited to the very different communities across the country and doomed to failure” (Finder, 2004, p. 5); yet, he headed studies that did just that. He spoke out against competitive tests that rank students (p. 30); yet, he was steadfast in comparing students against desirable, seemingly objective norms (Tyler, 1949/1968, chapter one).

Perhaps some of the fault lies in the way educators have used Tyler’s ideas. Unlike Fredrick Taylor and John Bobbitt, Ralph Tyler never had a penchant for stopwatches and breaking actions up into their smallest and most easily measurable components. This does not mean, however, that his colleagues and followers felt the same. What is unsettling is the degree to which the Tyler Rationale resonates with the work of the people discussed in chapter two. With his focus on means and ends that center on meeting objectives, he very much fits with scientific management used in business and industry as well as the behaviorist psychology of Edward Thorndike, John Watson, and later B. F. Skinner. By laying out his four step process, Tyler invites a focus on efficiency and effectiveness, and that has much in common with both Ramus and Taylor. Tyler asserts that he formulated his Rationale with teachers in mind so that they, with their unique insight into their classrooms, could improve their teaching (Tyler,

³² For example, Mary Linquist (2001) has written about the connection between NAEP and other standardized tests and mathematics standards.
1949/1968, chapter 1): yet in many ways it has instead become a tool for curriculum planners and subject experts who are divorced from the localized specifics of classrooms and searching for objectivity. As William Schubert points out, the Rationale led to “curriculum guides, teachers’ editions of schoolbooks, lesson-plan books, evaluation instruments by accrediting agencies, course syllabi, and many curriculum books that appeared in the 1950s and 1960s” (Schubert, 1980, p. 110). In other words, it often reduced teachers to merely installers of a given curriculum. Most of the teaching that sprang from the Tyler Rationale exemplified teaching as telling. One can easily make that same connection to main-stream education today.

Due to the work of behavioral psychologists such as Edward Thorndike, John Watson, and B. F. Skinner, by the 1960s “the Tyler Rationale, conceived first as a rational scheme for curriculum development, had become a rationale for narrow, behavioristic conceptions which reduced curriculum to objectives and outcomes” (Pinar et al., 1995, p. 177; Pinar, 2010). Additionally, the American economic, cultural, and militaristic ideas prevalent at the beginning of the cold war strengthened the connection between education, business, and industry—one characterized by ends/means thinking. In the 1960s the search for efficient, effective teaching methodologies was pervasive and was a major issue for the National Curriculum Reform movement based on Jerome Bruner’s “structure of disciplines” argument. Progressive education had gradually transformed into either “life adjustment education” or an extreme child-centered pedagogy à la A. S. Neill’s bestseller, Summerhill. Bruner (1960/1977) attempted to bring back academic rigor to education; to make students into “little mathematicians” and “little scientists” as they actively engage with the structural foundations of the subjects they were studying.

Bruner posits that different disciplines have different structures and that students must be exposed to the inner workings of each discipline of study in the curriculum in order to truly
understand it. It led, for example, to the “new math” of the 1960s (Tanner & Tanner, 1990, p. 316). “Structure of disciplines” was a call for a more cognitive approach to education that would allow for the rigor needed to match Russian education. The structure of disciplines argument fits nicely with the ideas of Ramus, Bobbit, and Tyler. Curriculum planning “requires the most fundamental understanding of the field” Bruner (1960) wrote. “It is a task that cannot be carried out without the active participating of the ablest scholars and scientists” (p. 32). Even though teachers were supposed to help subject specialists to structure the curricula, few teachers were grounded in their subject specialization enough to have a “fundamental understanding” of their field and were, for the most part, left out of the process. This led to the surge in popularity of “teacher proof” methods of instruction that centered on the Tyler Rationale and prescribed a Ramist-like breakdown of knowledge.

The focus on the structure of disciplines seems innocuous (at least for the student) until one realizes that it dehumanizes schooling. As many commentators have noted, even though it was couched in academic terms, in the end it boiled down to “neither personal development nor social reform but national power” (Tanner & Tanner, 1990, p. 178). Even Bruner would end up reconsidering it later, calling for it to be de-emphasized in order for education to also attend to more humanistic concerns such as social inequalities. Nevertheless, in the 1960s it had “become

33 “New Math” was an early attempt by researchers in mathematics education and mathematicians to advocate for the content needed to better prepare students for college. Rather than traditional education’s focus on computational skills and memorization, new math focused on meaning and its advocates sought to make curriculum more rigorous. Set theory, number theory, and abstract algebra all played a substantial role in the new curricula but have since been either de-emphasized or eliminated (Kline, 1974). “New math” came to typify the elementary math curriculum in the 1960s but fell out of favor by the 1970s (Loveless, 2001b, p. 185).

34 The Woods Hole Conference of 1959 was a major event for the “structure of disciplines.” At the conference “Physicists, biologists, mathematicians, historians, educators, and psychologists came together to consider anew the nature of the learning process, its relevance to education, and points at which current curricular efforts have raised new questions about our conceptions of learning and teaching” (Bruner, 1960, p. 2). It turns out, however, that “only three [participants] were identified as educators and none represented the field of curriculum” (Marshall et al., 2007, p. 45). Evidently they were thought to be not needed.
commonplace, a taken-for-granted ‘fact’” (Pinar et al., 1995, p 161). This atmosphere was part of the reason why in 1969 Joseph Schwab concluded that the field of curriculum was “moribund” (p. 1).

**Behaviorism and Challenges to Behaviorist Psychology**

Behaviorism dominated educational psychology in the early-to-mid 20th century and B. F. Skinner was heir to the tradition. Skinner played a prominent role in the field from the early 1930s until his death in 1990. There were, of course, ways in which his theories differed from those of Thorndike, Watson, and others but they had many similarities. Skinner is well known for his theory of Operant Conditioning, a modification of Thorndike’s Law of Effect in which consequences are used to form and modify the occurrence of behaviors. His operant conditioning chamber was really an updated form of the puzzle box used to test theories by decades of behaviorists before him. Like Thorndike and Watson, Skinner focused his research on objective quantitative data collection and disregarded inner causes and explanations for behavior. “The objection to inner states is not that they do not exist,” wrote Skinner (1953/1965), “but that they are not relevant in a functional analysis” (p. 35). Instead, one must seek causes for behavior in the environment.

In an article published in 1984 titled “The Shame of American Education,” Skinner wrote about the problems he saw the United States facing at the time. Drawing on the inflammatory report, A Nation at Risk (U.S. Department of Education, 1983), Skinner bemoaned the poor scores of American students on standardized tests and offered a solution to the problem. “Most current problems could be solved,” he wrote, “if students learned twice as much in the same time and with the same effort” (p. 947). While that might seem like a silly truism, Skinner advocated three “scientifically proven” ways to achieve the desired results: 1) succinctly define educational
goals (objectives); 2) allow individual pacing by students; and 3) use programmed instructional materials. None of the three suggestions were new to him; he had advocated each for nearly 50 years.

Schools of education, Skinner insists, are not teaching the correct theories of human behavior and “teachers need to be taught how to teach (correctly)” (p. 947). According to Skinner’s earlier work, there are specific obstacles related to human behavior that get in the way of learning and each must be taken into account when planning lessons. They include 1) a fear of failure, 2) lack of adequate breakdown of what is to be learned, 3) lack of directions (or directions lacking clarity), and 4) a lack of prompt positive reinforcement so that errors are not reinforced35 (Skinner, 1968). One can get a fairly good idea of the teaching methods he advocated by thinking about possible remedies. The second and third obstacles are easily bypassed with adequate preparation and organization. The first and fourth are remedied with immediate and constant positive reinforcement.36 In order to achieve this nearly simultaneous level of reinforcement one must rely on programmed instruction and, according to Skinner, the most effective way of delivering programmed instruction is with teaching machines (basically interactive computer-aided lessons). In fact, he once wrote, “the simple fact is that, as a mere reinforcing mechanism, the teacher is out of date” (1954, p. 94). By this he meant that the amount of reinforcement required is too much for one person, “even if a single teacher devoted all her time to a single child” (p. 94). Teaching machines would, therefore, free up the teacher for more important tasks, such as student/teacher relationships (p. 96). While teaching machines of

35 Skinner (1968) wrote, “It can be easily demonstrated that, unless explicit mediating criteria have been set up, the lapse of only a few seconds between response and reinforcement destroys most of the effect” (p. 16).

36 Between a student’s fear of failure and the need for immediate positive reinforcement, mistakes take on a whole new meaning. For Skinner, they are to be stamped out quickly rather than used as a source of possible insight or motivation.
the type Skinner proposed did not catch on, the basic idea of teaching machines persists in programs of direct instruction and scripted education created by subject specialists and passed down to teachers. For Skinner, programmed instruction is the “one best way” because it is the most efficient and effective way to achieve desired objectives.

Three years before his death, Skinner lamented that the American view of psychology as a science of behavior was being impeded by “humanistic psychology, the helping professions [psychotherapy], and cognitive psychology” (Skinner, 1987, p. 780). Among those three, the “cognitive revolution” spurred on by cognitive psychology has arguably had the most influence on education. Among others, Jean Piaget, Lev Vygotsky, Jerome Bruner, and Howard Gardner have been influential in its growth. Bruner (1990) describes the “cognitive revolution” as an all-out effort to establish meaning as the central concept of psychology—not stimuli and responses, not overtly observable behavior, not biologic drives and their transformation, but meaning. It was not a revolution against behaviorism with the aim of transforming behaviorism into a better way of pursuing psychology by adding a little mentalism to it. . . . Its aim was to discover and to describe formally the meanings that human beings created out of their encounters with the world, and then to propose hypotheses about what meaning-making processes were implicated. (p. 2)

The cognitive revolution was instrumental in helping dethrone behaviorism as “the” educational psychology. Although behaviorism still enjoys clout in certain educational discourses, especially special education, it no longer reigns supreme the way it did during the 1920s-1960s.

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37 With the call for technology in the classroom, computer-based instructional programs are becoming more prevalent in the 21st century—especially tutorials and drills.
38 DISTAR (Direct Instruction System for Teaching Arithmetic and Reading) is a program of direct instruction that is used by many schools across the United States. Standards based programs like Success for All and Open Court Reading have similarities to direct instruction. The first programmed instruction was developed by Skinner from his analysis of verbal behavior, so it is not surprising that reading and linguistics are common foci of direct instruction (see Skinner, 1984, p. 949).
The development of the first electronic computers in the 1940s was an important event in the formation of cognitive science. As scientists explored the possibilities of computers, many made the connection between those “logical devices” and the human brain and nervous system. The time after World War II would spawn various interdisciplinary meetings in order to help make sense of new developments such as artificial intelligence, computer science, cybernetics, information theory, systems theory, and game theory. The Woods Hole Conference discussed in chapter two and the Macy Conferences on Cybernetics in the 1940s and 1950s are examples that brought together scholars from diverse fields. Two of the seminal events in the cognitive revolution also came in the form of interdisciplinary conferences—the Hixon Symposium of 1948 and the Symposium on Information Theory held at the Massachusetts Institute of Technology in 1956. Both included linguists, philosophers, psychologists, mathematicians, neurophysiologists, and anthropologists as well as leaders from other fields.

According to Howard Gardner (1985), Karl Lashley gave one of the most influential and provocative talks of the Hixon Symposium. A behaviorist in the past, Lashley began to question some of the fundamental beliefs of behaviorism. As I discussed in chapter two, there are two basic tenets of behaviorism: 1) behaviors are what is to be studied and 2) the research must be quantifiable, testable, and repeatable. Lashley believed that leaving out subjective, introspective thoughts as well as concepts and topics such as mind, thinking, imagination, desires, and intentions was detrimental to psychology. As Gardner recalls, “Lashley voiced his conviction that any theory of human activity would have to account for complexly organized behaviors” (p. 12). Essentially, “simple associative chains between a stimulus and response . . . could not possibly account for any of this serially ordered behavior” (p. 13). Echoing many of Dewey’s criticisms of the reflex arc concept (1896/1972 ), Lashley believed that “rather than behavior
being consequent upon environmental promptings, central brain processes actually precede and dictate ways in which an organism carries out complex behavior: rather than being imposed from without, organization emanates from within the organism” (Gardner, 1985, p. 13). In addition to his critique of behaviorism, Lashley also denounced two points central to neurobehavioral analysis: “the belief that the nervous system is in a state of inactivity most of the time, and the belief that isolated reflexes are activated only when specific forms of stimulation make their appearance” (p. 13). Lashley’s ideas were influential in not just psychology but also the burgeoning fields of information theory and computer science. They would help shape the cognitive research agenda in the years to come (p. 11). One person whose thoughts resonated with Lashley’s was Jean Piaget.

Jean Piaget was a Swiss biologist and psychologist whose work spanned over sixty years, beginning from the 1910s until his death in 1980. Child development was a primary interest of his, and at the beginning of his career he worked in the budding field of intelligence testing. It was not long, however, until he began to realize the limitations of those tests. Instead of testing to see what answers a child would get wrong, it would be more beneficial, he thought, to ask how that child would get those answers wrong. Piaget realized that “children’s thinking, reasoning, and experiences . . . are substantially different from adult thinking and experience in their character” (Jardine, 2006, p. 5). Taking that into account, one realizes “children’s thinking, reasoning, and experiences may have integrity and truth that is masked if we leave typical adult thinking in its place as the unforgiving norm against which children are understood” (p. 5).

Educational interest in Piaget’s work burgeoned in the 1970s, and since that time his legacy has grown. David Jardine (2006) reminds us that many of our now taken-for-granted

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39 According to the ERIC (Education Resources Information Center) database, prior to 1970 just over 200 articles drew on Piaget’s work. In the 1970s that number exploded to just over 3000.
educational beliefs have had their origins in, or been highly influenced by, Piaget’s writings. They include: the idea that intellect develops through a sequence of stages, the need for developmentally appropriate curricula, the importance of “hands on” manipulations of objects, the importance of play in the development of intelligence, and the awareness that “we actively construct our experiences and understandings of the world according to our concepts, categories, levels of development, and previous experiences” (p. 3). This last insight is particularly important in the learning theory of constructivism.

Piaget’s theories on conceptual construction were influenced by his readings of the work of Immanuel Kant (Jardine, 2006, Ch 2). They are based on the interplay between and among assimilation, accommodation, and equilibrium. A person’s conceptual schemata is the framework, structure, or organization of that person’s thoughts or ideas. Essentially, when people encounter a new idea or concept they must either assimilate it into their existing schema or accommodate for it by changing existing schema. It is not, however, simply a matter of one or the other. There is always some overlap. Piaget (1952/1997) writes,

Assimilation can never be pure because by incorporating new elements into its earlier schemata the intelligence constantly modifies the latter in order to adjust them to new elements. Conversely, things are never known by themselves [Kant’s ding an sich], since this work of accommodation is only possible as a function of the inverse process of assimilation. (p. 6-7)

It is in this interaction that equilibrium comes into play. “Adaptation,” he writes, “is an equilibrium between assimilation and accommodation” (p. 6; original emphasis).

These periods of equilibrium help structure the stages of development that Piaget theorized. His inquiry led him to believe that children go through a sequence of four, age
dependent, distinct stages in their cognitive growth. They begin with sensori-motor knowledge (0-2 years old) and from there move on to pre-operational knowledge (2-7 years old), concrete operational knowledge (7-11 years old), and formal operational knowledge (11-15+ years old). The stages are linear, so each one forms the foundation for the next. Basically, the stages are periods of relative equilibrium whereas the jump from one to the other is initiated by “nonbalance” or disequilibrium due to cognitive conflict. He wrote,

It is clear that one of the sources of progress in the development of knowledge is to be found in nonbalance as such which can alone force a subject to go beyond his present state and seek new equilibriums. . . . It is worthwhile to note that however the nonbalance arises, it produces the driving force of development. Without this, knowledge remains static. . . . [and] there would not be ‘increasing reequilibration.’ (1977, p. 12-13)

Although theorists have questioned the linearity of the stages as well as their age ranges, the idea that cognitive development progresses through stages has become commonplace for many teachers. Too often, however, the importance of disequilibrium is either neglected or glossed over. This is unfortunate because, as William Doll (1993) argues, if disequilibrium is the “driving force of development” then “the teacher’s art, along with helping disequilibrium occur, is that of constraining this disequilibrium—of not letting it turn into unbridled disruption” (p. 83).

Many educators with a penchant for scientific management have taken Piaget’s theories and turned them into “rigid, lockstep developmental sequences” (Jardine, 2006, p. 107). Facts, skills, and concepts are broken down into increasingly simple and isolated parts and doled out at “developmentally appropriate” times. Essentially, when this happens an open system becomes closed and cut off from rich relationships (Doll, 1993, pp. 14-15).
When thinking about the basic tenant of constructivism,\textsuperscript{40} that “people construct their own knowledge,” one wonders how it does not fall into the trap of relativism or solipsism. Following Kant, Piaget believes in the Enlightenment ideal, that underlying our individuality there are “commonly held categories, forms, or methods of knowledge: commonly held ways of constructing knowledge and objectivity, [and] commonly held ways in which human reason essentially operates” (Jardine, 2006, p. 22). There is much to learn from Piaget’s work, but one facet that is not well developed is the \textit{social aspect of knowing}. For that, the work of Lev Vygotsky becomes helpful.

Vygotsky was a Russian psychologist who died of tuberculosis at the early age of 38. Like Piaget, he was born in 1896 and was influenced by the psychological thought of the day that included American pragmatism,\textsuperscript{41} behaviorism, and Gestalt psychology. Although they were contemporaries in the scientific community for only a short time, they knew of each other’s work. For example, in 1962 Piaget wrote the preface to the Russian edition of Vygotsky’s book, \textit{Thought and Language} (1934/1996),\textsuperscript{42} a book in which Vygotsky deals heavily with Piaget’s theories. Although Vygotsky was influential in psychology both before and after his death, his work did not find a substantial place within American educational psychology until the 1970s.\textsuperscript{43}

\textsuperscript{40} The background and educational implications of constructivism can be found in fourth monograph (1990) of the Journal for Research in Mathematics Education (JRME). See also Davis & Sumara, 2003.

\textsuperscript{41} Connections between Vygotsky and American Pragmatists, especially George Herbert Mead are explored in Anne Edwards’s “An Interesting Resemblance: Vygotsky, Mead, and American Pragmatism” (2007).

\textsuperscript{42} \textit{Thought and Language} was the translated title to the original English translation of Vygotsky’s work. For the six volume collected works of Vygotsky, the translator felt as if the title \textit{Thinking and Speech} better conveyed the nuances of Vygotsky’s original Russian title.

\textsuperscript{43} A search in the ERIC database for “Vygotsky” between 1920 and 1969 showed approximately 70 hits. The earliest is a 1937 article from the National Council of Teachers of Mathematics titled “Numbers and Numerals.” In comparison, from 1970 to 1979 there were over 1500 hits. Nearly two-thirds of those hits were for mathematics education.
A student during the Russian communist revolution of 1917 (also known as the Bolshevik Revolution or, in Russia, The Great October Socialist Revolution), Vygotsky was influenced by Marxist thought and Marx’s theories on the social and historical. He describes the interplay between biology and history as an outside-in process rather than Piagetian inside-out process. Vygotsky (1978) wrote, “Every function in the child’s cultural development appears twice: first, on the social level, and later, on the individual level; first between people (interpsychological), and then inside the child (intrapsychological)” (p. 57; original emphasis). Vygotsky was adamant about the substantial role language plays in understanding, and stressed the social foundations of language and thinking (while taking into account the inadequacies of speech). He argued that, “It may be appropriate to view word meaning not only as a unity of thinking and speech, but as a unity of generalization and social interaction, of thinking and communication (1934/1987, p. 49; original emphasis). Vygotsky (1978) also believed that thought is a type of internalized speech. “Language arises initially as a means of communication between the child and the people in his environment,” he asserted. “Only subsequently, upon conversion to internal speech, does it become an internal mental function . . . reasoning occurs in a children’s group as an argument intended to prove one’s own point of view before it occurs as an internal activity” (pp. 89-90). It is this sociohistorical theory (or sociocritical theory) for which Vygotsky became well known.

Interestingly, crisis plays an important yet underappreciated role in Vygotsky’s understanding of the interplay between the society and the individual. “For Vygotsky,” David Kirshner and David Kellogg (2009) write, “crisis reflecting the contradictions between the child’s immature appropriation of cultural resources within a more adult society are a necessary process of development” (p. 48). Unlike most behaviorists, Vygotsky argued that humans are
able to help shape their environment for their purposes and emphasized the importance of socially meaningful activities.

An important concept of Vygotsky’s that is known well to educators and intimately tied to the interplay between the individual and society is the zone of proximal development (ZPD). He describes it as “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (Vygotsky, 1978, p. 86; original emphasis). Social interaction with a teacher or more capable peer allows one to transcend what he or she could do alone. “[W]hat the child is able to do in collaboration today he will be able to do independently tomorrow” (Vygotsky, 1934/1987, p. 211). It would be a mistake, however, to take this in too individualistic a manner. It is not simply learning by an individual that is important to Vygotsky (i.e. a teacher or peer helping a student), it is the “creative potential of the community” that is important (Kirshner & Kellogg, 2009, p. 48).

The next psychologist I would like to discuss is Jerome Bruner. Bruner has been active in education for more than 60 years (he is currently in his 90s). By the early 1960s his theories had found a wide-spread audience, and in 1965 he served as the president of the American Psychological Association. Bruner was influenced by Piaget early, but as his career progressed he became more interested in culture and with it, Vygotsky’s work. Perhaps his Piagetian influence can best be seen in two of his early and most influential works, titled The Process of Education (1960/1977) and Toward a Theory of Instruction (1966/1974). Even though he would later distance himself from some of the ideas they contain, they are probably what he is best known for in teacher education.44

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44 The PRAXIS test is a series of certification exams for teachers administered by the Educational Testing Service (ETS). The second part, PRAXIS II, “measures general and subject-specific knowledge and
Bruner’s 1960 book titled *The Process of Education*, is one in which he develops the key themes of the Wood’s Hole Conference of 1959. The themes include the basic tenet that structure is central to teaching, to students’ readiness for learning, to the nature of intuition and its connection to analytic thinking, and to motives for learning (1960/1977, pp. 11-14). It is under “readiness for learning” that Bruner writes, “any subject can be taught effectively in some intellectually honest form to any child at any stage of development” (p. 12). Underlying this is the idea of a spiral curriculum, one which “revisits these basic ideas repeatedly, building upon them until the student has grasped the full formal apparatus that goes with them” (p. 13). He basically was advocating for a “structure of the disciplines,” a way to learn efficiently within individual subject areas so that that learning would transfer to other problems students would face. In essence, this meant a call for a more cognitive approach to education.

In another of his major works, *Toward a Theory of Instruction* (1966/1974), Bruner built on his previous ideas. He detailed four major features that a theory of instruction must take into account, the “rules concerning the most effective way of achieving knowledge or skill” (p. 40). The first is that teachers must “implant in the individual a predisposition toward learning” (p. 40; emphasis added). Next, subject specialists “must specify the ways in which a body of knowledge should be structured so that it can be most readily grasped by the learner” (p. 41). Of importance here is that “a structure depends upon its power for simplifying information, for generating new teaching skills” (ETS.org). PRAXIS tests are well known for reducing thinkers and theories down to slogans and catch-phrases. For the test, teachers are expected to know Piaget’s theory of assimilation and accommodation and Vygotsky’s zone of proximal development. From Bruner the main ideas tested include “readiness for learning,” the four features of his theory of instruction, and his concept of scaffolding (based on Vygotsky’s ideas but coined by Bruner. See PRAXIS PLT review books for examples). In many states, passing PRAXIS II confers the No Child Left Behind “highly qualified” status (U. S. Department of Education: Institute of Education Sciences).

45 By focusing on the isolation of specific facts and concepts, a spiral curriculum is repetitive rather than recursive. Bruner himself, as well as William Doll, would later advocate recursive approaches to curriculum. The spiral approach also lacks the metacognitive aspects of recursion (see Bruner, 1986 and Doll, 1993, pp. 177-178).
propositions, and for increasing the manipulability of a body of knowledge. . . . [T]he optimal structure . . . is not absolute but relative” (p. 41; original emphasis). The third feature is that subject specialists “should specify the most effective sequences in which to present the materials to be learned” (p. 41). Lastly, “a theory of instruction should specify the nature and pacing of rewards and punishments in the process of learning and teaching” (p. 41). Importantly, at least for Bruner at the time, was that his theory of instruction was “a normative theory” (p. 40; original emphasis).

The effects of these two books on educational reform were significant and fundamentally recast the roles of teacher, student, and curriculum workers (curriculum theorists). As Marshal, et al. (2007) write, “Teachers either became subject matter specialists or human conduits for the transmission of subject matter knowledge, students became child-scientists and the curriculum worker took a backseat to psychologists and other discipline scholars of the ‘first rank’ ” (p. 51). Even though the psychological theory Bruner espoused differed greatly from behaviorism, for all practical purposes the role of the teacher did not.

Although in 1962 Bruner would write the introduction to the English translation of Vygotsky’s book titled Thought and Language, it would not be until later that his work would swing toward the construction of a cultural psychology that takes into account social and historical experiences. His book, Actual Minds, Possible Worlds (1986), includes the essay “Two Modes of Thought.” In it he compares and contrasts the “logico-scientific” with the “narrative.” The logico-scientific mode is based around criteria such as objectivity, precision, verifiability, and logical arguments whereas the narrative mode deals with subjectivity, metaphor, rhetoric, and the messiness of interpretation. Although complimentary, in many ways they are incommensurable; “efforts to reduce one mode to the other or to ignore one at the expense of the
other inevitably fail to capture the rich diversity of thought” (p. 11). If education were reduced to
precise skills, information processing, and the categorization of knowledge then it would lose
much of its richness. Most of Bruner’s earlier work focused on the logico-scientific to the
exclusion of the narrative. By this stage in his career, however, he saw the need for both modes
of thought to be on equal footing. One must dwell in a third space, appreciating the richness of
the two modes, especially when integrated.46

In one of his more recent books, *The Culture of Education* (1996), Bruner wrote, “How one
conceives of education, we have finally come to recognize, is a function of how one conceives of
the culture and its aims, professed and otherwise” (pp. ix-x). He goes on to explain that mental
activity cannot be understood “unless you take into account the cultural settings and its resources,
the very things that give mind its shape and scope. Learning, remembering, talking, imagining:
all of them are made possible by participating in a culture” (pp. x-xi). Here education, for Bruner,
is about meaning making, and meaning making requires a connection to culture no matter the
subject being studied. The behaviorist psychology of Thorndike, Watson, Skinner, and others
was predicated on the basic idea that people learn the same way. When one takes culture into
account, especially the abundance of micro-cultures, then it follows people will have differing
strengths and weaknesses when it comes to learning. Another influential theorist who spoke out
about different types of learning is Howard Gardner.

challenged that assumption by questioning the ingrained conceptions of intelligence that had
been so influential in education. He wrote that earlier psychologists in the behaviorist camp

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46 In an article titled “Modes of Thought: Science, Story, and Spirit” (in press), William Doll develops
Bruner’s ideas on the logico-scientific and narrative modes of thought and connects them to the work of
theorists such as Alfred North Whitehead, Dwayne Huebner, Gregory Bateson, and Michel Serres.
searched for the basic laws of sensation, perception, memory, attention, and learning, which, once discovered, were assumed to work equivalently across language and music, across visual and auditory stimuli, across elementary and complex patterns and problems. In its strong “uniformist” version, this search had as its goal a single set of principles—usually laws of association—which were assumed to underlie all of the aforementioned faculties. (p. 280)

Since the inception of IQ tests in the beginning of the 20th century, linguistic and logico-mathematical skills were those thought to accurately convey a person’s intelligence. “Only if we expand and reformulate our view of what counts as human intellect,” Gardner asserts, “will we be able to devise more appropriate ways of assessing it and more effective ways of educating it” (p. 4). The framework he suggests is one of multiple intelligences. He lists six distinct types of intelligence that each have their own strengths and constraints: linguistic, musical, logico-mathematical, spatial, bodily-kinesthetic, and the personal intelligences.47 Gardner posits that individuals possess each of these types of intelligence in varying degrees and that teachers must be sensitive to this when preparing lessons. Historically, lessons have benefited those more attuned to the linguistic and logico-mathematical than other intelligences. To counteract this imbalance, Garner asserts that teachers should plan lessons that take into account different forms of intelligence and that students should be encouraged to play to their learning strengths. Additionally, assessment must measure across the various types of intelligence rather than focus on only one or two.

47 Since Frames of Mind, Gardner has subdivided “personal intelligences” into interpersonal and intrapersonal intelligence and changed “linguistic intelligence” to verbal-linguistic intelligence. He has also added a new type of intelligence—naturalistic. At this point, according to Gardner’s work there are eight types of intelligence.
Certainly, the cognitive revolution influenced educational reform greatly from the 1970s on. It does not mean, however, that a unified theory of cognition emerged. Quite the contrary, numerous cognitive perspectives on learning proliferated. In addition, behaviorism hardly dried up and vanished. Its influence might have waned in academia, but it was far from ineffectual. By the late 1980s and 1990s educational debates raged over teaching and learning theories, especially those theories related to the subjects of reading and mathematics. In the next section I will explore the curricular debates that occurred in the last part of the 20th century. I will also connect the debates to the current legislation that has become so central to education—the No Child Left Behind Act.

**Sputnik, A Nation at Risk, and the Reforms of the Latter 20th Century**

Senator Joseph McCarthy would die before the launch of Sputnik (October 4, 1957) and the Cuban Missile Crisis (1962), but the part he played in fanning the flames against communist subversion helped set the tone of fear that would shape the 1960s through the turn of the century. The “us-versus-them” battle that pitted the United States against the Soviet Union for military supremacy would come to include battles for economic dominance against other nations as the post-World War II economic prosperity of the United States leveled off and declined in the 1970s. Complex, interconnected events such as the Vietnam War, the OPEC oil crisis, stagflation, high unemployment rates, and trade deficits resulted in fears that the United States would lose military and economic power and, in turn, national security would be compromised. In many ways, schools became the battleground upon which the fight for national security would take place. William Pinar (2000) characterizes the post-Sputnik educational reforms that originated from these fears as a type of “vocationalism” (p. xiii). At its core, he asserts, “is the masculinist, militaristic, and economic fantasy that academic achievement (as measured by standardized
tests . . .) creates the conditions for national supremacy, understood today primarily as economic prosperity but also cultural and military dominance” (p. xiii). As militaristic and economic fears became more and more common, the national government came to play a role in education that was previously held by state or local governments. This role would grow as the turn of the century neared.

American confidence in its technological superiority was shaken by the launch of Sputnik in 1957. Within a year the federal government had established NASA (National Aeronautics and Space Administration) and the ARPA (Advanced Research Projects Agency48) in order to better compete with the Russians. Also in 1958, the National Defense Education Act (NDEA) was signed into law. All three were efforts to assure that the United States would lead the world in state-of-the-art technology. Arthur Flemming, the U.S. Secretary of Health, Education, and Welfare at the time NDEA passed wrote,

The National Defense Education Act. . . . [is] designed to motivate the discovery of intelligent and talented young men and women and stimulate them to devote themselves to the sciences, foreign languages, technology, and in general, strengthen resistance to totalitarianism, and enhance the quality of American leadership on the international scene (Flemming, 1960, p. 132).

The act authorized one billion dollars (p. 134) in an attempt to re-focus the academic thrust of schools from “life adjustment education” to subjects thought necessary for national defense; namely, mathematics, science, and modern foreign languages. Although at first modern foreign languages seems the odd man out, it is important to remember that foreign trade, international diplomacy, intelligence gathering, and espionage often require those with multilingual abilities.

48 The name has changed back and forth between ARPA and DARPA (Defense Advanced Research Projects Agency) over the decades.
Millions were given for districts to upgrade technology and teaching resources for science and mathematics. Teachers, teacher educators, and researchers in those subjects also reaped the benefits of NDEA through the student loans, financial aid and fellowships made available (pp. 134-136). NDEA also marked a new chapter in gifted education. Gifted programs had existed in the United States prior to 1958, but the use of federal monies to improve procedures for identifying and educating gifted students was new. Meritocratic ideals had been espoused in the United States since its independence, but the passage of the NDEA signaled the beginning of a meritocratic hierarchy with mathematics and science placed at the top.

Although the NDEA sought to stabilize the confidence in mathematics and science education that was shaken with the launch of Sputnik, when the first international standardized tests were given in the mid-1960s American students scored much lower than expected. Critics again derided the “life adjustment education” that progressive education had become and advocated a “back-to-the-basics” approach (Tanner & Tanner, 1990, p. 316, p. 367). This call for “back-to-the-basics” fit well with Skinner’s operant conditioning, the Tyler Rationale, and the principles of scientific management. By the 1970s, however, the cognitive revolution was in full

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49 One remembers that Thomas Jefferson’s supported a “natural aristocracy” over one defined by class, wealth, or family connections. He famously proposed publicly funded education that would allow “the best geniuses . . . [to] be raked from the rubbish” (Jefferson, 1782/1900, p. 275).

50 The First International Mathematics Study (FIMS) was conducted between 1963 and 1967. It included 13-year-old students from 12 countries. The First International Science Study (FISS) was conducted from 1968-72. It included 10-year-old students, 14-year old-students, and students in the final grade of the secondary school from 18 countries. The Second International Mathematics Study (SIMS) was conducted between 1977–81. It tested 13-year-old students and students in the final grade of secondary education from 18 countries. The Second International Science Study (SISS) ran from 1982-86. Included were 10-year-old students, 14-year-old students, and terminal secondary school students from 23 countries. By the mid-1990s the tests were combined into the Third International Mathematics and Science Study (TIMSS). The students tested were third and fourth grade, seventh and eighth grade, and those in their final year of secondary school. Recently, the test has been renamed Trends in International Mathematics and Science Study (still TIMSS) and is given every four years. The most recent test was given in 2007 to fourth and eighth grade students from 48 countries. (historical information can be found at the website for the International Association for the Evaluation of Educational Achievement at http://www.iea.nl/completed_studies.html)
swing and theories espoused by Piaget, Vygotsky, and Bruner would compete with behaviorism for dominance over the curriculum. Unfortunately, many of the theories espoused by those who were part of the cognitive revolution were also turned into “teacher-proof” curriculum packages and parceled out to faculty.

In 1981 Ronald Reagan took office and soon after appointed a task force to study the quality of education in the United States. In 1983 that task force, the National Commission on Excellence in Education, released its report—*A Nation at Risk: The Imperative for Educational Reform*. National security, economic prosperity, and education are deeply connected, the authors of the report wrote, and education is failing miserably in its duties. It is worth quoting from the report at length in order convey its tone of fear mongering:

> Our Nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world. This report is concerned with only one of the many causes and dimensions of the problem, but it is the one that undergirds American prosperity, security, and civility. We report to the American people that while we can take justifiable pride in what our schools and colleges have historically accomplished and contributed to the United States and the well-being of its people, the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people. (U.S. Department of Education archives, 1983)

In order to put the United States back on track, the authors make numerous recommendations. Among those recommendations are that schools embrace more rigorous academic standards and that standardized tests be given to quantify achievement.
The report struck a chord with the American public. Almost immediately the rallying cry of “back-to-the-basics” (under the new term “the new basics”\(^{51}\)) was heard and for the most part overshadowed other calls for reform by cognitive scientists, curriculum theorists, civic leaders, and others. Much of the curriculum reform from the 1980s on was spurred by the “new basics” call for academic standards (Ravitch, 2000, p. 413). In the early 1990s the Department of Education headed a collaboration of federal agencies that offered grants to “organizations of scholars and teachers to develop voluntary national standards in seven school subjects” (p. 432). The subjects included were “science, history, geography, the arts, civics, foreign languages, and English” (p. 432). Mathematics was not included because the National Council of Teachers of Mathematics (NCTM) had put forth their Curriculum and Evaluation Standards for School Mathematics in 1989. Arguments over academic standards were one of the causes of the curriculum debates of the 1990s.


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\(^{51}\) While “the basics” connoted “traditional values of authority, discipline, respect, and academic standards” (Tanner & Tanner, 1990, p. 340), the “new basics” enlarged the commitment to academic standards and added different literacies to the mix such as “cultural literacy, scientific literacy, computer literacy, and other segmented forms of literacy” (p. 340). See Jardine, Friesen, & Clifford, 2003.
discipline and order in the classroom; the primacy of teacher-led instruction; and regular testing to assess student performance” (Loveless, 2001a, p. 2). The 1990s version of the debate was held over the subjects of reading and mathematics. Essentially, reading instruction boiled down to the proponents of whole language, led by the National Council of Teachers of English (NCTE) versus the proponents of phonics. Mathematics instruction pitted those for the reforms suggested by the National Council of Teachers of Mathematics (NCTM) and those against them.

In 1995 D. C. Philips wrote that “across the broad fields of educational theory and research, constructivism has become something of a secular religion” (p. 5). Yet by 1998 the situation in mathematics had become so contentious that at a meeting comprised of members of the American Mathematical Society (AMS) and the Mathematical Association of America (MAA) U. S. Secretary of Education Richard Riley felt compelled to call for an end to the math wars (Loveless, 2001b, p. 184). Debates continued to be combative, however, and still continue as we approach the 2010s. Although the NCTM standards are often those on which state mathematics standards are modeled, book series such as Singapore Math and Saxon Math continue to grow in popularity. If anything, an overview of these debates suggest that there is no “one best way” to teach mathematics or English.

In many ways, the reform efforts that have been initiated since A Nation at Risk have been built around common ideas. One overarching thread is that educational excellence, defined in terms of standardized test scores and based around traditional academic curricula, is the primary aim. This was true for the first President Bush’s educational legislation titled “America 2000” (signed into law in 1991) as well President Clinton’s “Goals 2000” (signed into law in 1994). The most pervasive piece of legislation in the 21st century, the No Child Left Behind Act signed into law by the second President Bush in 2002, is no different. NCLB’s primary objective
is to improve the academic performance of public school students. It is built on four pillars: 1) stronger accountability for results via standardized tests; 2) more freedom for states and communities to use federal education funds; 3) basing instruction on scientifically proven education methods; and 4) more choices for parents whose children are attending low-performing schools (NCLB Overview, U.S. Department of Education).

Although NCLB uses activist language, vowing to leave no child behind, the practice does not seem to match the rhetoric. As the first pillar makes it clear, accountability through standardized testing is a priority, but the search for “objective” test results rarely takes into account the tensions that exist between and among the often conflicting ideas of academic excellence, equality, and diversity. In his book Shame of the Nation (2005), Jonathan Kozol points out that students from poor, urban schools are disproportionately affected by the high-stakes testing atmosphere that envelops NCLB (pp. 53-54). He lists the problematic issues he sees again and again in his school visits, writing that the goals and standards required by NCLB cause adaptive strategies such as

relentless emphasis on raising test scores, rigid policies of non-promotion and nongraduation, a new empiricism and the imposition of unusually detailed lists of named and numbered “outcomes” for each isolated parcel of instruction, an oftentimes fanatical insistence upon conformity of teachers in their management of time, an openly conceded emulation of the rigorous approaches of the military, and frequent use of terminology that comes out of the world of industry and commerce. (p. 64)

In other words, the standards and the high stakes testing that measures them become the driving force behind the curriculum. Even though no child is to be left behind, Kozol asserts that equality of opportunity as well as the possibility for social mobility has been pushed into a secondary role.
The third pillar, using scientifically proven teaching methods, is also less innocuous than it sounds. Like high-stakes testing, “scientifically proven” teaching methods rarely take into account the tensions that exist between and among academic excellence, equality, and diversity. By emphasizing only those “educational programs and practices [that] have been proven effective through rigorous scientific research” (NCLB Overview, U.S. Department of Education; emphasis added) many of the issues I discussed in chapter two become prominent. If objectives are not explicitly stated at the beginning of the lesson, then they cannot be tested with reliability; thus, many teaching methods are deemed “un-scientific” specifically because they allow objectives to emerge through classroom interactions. Indeed, the focus on “rigorous scientific research” opens the door for the behavioristic ideas of Thorndike, Watson, Skinner, and others while shutting the door on others. “With the signing of the No Child Left Behind (NCLB) Act in 2002,” Richard Gibboney (2006) evocatively writes, “Thorndike’s ghost marched at the head of the reform parade while the marshal, President George W. Bush, flanked by legislators of both parties, waved approvingly from the reviewing stand” (p. 170).

In his recent book, Teaching by Numbers (2009), Peter Taubman describes how the discourse of standards and accountability sanctioned by NCLB and the National Council for Accreditation of Teacher Education (NCATE) has also greatly impacted teacher education. He argues that since the 1980s there have been “accumulating charges that our nation was threatened by the crisis of failing teachers, failing schools, failing students, and failing teacher education programs. . . . By 2003 the language of crisis was driving educational reform” (p. 11). Standards and accountability, concepts that have their roots in science and business, have been called upon to solve the crisis. They have become such commonplace terms in educational discourse that they are thought by many to be beyond questioning. At their heart lies the hope that objectivity
and quantification can lead American schools toward a brighter future. Unfortunately, too often the performance of students and teachers are reduced to numbers. As Taubman writes, “these numbers give the impression that what happens in classrooms—extraordinarily complex, psychically tumultuous and potentially both ecstatic and maddening places of teaching—is best understood as objective, transparent, and measurable” (p. 2). This mind-set has become so pervasive that many “teachers and teacher educators have embraced the most mechanistic approaches to pedagogy and curriculum in the belief that these would empower them and help their students” (p. 2).

The post-Sputnik reform in the United States has not been without challenges. In the 1970s, for example, there was a push to reconceptualize curriculum studies led by William Pinar, Michael Apple, and others. Although hardly unified in thought, those involved with the reconceptualization have “decried the technocentrism, instrumentalism, racism, sexism, and heterosexism of not only No Child Left Behind, but also the programs that have since the 1970s passed themselves off as educational reforms” (Taubman, 2009, p. 36). In the next section I look at some of the main theories stemming from the reconceptualization— theories underappreciated by mainstream educational associations and politicians, yet often espoused in teacher education courses.

The Reconceptualization

The predominance of the corporate management metaphor of education that focuses on the methodization of teaching provided an impetus for the reconceptualization of curriculum studies in the 1970s. In fact, in many ways the reconceptualization of curriculum studies in the 1970s was a direct challenge to the “Tylerian paradigm” (Pinar et al., 1995, p. 178). In this chapter, I will examine some of the theories advanced by those who were involved in the
reconceptualization of curriculum studies, as well as those who followed in their wake. I focus on several of the themes I see that are reactions against the methodization of teaching. Because the reconceptualization of the field has gone in a variety of directions; instead of sketching out those branches (done well in Pinar et al., 1995), I will focus on those themes and thinkers who have influenced my thoughts as I have explored/theorized teaching in a third space. I will examine six main themes in this section: 1) the growing realization that the field needs to be historically grounded; 2) the struggle to connect theory and practice; 3) the increased attention placed on the experiences of both the student and the teacher; 4) the desire to question the traditional teacher/student relationship; 5) the need to evoke imagination and wonder; and 6) the rethinking of what it means for teaching to be efficient and effective.

**Historical Grounding.** Always attempting to add a bit of levity to what could be a dry class, a couple of times a semester a high school teacher of mine used to quote George Santayana: “Those who cannot learn from history are doomed to repeat it.” It is an aphorism, I am sure, that is echoed in history classes across the United States if not throughout the world. My teacher never failed to chuckle at the double entendre—that one would repeat not just the mistakes of past generations but also (and seemingly more important for him) would be forced to retake his history class. Now, when I am teaching mathematics education courses or courses designed to encourage discussions of teaching connected to the historical and philosophical dimensions of schooling/education, the words of Santayana often come to mind.

If one is unaware of historical events, ideas, and discourses, then one can easily repeat past mistakes. Those involved in the reconceptualization of curriculum studies realized that the traditional field, one characterized at that time by scientific management and the Tyler Rationale,

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52 The phrase my teacher used is a common misquote of Santayana’s words. The actual quote is: "Progress, far from consisting in change, depends on retentiveness. Those who cannot remember the past are condemned to repeat it" (Santayana, 1917, p. 284)
was ahistorical in nature. Methodization has reduced teaching from an art to a bureaucratically imposed procedure and, as Pinar et al. (1995) write, “bureaucratic interest has little need to consult history” (p. 42). Looking back on the traditional curriculum studies field, Herbert Kliebard (1970b) writes:

One of the most disturbing characteristics of the curriculum field is its lack of historical perspective. New breakthroughs are solemnly proclaimed when in fact they represent minor modifications of early proposals, and, conversely, anachronistic dogmas and doctrines maintain a currency and uncritical acceptance far beyond their present merit. (p. 70)

Although more of those involved with curriculum studies are aware of the complex historical connections to today’s curricular discourses than before, it seems that many teachers, administrators, and “experts” who are hired to design curricula are not. Unlike the cyclical nature of fashion, aware of its roots yet always reinterpreting, many curricular ideas seem to be “fads,” disconnected from their historical precursors.

Whether I am teaching mathematics or history it seems that in the first half of each semester a few of my students voice frustration at our focus on historical events and discourses. Never was this more evident than one semester when I assigned sections of John Dewey’s *The Child and the Curriculum* (1902/1976) to my Teaching, Schooling, and Society class and a chapter of Alfred North Whitehead’s *The Aims of Education and Other Essays* (1929/1967) to my mathematics education class. Why, they asked, are we reading books that are so old? Surely a book written in the 2000s would be more relevant, they asserted. Through ensuing class discussions over the semesters I have come to realize that most of my students begin the semester thinking about the connection of history and education in a linear way that characterizes
This modernist mind-set views the history of ideas as being refined over the years where the “good” ideas are distilled from the “bad” so that the present ideas are at an apex (to be superseded by future ideas).

The inevitability of progress that comes from this modernist mind-set can be easily connected to the progress of science and, as in science, one rarely examines the ideas that underpin (or have been left out from) what is considered the most advanced thought of the day. This type of thinking is true not only for many pre-service teachers beginning their coursework, but also for many of those with advanced degrees who are considered curriculum specialists. William Reid (1986) writes that “curriculum study has tended not merely to be ignorant of, but even to be positively opposed to historical research, since the past has often been represented as a dark age best forgotten in the search for a brighter future” (quoted in Pinar, et al, 1995, p. 42).

In the early 1900s Greek and Latin, two subjects that were integral parts of early American schooling, were taken out of most curricula so that education could be more relevant to daily life. While one can argue that this change has merit, from another perspective one realizes that in many ways it devalues history. People are forced to rely on secondary sources and the translations of others—a problematic issue as old as written (and even spoken) history—and certain conceptions of history get codified and taken as gospel. One remembers Ramus’s complaints about the commentaries on Aristotle and the changing views of Aristotle’s works in the Middle Ages and Renaissance (see chapter two).

Certainly, Santayana was right to be concerned about our repeating past mistakes, but there are also many other reasons to study historical events and discourses. Each person writing on historical topics has his or her own biases, and unfortunately many voices are typically left

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53 The notion of time being linear (and hence progressive) is challenged by Michele Serres, 1990/1995.
out of historical studies. With the reconceptualization, historians began to look at education in a way rarely done before. David Tyack (1974), Herbert Kliebard (1970a, 1970b, 1986/2004), and Raymond Callahan (1964), for example, all connected complex historical discussions to education in order to elucidate why schools in the United States developed the way they had—a perspective that had been undervalued and lacking. In a similar vein, Margaret Smith Crocco, Petra Munro Hendry, and Kathleen Weiler (1999) are among those who have brought back historical voices that had been marginalized and traditionally excluded from historical studies. Indeed, examining what has been overlooked, or what was not thought of in relation to other things, can cause one to rethink opinions. As Nietzsche often wrote, there are ideas whose time has not yet come. By devaluing history we are losing out on those ideas and stories. When studying history, one has the ability to look at events and discourses again from alternative perspectives, with fresh eyes or what M. Jayne Fleener (2002) calls “soft eyes.” It is easy to understand how disagreeing with ideas can stimulate thought; as Dewey (1922/1988) writes, “Conflict is the gadfly of thought” (p. 207). It is also interesting to note that misinterpretations of ideas also have the potential for stimulating thought.

Santayana’s idea of repeating a history not known certainly provides an impetus for studying historical events and discourses, but there are also other compelling reasons. Being open to history, and a reinterpretation of history, allows for the possibility not only of picking up on what others might have missed or failed to appreciate, but also helps create spaces where differing opinions can be discussed and valued.

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54 Nietzsche’s (1844-1900) own work provides proof for his assertion and has enjoyed a resurgence since its mistaken connection to Nazi ideology in the first half of the twentieth century. Nietzsche’s ideas have provided inspiration for such contemporary giants as Michel Foucault, Gilles Deleuze, and Jacques Derrida.
Connecting Theory and Practice. Frederick Taylor was steadfast in his admonition that theorizing and planning at the managerial level must be separated from the doing or practice of the workers. Taylor, however, was far from being the first to separate theory from practice. Stephen Toulmin (1985) comments that theoros originally referred to one who did not participate in the ancient Greek city-state games but sat as a “spectator,” a representative of a differing city state (p. 239). Aristotle used the word to distinguish the philosopher’s contemplation from the practical affairs (praxis) of everyday life. Descartes, of course, made the distinction between res cognitans (that which is mental) and res extensia (that which is material and measurable). Dewey is famous for his objection to this dualistic splits and devoted both editions Reconstruction in Philosophy (1920/1988 first edition, 1957 second edition), as well as most of his educational writings (especially Democracy and Education, 1916/1980), to explain alternatives to these dichotomies. Today such a split still exists in pure and applied mathematics as well as in theoretical and experimental physics. Educators use, in the twentieth century, of a theory/practice, or an expert/novice split was not new, but with the added impetus of Fredrick Taylor’s work, the supervisor-curriculum designer/worker-teacher split took on even more importance. In the 1960s, “teacher-proof” curricula became a strong manifestation of this theory-practice split. When Joseph Schwab (1969) declared the field of curriculum studies to be “moribund” (p. 1) he was referring to this disjunction between theory and practice. At the time of the Woods Hole Conference in the late 1950s, subject specialists and others thought to have expert knowledge were planning curricula and giving those curricula to teachers so that they could implement it in their schools. Schwab, however, was dismayed by this progression and wanted “the practical” to become part of the conversation. To be practical, he argued, one must take into account of the subjectivities of the classroom and make them an object of study.
The break between theory and practice is an issue that often comes to mind when I reflect on my teaching experiences. One of the complaints I have read in evaluations I have received over the years (especially in my earlier evaluations) is that there was too much emphasis on theory and not enough on practice. As the instructor, my students seemed to think my job was to pick out what was meaningful from the theory, distill it down to its essence, and convey that essence so it could be easily understood and implemented. In a sense, the students actually wanted their chains tightened. Oftentimes, even when students desire to break away from traditional notions of teaching they still want me to tell them how to teach in other ways. In the conditions under No Child Left Behind, theory is valued because it “scientifically” tells us what works “best.” However, James Macdonald (1981/1995), whose thoughts were a major impetus for the reconceptualization of the curriculum field in the 1970s, takes issue with this view. He writes,

The test of “good theory” in practice is . . . not centrally what works (i.e. that we can control practice), but that in the engagement of theory and practice we are emancipated from previous misunderstandings and are then freed to reinterpret situations and reach greater understandings. (p. 178)

From the first class I taught, I chose articles to share because of the profound impact they had on my teaching. Part of my struggle and growth as a teacher has been to better show not only the ways that theorizing has influenced my practice, but also the ways that practice has influenced my theorizing.

In his years spent working as a teacher, administrator, and professor, Ted Aoki (1986) has taken up the charge against the dualisms that arise in education. The focus of much of his attention falls on the distinction between what he terms curriculum-as-planned and curriculum-
as-lived experience. This split between curriculum-as-planned and curriculum-as-lived experience is often manifested as a break between theory and practice.

Aoki characterizes curriculum-as-planned in much the same way as Taylor characterizes his method of scientific management. Curriculum-as-planned arises outside the classroom and focuses not just on the information experts believe is of most worth, but also what the experts believe are the most efficient and effective ways of passing on that information. There is the real possibility, Aoki asserts, that teachers are simply reduced to becoming the instruments of the experts without having intellectual autonomy. Aoki (1983) notes that his concern with instrumentality is not new. It has been referred to as “the crisis of Western reason” (p. 113) and explored by thinkers such as Edmund Husserl, Jürgen Habermas, and François Lyotard, mostly because it “effectively submerges the ideology of sociocultural values, leaving in its wake the ‘neutral’ standards of purposive relational action and instrumental reason” (p. 114). Aoki considers there to be a “producer-consumer paradigm underlying the view of implementation” (p. 112), one in which the end-means relationship is “oriented toward efficient control” (p. 113). Going hand-in-hand with the business model’s control of efficiency is the focus on assessment and accountability. This model “measure[s] teacher effectiveness indirectly by measuring student learnings directly” (p. 111). Aoki (1990) is concerned that “such an understanding of implementation allows the possibility of curricular imperialism” (p. 362). It can be hegemonic, pushing people to the margins and cutting off ways of thinking that are not deemed appropriate or the most effective.

Curriculum-as-lived experience, on the other hand, originates in the actual experiences in the classroom. Rather than the abstract, generalized notion of a student as a set of test scores and attendance records, students are looked upon as unique beings. And teachers, rather than being
classified according to their student’s marks on the latest set of exams, are acknowledged to be facing problems unique to their classroom. Curriculum-as-lived sees both students and teachers as individuals and looks at education in a different light. Aoki (1990) writes,

To me, an educated person, first and foremost, understands that one’s ways of knowing, thinking, and doing flow from who one is. Such a person knows that an authentic person is no mere individual, an island unto oneself, but is a being-in-relation-to-others, an ethical being. . . . Such a person . . . [is] concerned with dwelling aright in thoughtful living with others. (p. 365)

Curriculum-as-lived sees the individual, daily struggles of the students and teacher, and the relationships that exist in the classroom. It is a face-to-face living with each other.

Aoki often writes of the conflict that arises between curriculum-as-planned and curriculum-as-lived experience. Unlike the term praxis, which implies a “theory into practice” progression, one needs to realize that theory and practice can be viewed as “twin moments of the same reality” (1983, p. 120). Unfortunately, in the context of education in the United States, the break between them remains strong (as it does in Aoki’s home country of Canada). Aoki asserts that teachers must dwell in the tensions created because of their potential to influence thought. It goes beyond curriculum-as-planned and curriculum-as-lived, however. Feelings of conflict about curricular issues are endemic to teaching and teachers must develop the ability to exist in a space between and among ideas that are at odds with each other (I will further develop these ideas in chapters 4 and 5)

**The Appreciation of Subjective Experience.** Businesses must be efficient and effective in order for them to make a profit and in a business sense efficiency and effectiveness call for objectivity and universality. As one might expect, when business becomes the dominant
metaphor for education, the search for the most objective and universal educational goals, assessments, and “best practices” begins. As in the scientific positivism of Auguste Comte, educational research seeks to be objective and “value free,” but true universality and objectivity is a myth and there are always hidden, subjective assumptions underlying research. These are not necessarily flaws to be stamped out, they do, however, need to be put in the open to be made visible. So too are there assumptions made when students are told what they need and are assessed compared to a standardized norm that does not take into account their individuality. The quest for empirical verification and quantification causes subjectivities to be overlooked. All too often this disjunction between the child and the curriculum makes it difficult for students to make ideas their own. “Goals or objectives—distorted images of the meeting between young persons and tradition—are shaped by the language of the school, curricular materials and evaluation instruments” Dwayne Huebner (1987) poignantly remarks. “This language of school people cannot be owned by the young person. It cannot therefore become part of the young person’s story” (p. 383). Traditionally, little if any effort has been made in education to bring in students’ subjectivities as a topic for reflection. Their experiences of the education they receive has been neglected and undervalued.

Experience was an overarching topic for John Dewey and he wrote about it for much of his life. His focus on the experiences students have in school is why he is often credited with the idea of “student-centered” teaching. Although a close reading of Dewey reveals that he is actually trying to do away with the student-centered/teacher-centered duality (Dewey, 1902/1976), insisting instead on a more fluid, dynamic, polycentric conception of classroom interactions, it is true that students’ experiences form the cornerstone of his educational theories.
In fact, the aim of education for Dewey is, simply, growth, and growth is something that cannot be quantified (1916/1980, chapter 4).

Dewey worried about the artificiality that comes when education is imposed from without and seeks conformity. When that happens,

Natural instincts are either disregarded or treated as nuisances—as obnoxious traits to be suppressed, or at all events to be brought into conformity with external standards. Since conformity is the aim, what is distinctively individual in a young person is brushed aside. (p. 55)

One must instead welcome the student’s individuality and allow it to influence experiences in the classroom. In *Experience and Education* (1938/1988), Dewey asks the poignant question: “How many lost the impetus to learn because of the way in which learning was experienced by them?” (p. 12). In order to stimulate learning a teacher’s struggle becomes “that of inducing a vital and personal experiencing” (1902/1976, pp. 285-286) in his or her students. It was Dewey’s focus on the individuality of experience that caused him to rethink the idea of narrowly defined educational objectives or goals. For if the personal experiences of the students are valued as legitimate and important then teachers must allow them to influence the direction of the lesson. Goals, therefore, must emerge from the situation itself rather than being preset.

Unfortunately, Dewey’s ideas on experience were overshadowed with the coming of the Second World War and subsequent beginning of the Cold War. At that time American educational institutions redoubled their efforts to search for universally applicable teaching methods that would guarantee the academic success thought to be needed to keep our economy and military strong. Frustrated with the overarching concentration on accountability, William
Pinar and Madeline Grumet attempted to revitalize the study of educational experience in the 1970s. Pinar (1976/2006) explained his reasoning as follows:

We have gone just about as far as we can go in understanding the nature of education by focusing on externals. It is not that the public world—curriculum instruction, objectives—becomes unimportant; it is that to further comprehend their roles in the educational process we must take our eyes off them for a time and begin a lengthy, systematic search of our inner experience. (p. 4)

Pinar and Grumet explain that the focus on normative and “objective” expectations to the exclusion of individual experience dulls the intellect and stifles creativity and imagination. Additionally, one has the possibility of becoming estranged from one’s self. Pinar and Grumet theorized currere as a way to counteract these possibilities. *Currere* is an autobiographic method aimed at the individual so that her experience of education can become the object of study. It is “a way of thinking about educational experience that invite[s] students to think about the way that these identifications medicated their experience of school, of texts, of curriculum” (p. viii).

In their work entitled *Toward a Poor Curriculum* (1976/2006) Pinar and Grumet weave together ideas from existentialism and phenomenology as well as psychoanalysis in order to show how *currere* differs from traditional autobiographic writing. As Pinar (2004) explains,

The method of *currere*—the Latin infinitive form of curriculum means to run the course, or, in the gerund form, the running of a course—provides a strategy for students of curriculum to study the relations between academic knowledge and life history in the interest of self-understanding and social reconstruction. (p. 35)
**Currere** is made up of four basic movements that are both temporal and cognitive: the regressive, progressive, analytical, and synthetical (Pinar, 1976/2006, p. 51). In the regressive movement one is called to step into the past and observe what one has experienced. It is important to be immersed in the past and not feel pressured to interpret those experiences. From the past one moves on to the future. During the progressive movement one reflects on intellectual interests in order to discern where they are going. Next is the analytical movement in which one reflects on both the regressive and progressive and in order to “more freely choose the present” (1976/2006, p. 26). The last movement is the synthetical. In the synthetical one brings together the previous movements for examination with the hope that new ideas of self emerge. *Currere* allows one the space to negotiate the boundary between self and other. By doing so it mitigates against the estrangement from self yet also calls for openness to others.

Unlike traditional writing that is linear, coherent, and logically organized, autobiographic writing is often non-linear, disjointed, and illogical (or irrational). That is part of why it is not highly valued in the age of standardized testing in which we live. Those issues considered limitations from a modernist, No Child Left Behind mind-set, however, become possibilities when looked at from a post-structural or post-modern perspective because by opening up spaces for alternative viewpoints it adds richness to the conversation.

By describing curriculum theory as “*the interdisciplinary study of educational experience*” (Pinar, 2004, p. 2; original emphasis), Pinar highlights the central role experience should play in education. Education is personal, and experiences are an important element of educational inquiry for both teachers and students. By valuing autobiography one values the personal and appreciates the journey of the self. “Understanding the self is not narcissism;” Pinar (1981) explains, “it is a precondition and concomitant condition to the understanding of others.”
Autobiography is a project whose aim is the transformation of not just the individual, but also of education as a whole.

**Questioning the Traditional Student/Teacher Relationship.** When I moved to Japan and began teaching it felt strange to be called sensei (teacher). Having grown up when the Karate Kid series of movies was popular, the term conjured up images of Pat Morita, Mr. Miyagi, exhorting young Daniel to “wax on, wax off.” I noticed that many people called by the honorific title were not those who were teachers in the traditional sense. Doctors, lawyers, politicians, and clergymen as well as those who display mastery in an art form (or martial art) such as novelists and musicians are routinely addressed sensei. As my Japanese improved, I began to understand the meaning of the two characters that make up the word sensei. Sen (先) means “to live” or “to be born” while sei (生) means “ahead” or “previous.” A teacher is literally “the one who came before.” As the Oxford English dictionary points out, the word teacher means something different in the West. A teacher is one who “shows, or points out; an indicator . . . one whose function is to give instruction . . . One who directs, conducts, convoys, guides (to, from a place)” (OED, 2008). I see a fundamental distinction in perspective between these differing meanings. For me, “the one who came before” can be a fellow traveler, a person who can offer advice, maybe some guidance or a helping hand, while “the one who points out, directs, or convoys to a place” is not so much a fellow traveler as he or she is the person in the lead, controlling the course to be followed.

For teachers coming out of the traditions of Ramus, Taylor, Bobbitt, and others, authority is granted by sheer fact of being the teacher and methods of control are sought. In this deeply engrained image of teaching, a good teacher is essentially an effective classroom manager who parcels out the necessary information needed to take her students to the prescribed goal. This role
of a teacher has become so socialized into American education that even in the early ages of elementary school students have specific ideas of what it means to be a teacher. Never was this more evident than when the issue of playing school was brought up in a class of mine. Out of a group of 31 female pre-service elementary school teachers nearly three-fourths had played school when younger. During our discussions, commonalities among their experiences shone through—the teacher was the authority and imposed control over her students as she led them through the course of study (the same course her elementary school teacher led her through). Even from an early age, children view teachers as the ones who know, the one whose knowledge counts most, the one whose knowledge is not to be questioned nor challenged. Socialized into this conception of a teacher, it is not difficult to see why so many act similarly when they start their teaching careers.

As early as 1902 in his work entitled *The Child and the Curriculum* (1902/1976), Dewey challenged a student-centered/teacher-centered dichotomy, asserting that it is not a case of either/or, but rather both/and—it is the child and the curriculum. The teacher is not first-and-foremost a manager, nor, as a teacher, should she crave methods of control. The teacher, as teacher, should instead join with the students in inquiry. As *prima inter pares*, first among equals, the teacher is there to offer advice and put forward rich problematics (Doll, 1993), but authority is to be diffused and the relationships between and among students, teachers, and the curriculum takes on new importance. Teaching as telling assumes a teacher/manager—student/worker split. This split neglects, indeed negates, the reciprocal relationship between teacher and student, one in which *learning together* becomes manifest. It is not a transfer of knowledge, but a relationship wherein the students and teacher learn from each other that is important (Freire, 1968/2003; Doll, 1993, 2001, 2002; Fleener, 2002). Like Dewey, others, such as Brazilian educator/activist Paulo
Freire, bring forward the ethical concerns that abound when teaching as telling becomes the method of teaching.

From the time Brazil won its independence from Portugal in 1822, the Brazilian government has gone through many changes. With a series of revolutions and military coups from the late 1800s until the mid 1900s, political forces have been in regular conflict. No matter the government, however, the plight of the common people has been consistent. Extreme poverty and social exclusion characterized Brazil in the twentieth century and the dramatic turn towards urbanization beginning in the 1950s, in addition to having one of the world’s fastest growth birth rates, has only exacerbated the situation (Brazilian Government, 2005). Paulo Freire grew up in the turmoil of the Brazilian depression of the 1930s and remembers that many of his friends barely had enough to eat. Through the help of his mother, he received a scholarship to a private high school and there began to realize first-hand the extreme discrepancy between the rich and the poor, between the oppressors and the oppressed. After graduating from law school, yet before trying a single case, he decided to focus his attention on education (McLaren, 2000, pp. 133-134). Over the years he worked not only in government to improve education, but was also a teacher. At the time, literacy was a prerequisite for voting rights in Brazil and Freire spent time teaching the poor how to read. His success with adult literacy and his outspokenness on issues of equality lead to much acclaim but also were among the reasons he came under attack in Brazil after the 1964 military coup and subsequent military dictatorship.

Freire’s most famous work, *Pedagogy of the Oppressed* (1968/2003), was first published in 1968 (although due to animosity toward him by the dictatorship it was not published in Brazil until 1974). In it, he draws on G. W. F. Hegel, Karl Marx, and Frantz Fanon (among others) to...
show how education can lead to the oppressor/oppressed dichotomy prevalent in society. He calls into question the direct transmission of knowledge, what he terms the “banking concept” of education, which in turn causes one to question the traditional teacher-student relationship. His critique of the banking concept goes beyond whether or not it is an effective teaching method, but also, and more importantly, whether it is an ethical teaching method. “The solution is not to ‘integrate’ [the students] into the structure of oppression,” Freire (1968/2003) writes, “but to transform that structure so that they can become ‘beings for themselves’ ” (p. 74).

As an alternative to the banking concept, Freire suggests “problem posing” education. Problem posing education requires a student/teacher relationship much different from the traditional one. Teachers must not dogmatically hold on to beliefs about knowledge, efficiency, and effectiveness. In the banking concept “the educator’s role is to regulate the way the world enters into the students” (p. 76). As one can tell, with this method certain ways of thinking or knowing and the well-worn paths to them are valued over others. This hegemonic relationship often closes educational conversations and marginalizes alternative routes or unappreciated ways of knowing—it does not bring out the abundance in the curriculum (Jardine, Frieson, & Clifford, 2006). In the problem posing education Freire espouses, students are not thought of as blank slates upon which to be imprinted; instead, each one comes in with unique experiences and ways of knowing that must be valued. Subverting the traditional student/teacher relationship, Freire argues that it is crucial a teacher be “no longer merely the-one-who-teaches, but one who is himself taught in dialogue with the students, who in turn while being taught also teach. They become jointly responsible for a process in which they all grow” (p. 80). Indeed, communication rather than narration characterizes problem posing education. Problem posing education is an
open, reciprocal relationship in which teachers and students think critically and creatively about the ideas with which they are working and as such is anti-oppressive.

**Evoking Imagination and Wonder.** The metaphor of scarcity is one that has seeped into education over the last century and a half. Drawing on the work of Ivan Illich, David Jardine and his co-writers Sharon Frieson and Patricia Clifford (2006) observe that “the institutionalization of education in the 20th century insinuated into students and educators alike the idea that knowledge was a scarce commodity and therefore that the shape of education must be one of a competition for this limited resource” (p. 3). This, Illich and Jardine et al. argue, has led to the factory mind-set so prevalent in the 1900s, one in which overarching methodologies, precise control, and constant assessment have become part of the everyday and are rarely questioned. Education and teaching have become oriented around pre-set and inflexible objectives, oriented around the known and controllable. But, as Dwayne Huebner (1995) writes, “shaping educational processes around the known diminishes the need for the imagination, for then the future is no longer a field of imagined possibilities” (p. 436). Curricular explorations with unpredictable outcomes or uncontrollable experiences are regarded as “frills” only to be allowed after the “real” work of studying is done, if at all. In this way the curriculum “becomes stripped of its abundance” (Jardine, Frieson, and Clifford, 2006, p. 4). But the abundance is still there, lying dormant, waiting to become manifest. In part it becomes manifest when educators are encouraged to create spaces where imagination and wonder are thought of as valuable, even indispensable, parts of the educative journey.

When the focus of education is on the efficient transmission of knowledge, as it was for much of the 1900s, the need for imagination and the capacity to wonder are diminished. Who needs imagination if the objective of education is just to recall information or skillfully
manipulate numbers? Maxine Greene (1995), however, writes that “to tap into the imagination is to become able to break with what is supposedly fixed and finished, objectively and independently real” (p. 19). By releasing the imagination one can make connections between the past, present, and future and can question the way things are or the way they should be. By seeing the possibilities that exist we have the opportunity to imagine alternative futures. “To call for imagination” Greene writes “is to work for the ability to look at things as if they could be otherwise” (p. 19). The imagination helps one conceive of the possible within the actual—it recognizes potential.

If history is any guide, much of what we take to be true or commonsensical will prove false, or at least be shown problematic in the future. Less than one hundred years ago, for example, gender and racial inequalities were thought of as commonsensical truths and as such were beyond question while nowadays, most pre-service teachers fail to question the commonsensical truth that every lesson needs strictly delineated objectives. It is imagination that points the way to new understandings that can lead to change, and it is this idea of imagination that brings out conceptions of ethics and ethical ways to teach. As such, the affirmation of imagination is the affirmation of freedom. This is important not only with social ideas such as racial and gender inequalities but also in those academic fields traditionally thought to be the very bastions of objectivity such as mathematics or science. It takes imagination in order to break free from what Dewey (1934/1987) called the “inertia of habit” (p. 276).

It is not just the student whose imagination is curtailed in schools but also that of the teacher, especially with the advent of “teacher proof” curricula. Mary Warnock (1994) asserts that imagination “should be central in any curriculum decision” (p. 173) but too often teachers are disempowered and asked to fulfill the role of implementer rather than co-creator of the
curriculum. “To learn and to teach” Greene (1995) asserts, “one must have an awareness of leaving something behind while reaching toward something new, and this kind of awareness is linked to imagination” (p. 20). With the focus on narrow, pre-set objectives, however, the known is elevated above all else while the potential of the new is depreciated. In turn, the ruts in well worn paths of ideas become deeper and more difficult from which to break free.

Awe and wonder also have the ability to play a dynamic part in one’s life. Much of the world is taken for granted and rarely noticed, but everything is potentially wonder-ous and awe-inspiring if one is willing to think in those terms. Everyday events and features in our lives, when viewed in the right light, can be seen in terms of their underlying complexity and uniqueness. By attending to these experiences and ideas, one cannot help but be filled with wonder. Like imagination, awe and wonder allow one to transcend what is taken to be fixed and finished and by doing so create spaces of freedom. “We are free only to the extent that we meet the world with wonder and awe” Huebner (1959) avows. “The response of awe and wonder essentially is going beyond our abstraction of the phenomena and our objectification of it, to an awareness of its individuality—its subjectivity, its existence, and consequently, our existence” (p. 6). A sense of awe and wonder comes from the realization that there will always something more, that possibilities abound, that we are all unfinished works in the process of becoming. “One whose imagination acknowledges that ‘moreness’” Huebner (1993) writes, “can be said to dwell faithfully in the world” (p. 403). Unfortunately, rarely in schools does this latent potential come to light. All too often the prepackaged course to run has been set and does not allow for such subjective “detours;” yet, those experiences mistakenly labeled “detours” or getting “off track” may just make our lives more meaningful.
For many, school is looked upon as a means to an end, the dues one must pay on the path toward a better, brighter future. For years Dewey (1934/1987) wrote of the harm done by diminishing everyday experiences, the injustice of putting the present on hold for the future; yet, again and again conversations I have with my students distressingly affirm it to be commonplace. It is ethically disconcerting when the potential of the present is underappreciated or disregarded. Awe and wonder bring us back to the here and now; they inspire a passionate engagement with the present. If, as Huebner (1993) writes, “life is a journey of constantly encountering the moreness and constantly letting aspects of us die that the new may be born within us” (p. 405), then should not education be an appropriate place for it to happen? Certainly, teachers cannot “give” their students these experiences of awe and wonder. What they can do, however, is help students “craft” their own experience (Dewey, 1934/1987; Jackson, 1998, p. 122) in which awe and wonder are welcomed and encouraged. Surely we as educators would want our students to feel captivated and enchanted by ideas and, in turn, be incited to study.

Huebner (1993) writes, “We ask how ‘learning occurs,’ thus hiding the fact that we dwell in a near infinite world, that our possibilities are always more than we realize, and that life is movement, change, or journey. ‘Learning’ too quickly explains and simplifies that journey” (p. 404). We in education must move beyond a quest for certainty, beyond the pursuit of predictable and manageable, and demand a place for imagination and wonder. It is only when imagination and wonder are affirmed that one can attend to the journey of education.

Reevaluating Ideas of Efficiency and Effectiveness. Ever since Frederick Taylor and his educational counterparts, Spaulding and Bobbitt, American education has been preoccupied with becoming more like a factory. In doing so, scientific principles have been increasingly applied to schooling. Whenever discussing ideas of pedagogy and management, industrial
buzzwords such as productivity, effectiveness, and efficiency have become the norm and with this emphasis on mechanization quantification has taken on a central role. Only learning that can be documented (measured) by way of a test or rubric is considered valid. Since Taylor’s time, however, there have been those who have argued against connecting education to the factory floor, those who have called into question what it means for teaching to be effective and efficient.

It was his belief in science that influenced John Dewey to found the University of Chicago Laboratory School in order to test pedagogical ideas. Dewey wrote and spoke often about the importance of science, but his ideas were much different from those of his contemporaries and even from many of his followers (Kliebard, 1986/2004). Dewey was well aware of the complexity of teaching and learning, and was ever-wary of overarching methods that promised success for all. In a scientific experiment, one tries to control the environment so that outcomes become repeatable and, hence, certain. “The quest for certainty” Dewey (1929/1988) wrote, “becomes the search for methods of control” (, p. 103). Although one can certainly exert influence in the classroom, Dewey noted, teaching and learning are far too complex to be controlled. Yet this is what many administrators, curriculum specialists, and teachers yearn for—ways to control practice so that desired outcomes naturally follow. This gives rise to ideas of “best practices;” those methods that have been “proven” to give the best results (effective) for the least amount of time (efficient). This is especially true given the less than stellar performances of American students on recent achievement tests such as the TIMSS report (Trends in International Mathematics and Science Study).

Although he was born before the advent of standardized testing Alfred North Whitehead, one of the most influential philosophers and mathematicians of the twentieth century, took part in his share of (high stakes) testing. While a student at Cambridge University, Whitehead had to
take the infamous three-part Tripos test designed to rank the students’ ability in mathematics at the end of their third year. As was common, he hired a math coach and avoided as many classes as possible in order to focus his attention on the topics specific to the test such as calculus, trigonometry, and geometry. With his coach he focused on speed and precision, for “the man who had to stop to think about the bookwork would not get far; his fingers ought to be dispatching it while he was thinking about the rider [the problem]” (Lowe, 1985, p. 101). Although Whitehead tested well, he later realized the harm done by this type of education. Certainly, it would not be a stretch to call his method of preparation efficient and effective—he did, after all, become well-nigh mechanical in carrying out complex calculations and ranked fourth in his class in one of the most prestigious institutions of higher learning in the world—but could it be called a “good” education? Whitehead did not seem to think so. In fact, later in life he went so far as to say that said that the overarching focus on the Tripos rankings had set British mathematics back 100 years (Lowe, 1985, p. 2). In his subsequent years as a Cambridge Don, he fought for reform and, in part because of his work, the Tripos was significantly modified in 1907 and 1909.

When educators discuss efficiency and effectiveness, one issue that rarely comes up is the subjectivity inherent in what is measured and counted as learning. Learning objectives must be established in order for teaching to be evaluated in terms of effectiveness, but are there times when objectives should be open and flexible to allow for intellectual freedom? Are teachers looking for the students’ ability to recall information or something more? Surely when Whitehead calls for ideas “to be thrown into every combination possible” (Whitehead, 1929/1967, p. 2), it would not fall under traditional notions of efficient teaching. Unfortunately, often with ideas of efficiency and effectiveness come teaching methods designed around the
transfer of knowledge from teacher to student. Ideas, skills, or concepts are broken down into their most basic components, easily digestible packets of information, and passed on to the students. Heavy emphasis on worksheets, too, is a hallmark because, as a high school teacher of mine used to recite to his students like a mantra, “Practice doesn’t make perfect. Perfect practice makes perfect!” Those advocating efficient and effective methods see mistakes as a waste of time and seek to militate against them. When I look back over my life, however, I realize that I learned far more from mistakes I have made than I ever have from my successes—not just from the hard-knocks school of life, but also in my academic endeavors. When educational dialogues equate learning with productivity it imposes a narrow definition of learning that does not leave space for wandering off of the prescribed path or playing with ideas.

In his article entitled “Curriculum as Affichiste: Popular Culture and Identity” (1998) Alan Block draws on the work of Henry David Thoreau, Michel Foucault, Bob Dylan, and others to describe the importance in education of wandering and “getting lost.” He quotes Thoreau: “What does education do? It makes a straight-cut ditch of a free, meandering brook” (p. 326). As a naturalist and abolitionist who resisted oppressive government by championing civil disobedience, this statement is classic Thoreau. Like his fellow Transcendentalist Ralph Waldo Emerson, Thoreau was interested in freedom and creativity. Rather than allowing a degree of freedom, creating spaces in the curriculum where students can wander and get lost, in school students get pigeon-holed into a pre-planned, inflexible course to run. The issue, in part, is one of control. As one might expect, wandering cannot be rigidly controlled, and when teachers are assessed by the scores of their students on local or national testing, something becoming more prevalent with No Child Left Behind and continuing debates over merit pay, they are less inclined to give up control and allow the intellectual freedom to wander.
What does it mean to wander or get lost? One can understand “getting lost” in multiple ways. First and most common, is that one can get lost by veering off prescribed paths without being able to find the way back (at least temporarily). In doing so one runs the risk of becoming “off track,” but a lack of orientation does not ensure that one really is “off track” or that what one is doing is not worthwhile—being lost can allow for growth (Dewey, 1916/1985). Next, one can get lost in something, such as in the case of becoming absorbed or immersed in thought. Getting lost and wandering, whether individually or in a group, has strong ties to self-motivated study—the path is not pre-set so one has the possibility of breaking new intellectual ground, for example, by making new connections between and among ideas. Finding one’s own path or breaking new ground can hardly be considered efficient—far better to stick to the well-worn paths if efficiency is what one wants. Of course, it is quite difficult (if not impossible) to discuss ideas of efficiency about topics such as critical, creative, and imaginative thinking—all worthwhile aims of education.

Like wandering and getting lost, playing is also an idea that does not correlate well with efficiency and effectiveness. Though often thought of in terms of practicing skills or recalling facts, playing can also be a way to make sense of ideas—it can be an imaginative, creative endeavor. In playing there is the possibility to see things from different perspectives, to modify, transform, and transcend rules, and to flexibly follow intuition and interest. Again, with pre-set objectives and measurable outcomes as the overriding goal, playing in this manner would not be considered effective because there is the very real possibility that the objectives might not be met or might even be consciously discarded through the course of playing. Additionally, playing cannot be looked on as efficient when efficiency is defined in terms of productivity.
Politicians drive educational policy when they demand that teachers must be held accountable for the learning of their students to justify their salaries. They require "evidence" that their students are learning and that schools throughout the United States demonstrate sufficient proof that they are achieving this goal. Underachieving or under performing schools are in danger of being taken over by businesses that promise a more effective way of delivering the educational product that the legislatures demand. By scrutinizing the educational vocabulary inherited from scientific management, a conversation has begun which calls for a new conception of what it means to teach well. Efficiency and effectiveness have proven too problematic to serve as the primary tools of measurement.

Concluding Remarks

As one can see from this chapter, opinions in the educational debates abound and are oftentimes highly contentious. Recent reforms seem to diminish teachers’ voices in those debates and to confer upon them the title of curriculum implementer. This, however, must not be the case. Working at the site where theory and practice are conjoined, teachers can offer unique insights and perspectives that can add richness to those debates that can influence their practice. In the following chapter I begin to explore how teachers can work productively and sanely as they dwell in the tensions that abound and actively carve out their understandings of what it means to be a “good” teacher.
Chapter 4
Theorizing a Third Space

Introduction

In chapter two I examined the roots of the methodization movement and the impact it has had on education. In chapter three I reflected on many of the overarching curricular conceptions since World War II and how each put forth its own ideas of what “good teaching” is. Teachers must carve out spaces in which they can work productively and sanely in the polyphony. In this chapter I begin my exploration into how educators can deal with the diverse and sometimes incompatible conceptions of “good” teaching. I examine historic and contemporary theories that influence me as I conceptualize teaching in a third space. In the first section, I draw primarily on American pragmatic tradition with an aside to Friedrich Nietzsche. In the second section, I turn my attention to continental post-structuralism/post-modernism while touching again on Nietzsche and also on post-colonial theorist Homi Bhabha. In the third section, I discuss my influences from educational theory to relate the previous two sections specifically to the classroom. I seek not to unify the concepts from the various theorists I discuss, but to weave their threads together into my story.

The (American) Evasion of Philosophy

One commonality in the American pragmatic tradition is the connection between truth and experience. For pragmatists, epistemological criteria by themselves cannot determine truth, because truth is confirmed through experience and is therefore fallible. William James (1907) wrote, “The truth of an idea is not a stagnant property inherent in it. Truth happens to an idea. It becomes true, is made true by events” (p. 201; original emphasis). He also declared, “Reality as such is not truth, and the mind as such is not a mere mirror. Mind engenders truth upon reality
(James, 1907/1982, p, 133; original emphasis). It is because of this that Cornell West (1989) describes pragmatism as an “evasion of epistemology-centered philosophy” (p. 5). In his book, *The American Evasion of Philosophy*, West traces the genealogy of pragmatism that he believes has its roots in the transcendental thought of Ralph Waldo Emerson. Louis Menand (2001) echoes West’s connection, characterizing pragmatism as a “disestablishment impulse in American culture—an impulse that drew strength from the writings of Emerson” (p. 89).

Although it would be a misrepresentation to say that only Americans evaded (or continue to evade) epistemology-centered philosophy (Nietzsche, whom I will discuss later in this section, is one European philosopher who did), American pragmatism was one of the first philosophic schools of thought to take it as a central tenet.

The turn of the 20th century was a time of dramatic changes and traumatic crises. As one might expect, the events of the day proved highly influential to the people in the pragmatic school of thought. As West (1989) writes,

> the pragmatists’ preoccupation with power, provocation, and personality—in contrast to, say, grounding knowledge, regulating instruction, and promoting tradition—signifies an intellectual calling to administer to a confused populace caught in the whirlwinds of societal crisis, the cross fires of ideological polemics, and the storms of societal class, racial, and gender conflicts. (p. 5)

It is these struggles that draw me to the pragmatic tradition as I theorize the need for teachers to dwell in a third space. In this section I would like to examine the theories of double consciousness, perspectivism, and pluralism as they relate to a third space in which “societal crisis,” “ideological polemics,” and “class, racial, and gender conflicts” are in tension.
In the 19th century, the term double consciousness was applied to cases of split personality56 and became a familiar term even among educated laypeople (Bruce, 1992, p. 236). The metaphoric use of the term has its roots in European Romanticism and American Transcendentalism with the work of Johann Wolfgang von Goethe (1749-1832) and Ralph Waldo Emerson57 (1803-1882). By the late 1800s W. E. B. Du Bois had also appropriated the term and used it metaphorically in his writings on race.

The transcendentalist movement was influential in American intellectual circles in the early to mid-1800s and included such prominent figures as Margaret Fuller, Henry David Thoreau, Elizabeth Peabody, and Ralph Waldo Emerson. It was a reaction to the culture and society in New England at the time, especially the positivistic philosophy and Unitarian doctrine that dominated intellectual thought at Harvard University (Ericson, 1986). One of the core tenets of transcendentalism is a nature-centered spiritualism realized through one’s intuition. Intuition can allow one to transcend the physical and empirical, transcendentalist’s thought, and it should be prized as a source of knowledge. Although being in solitude with nature figures heavily in the works of many transcendentalists (Thoreau’s novel Walden and Emerson essay “Nature” are principle examples), that does not mean that society was shunned. To the contrary, social activism was fundamental among transcendentalists and indicates their deep set belief in the

56 What was once called Split Personality Disorder was later changed to Multiple Personality Disorder and, in 1994, renamed Dissociative Identity Disorder (DID) by the American Psychiatric Association (APA). The change was to “emphasize the fact that the disorder does not really consist of many personalities living in one body, but rather of a failure to integrate various aspects of identity into a unified personality” (MSN Encarta Encyclopedia). Although the term schizophrenia comes from Latin, meaning “a splitting of the mind” (Oxford English Dictionary), it refers to someone with abnormalities in his or her perception or expression of reality rather than a person with a Dissociative Identity Disorder.

57 Although Emerson was an admirer of Goethe, once calling him “the soul of his century” (Porte, 1968, p. 40), he did not particularly like the epic poem Faust, which he found too “painful” and “destructive” (p. 40). Nevertheless, Emerson greatly admired Goethe’s portrayal of a divided soul. One of the most influential passages for Emerson was when Faust exhorts, “One impulse art thou conscious of, at best; O, never seek to know the other! Two souls, alas! Reside within my breast, And each withdraws from, and repels, its brother” (Goethe, 1808/1911, p. 45; Porte, 1968, p. 41).
interconnection between theory and practice. Thoreau’s *Walden* (1854) was one of the earliest texts advocating environmental activism while Margaret Fuller’s book, *Women in the Nineteenth Century* (1845), helped set the stage for feminism in the United States. In addition, transcendentalists critiqued the continuation (and proliferation) of slavery and the treatment of Native Americans. Going hand-in-hand with their activism, transcendentalists decried unthinking conformity, believing, as Emerson wrote, that every individual must strive to have “an original relation to the universe” (Emerson, 1836/1986, p. 3). Thus, creative innovation was an indispensable foundation for self-reliance and nonconformity.

In the mid-1800s, Emerson began to discuss, as well as embody, the concept of double-consciousness. He often expounded on contrary beliefs and showed the dynamic tensions between the social constructs of his upbringing and his liberal-egalitarian/transcendental ideals. In a lecture given at the Masonic Temple in Boston in 1842 titled “The Transcendentalist,” he discussed the tensions that exist when the insights that come from moments of illumination, of transcendence, are brought back down to worldly life, which itself must not be denigrated. “These two states of thought diverge every moment, and stand in wild contrast,” Emerson wrote,

> The worst feature of this double consciousness is, that the two lives, of the understanding and of the soul never meet and measure each other: one prevails now, all buzz and din; and the other then, all infinitude and paradise; and, with the progress of life, the two discover no greater disposition to reconcile themselves. (1842/1986, p. 105)

Similar to the term’s medical usage, Emerson is discussing split personalities that exist between the soul and nature. Individuals are, however, conscious of the split, and although the dispositions are incommensurable and not to be reconciled, they can be seen as subtly influencing each other. Joel Porte (1968) notes that dwelling in those tensions rather than
reconciling them is most important for transcendentalists. He writes, “most Transcendentalists believed that the true hero of the ages was less the man who healed the division in his nature than the one who could manage to live nobly in a kind of Faustian tension” (p. 43).

As Cornel West (1989) attests, Emerson’s ideas had a dramatic impact on American thought in the 18th and 19th centuries. He was also one of the first American intellectuals to be influential in Europe. On the cover of West’s book, The American Evasion of Philosophy (1989), he metaphorically depicts the genealogy of pragmatism as a tree—at its trunk, Emerson. One person greatly influenced by Emerson was William James, one of the fathers of pragmatism. In turn, as a professor at Harvard, James introduced many up and coming scholars to the thought of Emerson. One such scholar was W. E. B. Du Bois, the first African American to earn a Ph.D. from Harvard. James became somewhat of an intellectual mentor to Du Bois, who referred to him as a “friend and guide to clear thinking” (Menand, 2001, p. 394) and it was James who first discussed double consciousness with Du Bois (p. 394).

Like Emerson, Du Bois discussed how warring ideas inside the individual create a double consciousness, but Du Bois also appropriated the term to speak to issues of race in a way previously unheard. In the first chapter of his collection of essays, titled The Souls of Black Folk (1903/1999), he describes the double consciousness of the African American living in the United States at the turn of the 20th century:

It is a peculiar sensation, this double consciousness, this sense of always looking at one’s self through the eyes of others, of measuring one’s soul by the tape of a world that looks

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58 Other students of James’s include roughrider and 26th President of the United States, Theodore Roosevelt; G. Stanley Hall, the first president of the American Psychological Association; Gertrude Stein, writer and highly influential figure in the growth of modern art and literature; Alain Locke, a writer/philosopher/activist who was the first African American Rhodes Scholar; and Mary Calkins, who was denied a Harvard Ph.D. because she was a woman (despite James’s strong support) yet went on to become the first female president of the American Psychological Association as well as the first president of the American Philosophical Association.
Dickenson Bruce (1999) contends that there are at least three issues Du Bois was illuminating as he wrote about double consciousness. “First, the real power of white stereotypes in black life and thought” (p. 238). Next, “the double consciousness created by the practical racism that excluded every black American from the mainstream of the society” (p. 238). Lastly, and most importantly, he referred “to an internal conflict in the African American individual between what was ‘African’ and what was ‘American’ ” (p. 238). In other words, one is an American yet at the same time not an American—a paradoxical, unsettled place in which to dwell. In one sense, Du Bois saw double consciousness as a type of survival mechanism for African Americans, but he also realized that both aspects play an important role in one’s makeup. He calls, not for their homogenization, but for their continued relational influence. One should merge his double self into a better and truer self. In this merging he wishes neither of the older selves to be lost. He would not Africanize America, for America has much to teach the world and Africa. He would not bleach his Negro soul in a flood of white Americanism, for he knows that Negro blood has a message for the world. He simply wishes to make it possible for a man to be both a Negro and an American, without being cursed and spit upon by his fellows, without having the doors of Opportunity closed roughly in his face. (Du Bois, 1903/1999, p. 11)

Although some of the tensions can be minimized, the goal is not to eliminate the tensions; rather, one must live in the tension between the opposing forces. The difficulty of approaching life in this manner is evident. In fact, F. Scott Fitzgerald wrote that “the test of a first-rate intelligence is...
the ability to hold two opposed ideas in mind at the same time, and still retain the ability to function” (1936/1993, p. 69).

Emerson’s influence exceeded the bounds of the United States. In Europe, Friedrich Nietzsche (1844-1900) read, underlined, and quoted from many of Emerson's essays (Stack, 1993). It is easy to see that like Emerson, Du Bois, and later pragmatists, Nietzsche also evaded epistemology-centered philosophy. Although Nietzsche does not explicitly use the term double consciousness, there is a connection between the double consciousness of Emerson and Du Bois and Nietzsche’s theory of perspectivism. Perspectivism holds that there is no objective or God’s-eye view from which one can view the “Truth,” there are only perspectives which, although they may contain important insights, can never encompass the “Truth.” In order to compete with this partial knowledge, Nietzsche believed in examining issues from multiple perspectives. “There is only perspective seeing,” he wrote, “only perspective ‘knowing’; and the more affects we allow to speak about one thing, the more eyes, different eyes, we can use to observe one thing, the more complete will our ‘concept’ of this thing, our ‘objectivity’ be” (Nietzsche 1887/1989, p. 119; original emphasis). In other words, our degree of objectivity increases the more perspectives we can see from. Unlike relativism, which puts alternative perspectives on equal footing and fails to judge if those perspectives are viable, plausible, and/or justifiable, Nietzsche’s perspectivism demands that competing perspectives be compared, critiqued, and judged (although that judgement is revisable).

Nietzsche’s perspectivism presages the pluralism which would play a central role in pragmatist theory. As William James developed it, pragmatism is a theory of truth, a theory of meaning, and also a method for clarifying ideas—it is a way of connecting theory and practice. Because of this formulation, pluralism is at the crux of William James’s work (it is also a center-
point for John Dewey’s work). Like perspectivism, pluralism emphasizes diversity of thought over uniformity. James believes that too many (in philosophy especially) doggedly pursue a single way of viewing the world. Experience, however, resists this unification and reduction. James (1899/1916) asserts,

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\text{the truth is too great for any one actual mind . . . to know the whole of it. The facts and}
\text{worths of life need many cognizers to take them in. There is no point of view absolutely}
\text{public and universal. Private and uncommunicable perceptions always remain over, and}
\text{the worst of it is that those who look for them from the outside never know where. (p. v;}
\text{original emphasis)}
\]

Pluralism, therefore, calls for social interaction in addition to individual contemplation.

James and Dewey often use pluralistic ideas to combat the dualistic thought so engrained in philosophy and society since Descartes. Cartesian dualisms exemplified many of the philosophic and social dilemmas of their day and pluralism was a way to begin rethinking those dilemmas. In a collection of lectures titled *Pragmatism* (1907), James describes what he sees as the major conflict in philosophy—the split between the rationalists and empiricists.\(^{59}\) James simplifies the clash, describing the rationalists (including idealists) as concerned with “abstract and eternal principles” (p. 9) as well as being “Intellectualistic, Idealistic, Optimistic, Religious, Free-willed, Monistic, [and] Dogmatical” (p. 12). Empiricists (including positivists), on the other hand, are devoted to “facts in all their crude variety” (p. 9), as well as being “Sensationalistic, Materialistic, Pessimistic, Irreligious, Fatalistic, Pluralistic, [and] Sceptical” (p. 11).

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\(^{59}\) While James separates philosophic schools of thought into two main groups, I am sure he realized that that was not the only possible way to look at the field. Indeed, in *A Pluralistic Universe* (1909) James wrote, “Individuality outruns all classification, yet we insist on classifying every one we meet under some general head. As these heads usually suggest prejudicial associations to some hearer or other, the life of philosophy largely consists of resentments at the classing, and complaints of being misunderstood” (pp. 3-4). James classified philosophy in such a way for his specific purposes (though many would agree with the simplification he makes).
to James, the fundamental difference between the two is temperament. The rationalists (and idealists) are “tender-minded” while the empiricists (and positivists) are “tough-minded.”

While antagonism between the two groups might be intense among many professional philosophers, the layperson finds himself or herself caught between them (as James himself does). He writes,

Most of us have a hankering for the good things on both sides of the line. Facts are good, of course—give us lots of facts. Principles are good—give us plenty of principles. The world is indubitably one if you look at it one way, but as indubitably is it many, if you look at it another. It is both one and many—let us adopt a sort of pluralistic monism. Everything of course is necessarily determined, and yet of course our wills are free: a sort of free-will determinism. (pp. 13-14)

It is not simply a matter of finding a static mid-point between the two; it is about dwelling in an ever-shifting ground, open to both while at the same time critically appraising them. Since “There can be no difference anywhere that doesn’t make a difference elsewhere” (pp. 49-50; original emphasis), as James insists, the tensioned relationship between and among competing views becomes vital.

Like James, John Dewey often searched for a space between and among competing ideas. In fact, one thing that stands out in Dewey’s corpus is his struggle against dualistic thought. The School and Society, The Child and the Curriculum, Experience and Nature, Experience and Education, and Democracy and Education are all titles of books in which Dewey attempts to show that the theories and conceptions tied up in the issues cannot be reduced to opposing poles.

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60 By emphasizing that it is a clash of temperaments, James implies that the difference between the two camps is not simply based on reason. Rather, it is individualistic and subjective.
In one of his best known works, *The Child and the Curriculum* (1902/1976), Dewey examines two prevailing theories entrenched in education. The first school of thought takes as its center-point the subject-matter of the curriculum. In order to do so, one must find “an objective universe of truth, law, and order. . . . arranged on the basis of eternal and general truth; a world where all is measured and defined” (pp. 275-276). Once the facts and laws of the subject matter have been found, the curriculum developer must break it down into logical subdivisions so that it can be easily conveyed to the students. For that school of thought, “Problems of instruction,” Dewey suggests, “are problems of procuring texts giving logical parts and sequences, and of presenting these portions in class in a similar definite and graded way. Subject-matter furnishes the end, and it determines the method” (p. 276). In the other school of thought, “the child is the starting point, the centre, and the end. His development, his growth, is the ideal. It alone furnishes the standard” (p. 276). In many ways, the distinction Dewey makes between the two can be seen as a logical approach compared to a psychological approach. Although many educators put Dewey squarely on the “student-centered” side of the debate, what he really calls for is the relational interaction between the two extremes. What neither side realizes, Dewey argues, is that the child and the curriculum are not to be held in opposition. Rather, the child and the curriculum constitute a whole that is too often “transformed into an unreal, and hence insoluble, theoretic problem” (pp. 273-274).

Both examples I have given for James’s and Dewey’s pluralism involve subverting a dichotomy. It is much too simplistic, however, to think that James and Dewey are suggesting a person’s stance should fall on a one-dimensional line between two opposing theories (even when you realize that an infinite number of points can lie on the line between the two extremes) Moreover, the addition of a second axis also fails to capture the diversity, the plurality,
accessible. Pluralistic thought (as well as perspectivist thought) must be looked upon as multi-dimensional, entertaining theories whose complex intersections and disjunctions cannot be cleanly or clearly defined. This comes through clearly in Dewey’s *The Quest for Certainty* (1929/1988) in which he refuses to acquiesce to an authority on truth (especially the authority of science).

For Nietzsche, James, and Dewey, philosophy and psychology are deeply connected. One might say that James came to philosophy through psychology and that Nietzsche and Dewey came to psychology through philosophy, but in the end, both disciplines are tightly intertwined. Perspectivism and pluralism are ways to proactively engage with complex, incommensurable, and/or paradoxical beliefs that arise in daily life. By their very nature, they have a psychological, even therapeutic, dimension. One can certainly turn away from the plurality. Clinging dogmatically to beliefs *is* a way to circumvent the often uncomfortable feelings that arise when we realize that our beliefs are not as solid as we might hope. I argue, however, that the ethical foundations of that stance are questionable (and do so in the next section).

From Emerson and Du Bois’s descriptions, double consciousness seems to be a very organic process that happens when one is compelled (or forced) to behave differently in different situations or when one entertains incompatible beliefs. Nietzsche, James, and Dewey expand on this slightly by specifically pointing out that one must make an active push to consider multiple perspectives. The activism of Emerson and Du Bois seems to indicate that they agree (at least to a point). In asserting that “Negro blood has a message for the world,” Du Bois is urging white society to consider another perspective. This point seems a corollary to the larger issue that all races, cultures, genders, etc. have “a message for the world.” Similar arguments can be made for Emerson’s insistence that one must have “an original relation to the universe.” When he asserts
that “foolish consistency is the hobgoblin of little minds,” (1841/1993, p. 24; emphasis added),
his seems to be calling for not just an active pursuit of alternative perspectives, but even for us to
hold contradictory perspectives at the same time.

Certain perspectives of viewing the world have “power” in that they become legitimized,
or even sanctioned, by groups of people. When one perspective is legitimized, others are
necessarily marginalized. Certain ways of thinking may be marginalized because of race, culture,
gender, etc., while others may be marginalized because they do not fit in with predominant ways
of thinking. Too often people dig in and defend ideas against all comers rather than openly, and
critically, considering many viewpoints. Perceptions are personal as well as situational, yet there
is also a social element. Accepting that we cannot have access to a universal and objective point
of view engenders openness to the ideas of others, engenders openness to Other. This allows for
the possibility that it can have a profound impact on one’s own perspectives.

The theories of double consciousness, perspectivism, and pluralism all have much to
offer educators. In the next section I continue my work with these major themes while weaving
in thoughts and concerns arising from continental philosophers and postcolonial theorists.

The Ambiguities and Aporias of a Third Space

In this section I continue to theorize what I mean by a third space and explore some of the
complexities that arise when one seeks to teach in a third space. I begin with a discussion
comparing the modern and postmodern to help highlight the fact that although we might strive
for commensurability and consensus we must appreciate and even celebrate things that remain
incommensurable. From there I move to Homi Bhabha, scholar of literary and cultural theory
who often writes on the topics of post-colonialism and postmodernism. It is from Bhabha, and
his subsequent use in the work of Ted Aoki and Hongyu Wang, that I draw on the term third
space. Along with Bhabha, I draw on the work of Gloria Anzaldúa, Gilles Deleuze, and Michel Serres who all continue with the topographic metaphor similar to Bhabha’s conception of a third space. Lastly, I turn to Jacques Derrida to discuss his theories on aporia and negotiation and their connection to ethics.

**Postmodern Perspectives.** Often used but rarely explained, the term postmodern is widespread in intellectual circles, from the arts to philosophy to education. What does this ubiquitous term mean? In the late 1970s Jean-François Lyotard was commissioned by the *Conseil des Universités* of Quebec to do a report on “the condition of knowledge in the most highly developed societies” (Lyotard, 1979/1984, p. xxiii). His report, titled *La Condition Postmoderne: Rapport sur le Savoir*, focuses on the distinction between the modern and the postmodern. In it, he discusses the question of knowledge and its changing status and comments on the premium placed on scientific knowledge versus the devaluation of narrative knowledge. According to Lyotard, a techno-scientific mind-set relying on metanarratives for legitimation is the hallmark of modernity. He uses the term modern “to designate any science that legitimates itself with reference to a metadiscourse . . . making an explicit appeal to some grand narrative” (p. xxiii). Following this definition it seems reasonable to group Nietzsche, James, and Dewey as postmodern thinkers or at least as thinkers who helped usher in the postmodern age. The same can be said for Bhabha, Anzaldúa, Richard Rorty, Gilles Deleuze, Jacques Derrida whom I will discuss in this section (although many of them would object to being defined as postmodernists).

Two of the main issues that come into play with “grand narratives” are those of commensurability and consensus. Lyotard writes, “the role of consensus between the sender and addressee of a statement with truth value is deemed acceptable if it is cast in terms of a possible unanimity between rational minds” (p. xxiii). He clarifies this later in the book by saying that
“not every consensus is a sign of truth [in modernism]; but it is presumed that the truth of a statement necessarily draws a consensus” (p. 24). Additionally, narrative knowledge, since it lacks the rationality and “prove-ability” of scientific knowledge, is depreciated. The postmodern condition, in contrast, has “incredulity toward metanarratives” (p. xxiv) and shies away from overarching statements of truth. In Lyotard’s terms, a postmodern mind-set sees the need for both narrative knowledge and scientific knowledge.

Jürgen Habermas is one of the most visible proponents and defenders of modernism. He believes that modernism has unfulfilled emancipatory potential and calls it an unfinished project (Habermas, 1981/1997). Growing up in WWII Germany as a member of the Hitler Youth had a profound effect on Habermas, and he has continued to be highly critical of anything having to do with fascism since the war ended (Matuštík, 2001, p. 4). As a proponent of liberal democracy, open communication and social solidarity are key topics for him. He believes in the importance of a “public sphere” to mediate between the “private sphere” and the “sphere of Public Authority” (Habermas, 1962/1991). This public sphere is a place where individuals critically and rationally discuss interests and concerns common to them.

Coming to consensus is a key point for Habermas. This is not surprising considering he was influence by the work of Hegel and Marx who are very monistic in their views (rather than dualistic or pluralistic). By placing emphasis on reconciling contradictions into a whole, both view theorization as a linear process where ideas get improved and refined into better and best. Although Habermas realizes that distortion can play a role in communicative action, he claims non-distorted communication as the ideal speech situation. It should, therefore, serve as a model for rational inquiry and ethical relations. This focus on non-distorted rational communication led
him to search for a normative foundation upon which communicative action and social critique can be judged so that distortions and differences give way to consensus.

Certainly, the idea of coming to a consensus is seductive. In a democratic society we like to think we can come to a consensus on political and ethical aims. Richard Rorty, however, argues that consensus is a word contingent on epistemology (and he, like Nietzsche, James, and Dewey evades epistemology-centered philosophy). “To construct an epistemology is to find the maximum amount of common ground with others,” Rorty (1979) writes. “The assumption that an epistemology can be constructed is the assumption that such common ground exists. . . . To suggest that there is no such common ground seems to endanger rationality” (pp. 316-317; original emphasis). Instead of the epistemological view of “a group united by mutual interests in achieving a common end” (p. 318), Rorty turns to hermeneutics and the view of “persons whose paths through life have fallen together, united by civility rather than by a common goal, much less by a common ground” (p. 318). Looked upon in this way, incommensurability and difference take on new importance.

Another similar critique of Habermas’s communicative consensus is made by Lyotard. In modernistic thinking rationality itself becomes a metanarrative, because it is believed that through sound reasoning one can come to understand the truth. When Lyotard speaks of scientific and rational knowledge he describes them as things to be transmitted, consumed, or exchanged, but not really questioned. This knowledge is often “in the guise of indisputable truths” (Lyotard, 1979/1984, p. 25) when, in fact, he hints it is really a type of narrative itself. Commenting on Lyotard’s work, David Carroll (1987) writes, “The imposition of a master-narrative perpetuates injustice because it constitutes a denial of the imagination, a denial of the right to respond, to invent, to deviate from the norm—in other words, the right to little narratives
that are rooted in difference rather than in the identity established by the grand narrative” (p. 159).

Lyotard (1979/1984) insists that communicative consensus rests on a set of implicitly or explicitly accepted rules such as the “parity between partners” (p. 28). History shows clearly, however, that consensus is often a matter of power relationships with the will of the stronger imposed on that of the weaker. This happens too for those who question the rules, for “those who refuse to accept the rules, out of weakness or crudeness, are excluded” (p. 28). Can narrative knowledge provide another viewpoint from which one can have a deeper understanding of issues? Who is to say what stories or whose stories count or do not count? Drawing on these questions, Lyotard advocates that the power of the techno-scientific be challenged. As he states, “drawing a parallel between science and nonscience (narrative) knowledge helps us understand, or at least sense, that the former’s existence is no more—and no less—necessary than the later’s” (p. 26). In his argument he is encouraging a form of political struggle.

Engaging in a discussion of modernism and postmodernism, one begins to see the relationships and connections they have with American education. Certainly the modernist view has dominated the curricular landscape in U. S. Lyotard notes, “In matters of social justice and of scientific truth alike, the legitimation of power is based on optimizing the system’s performance—efficiency” (p. xxiii). Therefore the metanarratives become ones of managerial techniques such as programs of study, teacher-proof or comprehensive curricula, and high-stakes testing. What each is lacking is the context—the narratives—unique to each classroom environment. Modernist education usually originates external to the classroom, perhaps in a school district or state department of education, and inevitably includes the planners own presuppositions and assumptions of what knowledge is of most worth and the best way to pass
on said knowledge. The danger in this is that the curriculum planners take on an instrumentalist approach, reducing teachers to merely installers and reproducers of the curriculum. For both the teachers and the students it can be hegemonic, pushing people to the margins and cutting off ways of thinking that are not deemed appropriate or the most effective. Allowing for narratives sees the individual, daily, struggles of the students and teachers and the relationships that exist in the classroom. It allows for a face-to-face living with one another.

**Third Spaces, Borderlands, and Nomadic Journeys.** Homi Bhabha’s work is primarily concerned with understanding the nature of cultural difference, the “location of culture” as he calls it (it is the title of his 1994 book). He is troubled with how cultural difference is stifled. “A transparent norm is constituted,” he writes, “a norm given by the host society or dominant culture, which says that ‘these other cultures are fine, but we must be able to locate them within our own grid’” (Bhabha, 1990, p. 208). Thus the dominant culture tries to control and assimilate other cultures on its terms. In order to disrupt this hegemonic relationship, Bhabha theorizes a third space, a place of hybridity. “[T]his third space displaces the histories that constitute it, and sets up new structures of authority. . . . The process of cultural hybridity gives rise to something different, something new and unrecognizable, a new area of negotiation of meaning and representation” (p. 211). Unlike homogenization, which seeks to eliminate or reconcile differences, hybridization embraces differences in the creation of something new.

For Bhabha, the third space is related to a sense of resistance, a disruption in the binary antagonism between colonizer and colonized. It is a “productive space of the construction of culture as difference, in the spirit of alterity or otherness” (Bhabha, 1990, p. 209). As such it evades replicating the colonizer/colonized duality. The tension and incomensurability between and among differences places and important role. He writes,
The non-synchronous temporality of global and national cultures opens up a cultural space—a third space—where the negotiation of incommensurable differences creates a tension peculiar to borderline existences. . . . Hybrid hyphenisations emphasize the incommensurable elements as the basis of cultural identities. (p. 218)

Thus, for Bhabha, a third space is characterized by translation and the negotiation of contradictory differences.

One concern I have about Bhabha’s theory is the apparent linearity of a hybrid. “With the nature of cultural difference,” he writes, “I try to place myself in that position of linearity, in that productive space of the construction of culture as difference, in the spirit of alterity or otherness” (1990, p. 209). Although again and again he talks about the creation of something new, I wonder if the new is able to transcend the ‘in-betweenness.” Certainly the third space I envision is not one dimensional, but rather multi-dimensional.

This multi-dimensionality comes through in the work of Gloria Anzaldúa. Her descriptions of borderlands show the complexity, overlap, and incommensurability of these competing forces that pull one in different directions at the same time. In her book titled *Borderlands/La Frontera: The New Mestiza* (1987/1999), she describes these forces as deriving from many different aspects including the physical, psychological, sexual, and spiritual (p. 19). Another important point she makes clear is that although there are “certain joys” that come from living on the borders, “It’s not a comfortable territory to live in, this place of contradictions. Hatred, anger and exploitation are the prominent features of this landscape” (p. 19). She writes that “the mestiza’s dual or multiple personality is plagued by psychic restlessness. . . . La mestiza undergoes a struggle of flesh, a struggle of borders, an inner war” (p. 100). The way to survive is to cultivate a tolerance for ambiguity and contradictions. “Rigidity means death,” Anzaldúa
writes. “Only by remaining flexible is she able to stretch the psyche” (p. 101). It is not about overcoming the tensions. As soon as one might come to a new consciousness the “continual creative motion . . . keeps breaking down the unitary aspect of each new paradigm” (p. 102) and new tensions arise.

Like Bhabha and Anzaldúa, Nietzsche is troubled by metanarratives that fail to look at multiple perspectives of representation. In his writings he often allusively or symbolically incorporates the theme of wandering. For Nietzsche, wandering means never putting down permanent, unmodifiable roots. As a wanderer, one is forced to constantly reexamine one’s position and always be an explorer—looking for new relationships and new perspectives from which to view situations.

Gilles Deleuze draws on Nietzsche’s concept of a wanderer, stressing that it encourages nomadic thought. He is careful to make a subtle distinction, however, between a nomad and someone who simply wanders. Nomads do not wander aimlessly from one idea to another; they elude being forced or assimilated, literally or metaphorically, into another’s way of thinking. Deleuze (1973) writes, “The nomad is not necessarily one who moves: some voyages take place in situ, are trips in intensity. Even historically, nomads are not necessarily those who move about like migrants. On the contrary, they do not move; nomads, they nevertheless stay in the same place and continually evade the codes of settled people” (p. 149). Nomadic thought is creative and flexible; it seeks not simply to appreciate difference, but also to produce it. It is “an adventure suddenly embarked upon by sedentary groups impelled by the attraction of movement, of what lies outside” (p. 148). It is a type of “perpetual displacement” (p. 146) and the space between becomes of prime importance. Deleuze and Guattari (1980/1987) write, the “path is always between two points, but the in-between has taken on all the consistency and enjoys both
an autonomy and a direction of its own. The life of the nomad is the intermezzo” (p. 380).
Characterized by dynamic movement and change, it is not homogenized nor is it prepared in advance.

Like Nietzsche’s wanderer and Deleuze’s nomad, Michel Serres also incorporates topological metaphors into his writing. His book, titled *Troubadour of Knowledge*\(^6\) (1991/1997), complexly intertwines knowledge and learning with a journey as he explores a space that straddles literature and the science as well as the natural and human sciences. It is not about following a well-worn path to knowledge; one must break free from the ruts. Serres calls for invention, not imitation. In the first section of his book he lyrically tells a story from his childhood. Born left handed in a culture dominated by right handed people, he was pushed from early on to use his right hand. Reflecting back to those times, he comes to understand that rather than feeling upset at being forced to use his right hand, he feels a sense of gratitude because it allowed him a “completed half” (p. 3). He realizes that the experience has forced him to work in the middle ground, a third space. He writes, “Having become right-handed, it remains left-handed. . . . [I]t passes unceasingly through the fold” (p. 6). Rather than becoming fixed on one side—something Serres says leads to hemiplegia—living in the third space breaks through the paralysis and opens up a new, vibrant place from which to work.

Serres often uses the metaphor of a voyage to illustrate his ideas. “No learning can avoid the voyage,” he says. “Learning launches wandering” (p. 8). It is a journey to escape from being dominated by a way of thinking—whether one agrees with it or not. One must have the tension created through the interplay of ideas. “Learning consists of crossbreeding. . . . [T]he child evolves only through new crossings; all pedagogy takes up the begetting and birthing of a child

\(^6\) The French title is *Le Tiers-Instruit*. Literally, the third instructed.
anew” (p. 49). It is a middle ground in which foundations become uncertain and reference points vanish. Serres states, “Thought begins when the desire to know is purged of any compulsion to dominate” (p. 121). No matter how much one might believe in something, it must be questioned. “As judicious as an idea might be, it becomes atrocious when it reigns alone. . . . The fear of a unitary solution makes for the beginning of wisdom. No solution constitutes the only solution” (p. 122). It is in this inventive third space that one creates, it gives an excitement to learning. Serres eloquently notes, “Being brought up, a third place opens in the body to fill it with others. The body becomes pregnant” (p. 32). It is pregnant with possibilities in which one can learn and gain insights, and can lead to deeper understanding.

**Derrida and Aporetic Negotiation.** Deconstruction and aporetic negotiation play critical roles in the work of Jacques Derrida. Deconstruction seeks to question the foundations of issues, which in turn destabilizes and complicates them. It shies away from simple explanations and instead shows the complexity, temporality, and lack of inherent certainty. It is not just a way of taking things apart to show their problematic roots however, it is also a way of imaginatively reconstructing them. Derrida is careful to note that with this reconstruction one does not merely throw out the old in favor of the new, one is in a constant state of negotiation. He writes, “We must be suspicious of both repetitive memory and the completely other of the absolutely new; of both anamnestic capitalization and the amnesic exposure to what would no longer be identifiable at all” (1992, p. 19; original emphasis). It is a negotiation in a third space, a negotiation “between the values, themes, meanings, philosophemes that are deconstructed and a certain maintenance, or survival, of their effects” (Derrida, 2002, p. 16). One does not seek to extinguish tensions but rather, allow that tension to be creative and inspiring.
For Derrida, a sense of aporia plays a vital role in the negotiation process. He describes an aporetic situation as one with a paradoxical, insoluble contradiction between mutually exclusive provisions—a catch-22. He emphasizes the crucial relationship between aporia and negotiation by saying, “One does not negotiate between exchangeable and negotiable things. Rather, one negotiates by engaging the nonnegotiable in negotiation” (Derrida, 2002, p. 13). This aporetic groundlessness highlights the fact that negotiation is not some nice organized flowchart one can follow with ease. Therein, however, lies much of its transformative power.

Negotiation requires flexibility of thought; it is cultivating a sense of non-attachment to a position. Derrida (1991/1992) states,

I will even venture to say that ethics, politics and responsibility, if there are any, will only ever have begun with the experience and experiment of the aporia. When the path is clear and given, when a certain knowledge opens up the way in advance, the decision is already made, it might as well be said that there is none to make. (p. 41; original emphasis)

In order for a state of aporia to set in one must not be rigid in one’s thinking, for that would lead to a foregone conclusion—a decision easily made—which then is no decision at all. It is in seeing the complexity of issues that one begins to experience this sense of aporia. There is an ethical need and responsibility to question the values, themes, and meanings embedded in the curriculum. To make clear the difference between the traditional sense of responsibility as obligation and responsibility as ruptured or complicated, Derrida often refers to response/ability. Whereas, in the traditional sense responsibility is aligned with rules and orthodoxy, response/ability derives from the experience of the aporia: again, “ethics, politics and responsibility, if there are any, will only ever have begun with the experience and experiment of
the aporia.” The experience of the aporia is one of questioning and complicating certainty, negotiating a new path, one that sits in relation to the past but open to possibility. “For me” Derrida writes, “negotiation is the impossibility of establishing oneself anywhere” (Derrida, 2002, p.12). Fluidity and openness to change become the sine qua non.

**Education and a Third Space**

In this section I continue my exploration of a third space by looking specifically at educational theory. I begin with Tetsuo (Ted) Aoki, whose work on the importance of dwelling in the educational and pedagogical tensions that exist has been influential to my thoughts. As far as I know, he is the first to have used the term “third space” when discussing educational issues. From there I turn to Charles Bingham’s work connecting Nietzsche, especially Nietzsche’s perspectivism, to education. Lastly, I delve into the work of Hongyu Wang who has specifically connected a third space to issues of self and other in education.

**Dwelling in Tension: Ted Aoki.** Educational theorist and second-generation Japanese Canadian, Ted Tetsuo Aoki has been called a “legendary figure in North American curriculum studies” (Pinar, 2005, p. 1). His multifarious experiences have interplayed well with his theoretic interests in phenomenology, hermeneutics, and post-structuralism. As a child, Aoki traveled back and forth between Canada and Japan prior to the bombing of Pearl Harbor. Once the war in the Pacific began he, like most Japanese Canadians and Japanese Americans, was sent to an internment camp far away from his home. Aoki became a public school teacher in 1945, one of the few white collar jobs available to a Japanese Canadian immediately following the war. In the subsequent 60+ years, his educational resume became more and more diverse. Not only did he teach elementary, junior high, and high school for over twenty years before spending a few years as an assistant principal, but he also taught at the university level from 1964 until his retirement.
in the late 1990s (Aoki, 1993, p. 459). Throughout those years Aoki has spoken on many topics, but one that plays a recurrent role is that of the tensions that permeate education. He often uses the term third space to denote the predicament in which most teachers find themselves. He writes, a teacher’s “pedagogic situation is a living in tensionality—a tensionality that emerges, in part, from the indwelling in a zone between two curriculum worlds: the worlds of curriculum-as-plan and curriculum-as-lived-experiences” (1986, p. 159).

As a long-time teacher and administrator, Aoki recognizes the difficult situation in which teachers find themselves. They must live in both the classrooms that they would like to see and the type of classroom that is mandated to them. They must also deal with students as individuals when the curriculum sees them in objective terms. To complicate things further, the classroom an individual teacher “would like to see” does not imply stability. It can, and does, change moment to moment. Aoki calls the third space created between the two an indwelling in the zone of between. It is a way of working/living in the tensions produced by the extremes. Although tensions can be minimized, Aoki emphasizes their importance in the relationship. He writes, “to be alive is to be appropriately tensioned and that to be tensionless, like a limp violin string, is to be dead” (1990, p. 360). Lack of tension implies a sort of inertness while tensions, like those between the opposite polarities of a magnet, have the possibility of propelling one into new ways of thinking.

Being the master storyteller that he is, Aoki puts forth an example of someone dwelling in the tensions of a third space. He tells the story of Seiji Ozawa, a Japanese composer who has conducted concerts internationally. Ozawa lives seemingly separate lives in two worlds, but it is the tension between the two that gives it its richness and meaningfulness. “I see his dwelling as a

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62 I discuss “curriculum-as-plan” and “curriculum-as-lived-experience” in more depth in chapter three.
dwellings in tensionality in the realm of between, in the tensionality of differences,” Aoki writes. “It is the difference that really matters and for Ozawa, as for us, it is not so much the elimination of the differences, but, more so, the attunement of the quality of the tensionality of differences that makes a difference” (1987, p. 354). Although he argues that an elimination of differences would be detrimental, he does not infer that through interacting with differences one does not influence or change them. Teachers, for example, should still push to change curriculum-as-plan into something they deem more appropriate or applicable to them and their students.

Aoki uses the Japanese word yūmu (有無), literally “presence and absence,” to illustrate the need for one to move away from the deeply inscribed Western epistemological binary. He believes the binary seeks, by its reductionist thinking, totalization and homogenization. Informed by the work of Martin Heidegger, Aoki writes,

the traditional notion of “identity” tends to truncate the situational context of our lives, leaving the possible danger of reducing our life reality to an abstracted totality of its own, pretending to wholeness. [Heidegger] cautions us that such reduction seduces us to forgetfulness of the possibilities for a fuller life, of our living in differences. He advises us . . . to enlarge and to deepen our place of dwelling so that both identity and difference can dwell complementary. There, [Heidegger] says, would be a human place of openness wherein humans may struggle in their dwelling aright. And it is the quality of this struggle that really matters” (1987, p. 354; emphasis added).

Aoki quotes Gilles Deleuze, reminding us that “in a multiplicity what counts are not . . . the elements, but what there is between, the between, a site of relations which are not separable from each other. Every multiplicity grows in the middle” (1993, p. 205; emphasis added). Because of the dynamic interaction in yūmu between presence and absence, a dynamic that refuses stability
yet defies essentialization; it denies the privileging of either. This metaphor promotes an envisioning and embodiment of a third space allowing for complex interactions, and the relational change that will happen through that interaction, yet will allow for their continued difference.

Aoki’s body of work attests to his embodiment of living in a third space. His writings examine a wide range of topics, but underlying them is the basic premise that one must actively question the way things are and explore, both from a theoretical and a practical sense, different possibilities. Although he does orient the reader in new directions, he does not simply seek to turn away from the past. Guided by the work of Jean François Lyotard, Aoki (1993) writes “it is time not to reject but to decenter the modernist-laden curricular landscape” (p. 208), time to think of things from new perspectives. It is in thinking of things from new perspectives that Aoki excels. Not only is he rigorous and scholarly in his writings, but he has an ability to make complicated arguments approachable, and through them urges teachers and others to embrace the tensionality of a third space.

**Bingham, Nietzsche, and Issues of Self in Education.** Nietzsche has long be held up as an example of virulent critic of social institutions, so it is not surprising the less than flattering remarks he makes about education. What specifically is it that Nietzsche found so disagreeable? In Charles Bingham’s (2001) article, “What Friedrich Nietzsche Cannot Stand About Education,” he asks the question, “What is it in schooling that does not tolerate [Nietzsche’s] philosophy?” (p. 337). The primary answer is that rather than cultivating or stimulating radical forms of selfhood, education promotes the status quo. Bingham writes,

> Following the genealogical spirit, of not the letter, of Nietzsche’s project, education can be an experience that provokes radicalization of self-hood. . . . Educational institutions
can challenge normed notions of self-hood if alternative versions of self-hood are *centered* in education. . . . it means conceptualizing education—and curriculum—as an ontological project that forms other subjectivities. (p. 342; original emphasis)

With all his talk about the “will to power” and his remarks criticizing the unthinking “herd,” the last thing you might expect from Nietzsche is democratic arguments, but that is exactly one of his critiques of education. If alternative forms of selfhood cannot be encouraged in education, then education cannot live up to its promise to promote excellence for all. In the end, mass education leaves children behind.

For Nietzsche it is not simply a matter of challenging the notion of a stable self, and not just about “offering different versions of *self*” (p. 343; original emphasis), as important as that might be. His critique goes deeper in at least three ways. The first is that the very notion of selfhood itself must be challenged. Bingham writes, “for Nietzsche, *any* paradigm of selfhood, whether it be progressive and postmodern or not, is problematic: that the self is posited as this or that is one of the crucial mistakes” (p. 344). The second mistake “is to confuse the content of self-hood, which is who one can become at various instances, with the form of selfhood, which is how we think of the *one* of ‘who one can become’ ” (p. 344; original emphasis). In other words, “the self must be distinguished from its identity” (p. 344). Lastly, Nietzsche believed that the self’s form is multiplicitous and must be variously understood.

How then can we, as teachers, modify education so that these issues come to light? One way Bingham proposes is drawn from Du Bois’s and Emerson’s theory of double consciousness (though Emerson is not mentioned). If the reconsideration of self is the central feature of an educative process, as Nietzsche asserts, then “to teach and to learn are both derived from the ability to be ambivalent about whom one is” (p. 346). In order to help destabilize notions of
selfhood, “a pedagogy for double consciousness would encourage insiders to feel like outsiders as the result of new learnings. And it would encourage outsiders to feel like insiders” (p. 347).

But it is more than just that. It also has the ability to lead to more fundamental questions of self. It “would, like an education for empathy, encourage one to think like the other; but in so doing it would also encourage one to realize that one’s self is not the same as one had thought” (p. 347).

Although difficult, when such questioning of Self and Other come to the forefront in this type of education, it also encourages the questioning of other important issues such as what ethical behavior means.

**Wang’s Journey.** As a Chinese woman who received her Ph.D. at Louisiana State University, Hongyu Wang (2004) often confronts difficulties working in the middle ground between the two cultures and multiple ways of thinking. As she writes,

> The contradictory nature of differences between Chinese and Western cultures constantly challenges me to reconcile these differences into a creative site where new subjectivities can emerge. Embracing both cultures through a third space of mutual transformation enables me to approach the issues of self, relationships, and differences in a new way. (p. 16)

In her book, *The Call from the Stranger on a Journey Home* (2004), Wang draws on the work of numerous thinkers on topics ranging from psychoanalysis to philosophy to literature. She has been particularly influenced by the writings of Michel Foucault, Julia Kristeva, and Confucius. Without trying to unify their thoughts, she has woven theoretical threads from all three.

Wang first turns to Foucault and his notion of identity and self-creation. In traditional Western thought there has been a search for stability and certainty that has led to essentialization, classification, and a fixed sense of self. Foucault, however, “is interested in opening up critical
and creative spaces of subjectivity which cannot be limited by any preestablished essential self” (p. 25). Through his historical analyses, he recognizes the limitations imposed on individuals, but he still remains committed to the possibility that through an active, creative process, constantly pushing against the boundaries, one can overcome them. Wang elaborates his thoughts:

For Foucault, transformation stays at superficial levels if it merely adjusts the same modes of thought. Deep transformation must break away from the same thought by means of an open and turbulent critique, bringing forth new modes of thought. Creativity is possible only at the limit and cannot remain within any “sameness,” even an innovative one. (p. 27)

Wang draws on Foucault’s interpretation of the Greco-Roman notion of the care of self, which “emphasizes self-reliance, self-regulation, and personal choice” (p. 34) and whose goals emerge from activity rather than being externally imposed. It is here that Foucault “suggests that one has to give up oneself in order to become” (p. 35; original emphasis); the self can be created again, a concept closely related to an aesthetic of existence.

Although influenced by Foucault’s teachings, Wang problematizes several of his tenets. As she writes, one must “transform” Foucault’s ethics “not merely extend” them (p. 45; original emphasis). It is her search for transformative ways that leads her to the thoughts of Confucius and Kristeva.

Wang has found Western philosophy and psychoanalysis integral to developing an understanding of her situation. They have, in turn, been the impetus for further study. Their Western underpinnings, however, seem to be missing something. Her study leads her back to her roots, Eastern thinking—especially Confucianism—to further enrich and influence her thoughts.
Wang begins by acknowledging many of the criticisms of Confucian thought, from its classical roots to Neo-Confucianism. She speaks of how Confucius’s ideas as well as the development of his ideas have often been criticized as hegemonic and misogynistic. It is in Confucianism, however, that Wang finds an essential piece missing from Foucault’s analysis—relationality. She states,

To become engaged in a dialogue with the West in a creative way, it is necessary to reclaim the Confucian value of relationality while, at the same time, searching for new ways of promoting individuality. Therefore, to negotiate a dialogue between the Foucauldian subject and the Confucian self in a third space of mutuality and transformation, I believe that we need to generate a new sense of relational individuality, situated in dynamic and complex cultural connections, social interactions, and cosmic processes. (p. 76)

It is from this “complicated conversation” (Pinar, 2004) that novel ways of thinking and new connections can emerge.

A French philosopher and psychoanalyst born in Bulgaria, Julia Kristeva is the third of Wang’s triumvirate. Wang is drawn to her not only for a feminist approach, but also for issues of self. Kristeva seeks to examine issues of difference between the self and other in ways unlike before. She is concerned with the semiotic and symbolic elements of the signifying process of language. Unlike Saussure’s conception of semiotics as symbolic systems, Kristeva appropriates the term to refer to bodily drives, which she thinks of as “feminine and oriented to mother’s body” (p. 89). These drives (such as tones and rhythms) are fluid and prone to change. On the other hand, the symbolic, for Kristeva, “refers to the structure, grammar, or syntax of language. The symbolic function of language points to judgment and communication, which is necessarily
social and historical” (p. 89). She relates the symbolic to the masculine and describes it as structured and relatively unchanging. It is in the dynamic interaction of the two that Kristeva sees creative potential. In Wang’s words:

The semiotic challenges the symbolic, while the symbolic regulates the semiotic. . . . The semiotic is the repressed, unconscious other, which has the potential to transgress the symbolic order. . . . To translate the semiotic into words or signs—as poetic language can accomplish—helps one be in touch with the unconscious so that something innovative can be introduced into the symbolic. (p. 89)

Wang points out, “the Kristevian self/other relationship is built upon acknowledging and utilizing the stranger within the self” (p. 92). It is in this sense that “Kristeva attempts to search for ways of preserving alterity, differences, and strangeness without breaking away from the necessary boundary of identity. The subject is constantly put on trial, and alterity within the subject mobilizes the self” (p. 92). In that sense, the self does not colonize that with which it confronts.

Although Kristeva does see the need to distance oneself from the mother/child bond and push toward the symbolic, she always sees the semiotic playing a major role. Kristeva calls it the “loving third,” and by it she means a “third beyond—and also embodied in—both the maternal and the paternal” (p. 104). It is in the interaction between the differences, “the difference that makes a difference” (Bateson, 1969, pp. 271-272), that a generative space arises.

Throughout Wang’s journey, one of the few things that remained constant in her life was her scholarly interactions. Not only did she play the role of student in multiple cultures, but also the role of teacher. She has struggled on her own, with her mentors, and has been influenced by her students’ struggles. Playing various roles has allowed her a unique, multi-perspective view of
Her experiences have taught her the importance of respecting, and being open to, the alterity of the other and the power of interactions through differences. Although it can be unsettling and distressing at times, these sites of tension can also be sites of transformation. “The willingness and capacity of the self for relating to the other—be this a person, text, or a landscape—in such a way that the other’s alterity is acknowledged through a loving relationship is necessary for initiating an educative process” (2004, pp. 7-8). In doing so it allows the other, whose ideas are often in the margins, a voice and does justice to them.

Wang realizes the difficulties associated with combining the Foucauldian “self-in-process,” the Confucian “self-in-relation,” and the Kristevian “self-in-ality.” Working from a third space, however, Wang accepts the unsettledness of her position and moves fluidly between and among the concepts. The triumvirate’s ability to be synthesized is not as great as the transformative space that opens up as the boundaries of their differences interact.

In the final pages of her book, Wang articulates the ambiguity and unsettledness of her position. She writes:

[T]his cross-cultural, intercultural, gendered space I have attempted to articulate is not a model; it is not universally applicable. It cannot be confined to any model. As an invitation, it intends only to inform and inspire those who desire to move with the third space. . . . As a call, this book invites all those who are in search of new spaces to join in this journey, a journey essentially educational. (p. 181)

Wang’s willingness to share her feelings of equivocalness and uncertainty as she works in a third space is engaging. I am especially drawn to her insistence that, although she is coming to a deeper understanding of the self-other relationship in curriculum studies, her journey is necessarily unending. She sums up the feeling well when she writes about her final chapter,
which she calls “a concluding remark resisting conclusion, inviting readers to start anew” (p. 18)

A third space is a never-ending process of transformation, one we should be open to and embrace.

**Concluding Remarks**

What does it mean to think of education as dwelling in tensionality? While most adults accept tension as an inevitable part of life, teachers are expected to erase, or at least minimize, tensions in the classroom, are they not? Yes, tension can be detrimental, but one cannot essentialize the notion. Tension can beget transformation. Much the same as the relationship between eustress and distress, some tensions, and one’s struggle with them, can be beneficial, providing imaginative insights and moving one forward. A third space, however, requires more than just a pusillanimous resignation to tension. One must embrace the tensions.
Chapter 5

A New Vision of Teaching: Dwelling in the Tensions of a Third Space

As described in chapter two, the American movement toward the methodization of teaching has been strong since the late 1800s. With legislation such as the No Child Left Behind (NCLB) Act inspiring an ever-increasing focus on standardized testing, that trend has become even more exaggerated. In this climate the curriculum is driven by tests. The belief that there is a direct correlation between testing outcomes and teacher effectiveness essentially pushes to the margins the extraordinarily complex relationships that are part of everyday school life and learning. Pre-service teachers know that they will be held accountable for their students’ outcomes on high-stakes tests, and debates over proposed legislation such as merit pay drive that point home clearly. There is so much material on which the students will be tested on that many teachers believe without the most efficient methods their students will not perform the way they hope. Because of this, many teacher-education students often expect to be handed the “recipes” of how to teach well. It is not surprising that Peter Taubman (2009), Nel Noddings (2007b), and others consider NCLB’s focus to be anti-intellectual for both the teachers and the students. Further complicating matters are the contending and contentious voices in educational discourse. Whether the topic is methods for teaching, methods for classroom management, theories on learning, or myriad other educational issues, the field is far from unified in its

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63 In July of 2009, Barack Obama proposed a series of competitive grants called Race to the Top. As Obama explained in a speech he gave at the headquarters of the U.S. Department of Education, “This competition will not be based on politics, ideology, or the preferences of a particular interest group. Instead, it will be based on a simple principle—whether a state is ready to do what works. We will use the best data available to determine whether a state can meet a few key benchmarks for reform—and states that outperform the rest will be rewarded with a grant” (Hamilton, 2009; emphasis added). As with NCLB, the Race to the Top grants are data driven and measured by performance outcomes from evidence based research. Although at this point it is difficult to see if Race to the Top will differ significantly from the key themes advocated by NCLB, changing the focus from punishing failure to rewarding progress is not trivial.
viewpoint. Certainly many administrators, parents, students, and fellow teachers espouse diverse conceptions of what being a “good teacher” means to them. Caught in the middle, teachers must find a way to work productively in these tensions so that they do not become overwhelming and oppressive.

Closely tied in with issues of methodization and competing discourses are the cultural myths about teaching prevalent in the United States. In her book, *Practice Makes Practice* (2003), Deborah Britzman describes three cultural myths: “everything depends upon the teacher, teachers are self made, and teachers are experts” (p. 7). As she explains, these myths “situate the teacher’s individuality as the problem and proffer a static solution of authority, control, mastery, and certainty as the proper position. They seem to explain competency as the absence of conflict” (p. 7). This is problematic considering that conflict is necessary for learning, whether it be the cognitive conflict of which John Dewey, Jean Piaget, and others write or the more affective, existential conflict of which Shoshana Felman (1992) writes. Thus, learning to teach is at heart a paradoxical situation: “there can be no learning without conflict, but the conflict that animates learning threatens to derail the precarious efforts of trying to learn” (Britzman, 2003, p. 3).

In this, the fifth and final chapter, I continue to weave together ideas from preceding chapters and put forth a new vision of teaching, one that is sensitive to the complexity of the classroom and the difficult, even precarious, situations pre-service teachers (and teachers in general) face. If conflicting points of view and the tensions that surround them are endemic to

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64 As noted before, John Dewey (1922/1988) writes “conflict is the gadfly of thought” (p. 207) and Piaget (1977) asserts that “one of the sources of progress in the development of knowledge is to be found in nonbalance” (p. 12).

65 In her article, “Education and Crisis, or the Vicissitudes of Teaching” (1992), Felman explores the connections between crisis and education to show how intricately they are related.
teaching, then what can teacher educators do to help prepare their students for the transition into the classroom? In the next sections I seek to address this question.

**On Becoming a Teacher: Methods, Habits, and Teaching**

Pre-service teachers do not begin their coursework as blank slates. In fact, in his book, *Schoolteacher* (1975/2002), Dan Lortie estimates that the average American has over 13,000 hours of contact with teachers by the time he or she graduates from high school (p. 61). Add to this the secondary experiences many have from parents, siblings, or friends who teach and the total becomes even more impressive. Even though many do not reflect deeply on those experiences, they still come away from them with a fairly well formed idea of what a teacher does and what it means to be a “good” teacher (whatever that might mean to the individual). In my years working with pre-service teachers during their coursework, field experiences, and student teaching, one of the major difficulties I have seen arises when those unexplored but taken for granted conceptions are challenged and looked at critically.

One part common to undergraduate teaching programs is the ubiquitous “methods” class. Usually organized by subject, these classes are somewhat diverse in their intent. Sometimes they are held as a way for different teaching methodologies to be discussed, experimented with, and critiqued, but too often they are a way to focus on one specific “best” method and the directions for using that method well. Various problems exist with either of these approaches. Many students come into methods classes specifically expecting the recipe, the “best” method, to teach. In my experience, students often push teachers to conform to their expectations. As one can imagine, this can profoundly affect the classroom culture. I refer back to the student who wrote in my course evaluation that she did not learn “how to teach,” only “how to think.” Over the course of the semester, as a class we had discussed and experimented with many different
methods of teaching, but I had not given them step-by-step procedures to teach in any one specific way. While many found this empowering, allowing their teaching philosophies, personal strengths, and unique classroom contexts to influence the way they taught, some, like the student I mentioned, felt frustrated and just wanted to be taught the “right” way to teach. Perhaps these frustrations related to the subject I was teaching—mathematics. In my experience, many elementary teachers lack confidence in their ability to do mathematics and are understandably uncomfortable at the prospect of teaching math. One student confided in me that she was hopeful that learning the right method to teach mathematics could make up for, or mask, her lack of ability in the subject.

Methods classes that focus on learning one specific method and the directions for using it also have their own drawbacks. One problem is that there can be different, even antagonistic, “best” methods endorsed throughout a college or department of education. Certain methods may be more common among professors in a specific content area (science educators and constructivism is a good example), but that does not mean teachers from the same content area cannot diverge considerably in their thinking. Take, for example, the conflict of which I wrote in chapter three between the literacy professors who advocate phonics and those who advocate whole language. As members of the academy, many professors have heavily invested their professional reputations on specific methods and are steadfast in advocating or defending them. To further complicate matters, the tensions created by conflicting teaching methods do not end at the border of campuses. Methods are often heatedly debated in schools, school districts, and in public media by laypeople as well as professional educators and administrators. These debates, like those in higher education, are often influenced by complex power relationships.
Lisa Delpit calls attention to the power relationships so influential in schools in her article “The Silenced Dialogue” (1988). In it, she discusses some of the interactions she has had with students, teachers, and parents (primarily people of color) whose thoughts and opinions have been dismissed by those from the “culture of power” (primarily white and middle class). Her stories have a common theme: the people from one camp do not seem willing to openly discuss the teaching methodologies advocated by the people from the other camp. Those from the “culture of power” are so convinced that their point of view is correct that they are not willing to critically examine the opinions of others. What little communication there is is one-sided at best. It is only to reason with the others and persuade them to change their allegiance. This is not far removed from the struggles a few of my students have had when doing their field experience or student teaching. For the most part, those students have had mentor teachers who saw theirs as a world of practice far removed from the ivory tower of theory espoused at the university. The students’ proposed lesson plans were quickly dismissed without discussion (“That won’t work here”) and changed into something more in line with the mentor teacher’s views (“This is how we do it here”). I bring this up not to dismiss the unique knowledge and experiences those mentor teachers brought to the table; rather, to point out how easy it is for alternative viewpoints to be silenced (something of which I, too, must be conscious as I work with my students). I return to the work of Michel Serres. “As judicious as an idea might be, it becomes atrocious when it reigns alone,” he writes. “The fear of a unitary solution makes for the beginning of wisdom” (1991/1997, p. 122).

What happens when pre-service teachers are not encouraged to think critically about the methods they are expected to use? Dewey (1916/1980) worries about methods that are torn away

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66 It is important to note that the majority of my students’ experiences in the field have been positive for them and their mentor teachers.
from critical thinking. He worries about them being “reduced to a cut and dried routine, to following mechanically prescribed steps” (p. 176). In fact, he believes that “nothing has brought pedagogical theory into greater disrepute than the belief that it is identified with handing out to teachers recipes and models to be followed in teaching” (pp. 176-177). He goes on to say, the supposition that students “can be supplied with models of method to be followed…is to fall into a self-deception that has lamentable consequences” (p. 179). One of the major problems is that these methods assume a commonality of thinking on the part of both the teachers and the students that simply is not present. Dewey argues that methods must instead be flexible and must derive in part from the conditions in the school, taking into account the students, teacher, classroom environment, and subject matter. In other words, they should emerge from the exigencies of the classroom rather than be imposed from without. To make it clear, Dewey is not opposed to methods, per say, but he is opposed to methods that are fixed and inflexible and those not critically and creatively thought through. One must reflect on past experiences (whether those experiences are from teaching classes, taking classes, stories shared by peers, conference presentations attended, personal readings, etc.) while at the same time thinking about the uniqueness of one’s class and imagining how things could be different, how they could be better.

Methods and habits are connected in interesting ways. Habits are often understood as actions repeated often enough so as to become settled tendencies or involuntary responses. Many differentiate between “good” and “bad” habits according to whether they like the settled tendencies or think that they are undesirable (immoral, unhealthy, wasteful, etc.). Dewey, however, distinguishes between “habits” and what he calls “fixed,” “routine,” or “bad” habits in a unique way. For him, first and foremost, habits are active and intricately related to thinking whereas fixed, routine, or bad habits are passive and have been cut off from thinking. There is a
difference, Dewey points out, between a habit that is at a person’s disposal because of frequent use and those that become orthodox and unquestioned. The problem, he asserts, is that what we might consider “good” habits can easily “reduce themselves to routine ways of acting, or degenerate into ways of action to which we are enslaved” (p. 53). When this happens, they “possess us instead of us possessing them” (p. 54) and in doing so put an end to our intellectual flexibility. The question then, for Dewey, becomes whether methods make a person’s “reaction more intelligent or . . . induce a person to dispense with exercise of his own judgement” (p. 179).

Too often in schools the latter is the case.

For Dewey, habits have the possibility of being expressions of growth; and growth, for him, is the aim of education as well as life (pp. 51-54). It is not surprising, therefore, that he believes utilizing the habit of reflective/reflexive inquiry will lead one to a fuller and richer appreciation of life. Here I recall Ralph Waldo Emerson’s famous pronouncement that individuals must strive to have “an original relation to the universe” (1836/1986, p. 3). Like Dewey after him, Emerson did not want people to accept what came before just because it came before and is established. At what point are we living through the past, through others’ relations to the universe, instead of making our own way? In the background of my mind I can hear Tevye from the musical Fiddler on the Roof as he sings of the role of tradition. He seems to bring forward both good and bad aspects related to it. Certainly, traditions are important to both individuals and to societies. They can often provide coherence in our lives and connect us with

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67 As discussed in chapter four, Emerson’s influence on American pragmatism was immense. Authors such as Louis Menand (2001) and Cornell West (1989) consider him a foundational figure of the pragmatic school of thought.

68 “[Spoken] And how do we keep our balance? That I can tell you in one word. Tradition. [singing in chorus] Tradition, tradition! Tradition! . . . [spoken] You may ask, How did this tradition get started? I’ll tell you. I don’t know. . . . [Singing in chorus] Who, day and night, must scramble for a living, Feed a wife and children, say his daily prayers? And who has the right, as master of the house, to have the final word at home? The Papa, the Papa! Tradition” (Jewson & Harnick, 1964).
the past in a personally meaningful way. But what happens when we lose our ability to see things as if they could be different, as if they could be other? Is part of our responsibility as teachers to have an “original relationship” with our community, our students, and our teaching? Should we endeavor to come up with new and different ways to think about teaching? I believe so.

**On Being a Teacher: Ambiguity, Humility, Diversity**

My vision of good teaching hinges on the idea of teachers coming to an original relation to their teaching. To do so they must dwell in a third space. Three interconnected themes I see playing a prominent role in this are accepting ambiguity, adopting humility, and embracing diversity of thought.

Teachers and administrators long for the security of knowing what they are doing is right—they long for certainty. And the methodization of teaching offers the promise of certainty. It offers the promise of circumventing the “messy” parts of education such as the complex self/other relationships that are at the very heart of teaching. If only we use the best method of teaching; if only we use the best method of classroom management; then we can be sure that our classrooms will be organized and efficient, and that all our students will be well-behaved and learn exactly what we want them to. Dewey wrote, “the quest for certainty becomes the search for methods of control” (1929/1988, p. 103). While teachers do exert considerable influence over their classroom environments, it is naïve as well as ethically problematic to think that they can and must control their students. The classroom environment is simply far too complex to be controlled. Teachers must begin to accept and value the ambiguity involved in the pedagogic process as well as in life.

In many ways, fear and anxiety are natural reactions to ambiguous situations that lack predictability. Since teaching is anything but predictable, it is not surprising that many teachers
and administrators long for a sense of certainty and security. The fear of making mistakes, the fear of failure, is a common motivation for methodizing teaching. As much as we may try to minimize them, however, mistakes will always be made. There will always be things we would do differently given the chance, no matter the method we are using. While these mistakes and failures may cause us grief, they also have the potential to be a source of growth. Dewey (1933/1989) points out that for the reflective teacher,

 failure is not mere failure. It is instructive. The person who really thinks learns quite as much from his failures as from his successes. . . . . Nothing shows the trained thinker better than the use he makes of his errors and mistakes. What merely annoys and discourages a person not accustomed to thinking, or what starts him out on a new course of aimless attack by mere cut-and-try methods, is a stimulus and a guide to the trained inquirer. (p. 206; emphasis added on last statement)

Are teachers trained to be inquirers or are they trained to be transmitters of knowledge? Inquirers who dwell in a third space readjust their perception of mistakes and failure to see the creative potential that lies dormant.

Herein lies a problem central to teaching. We can never be sure that what we are doing is right. We can never be sure that what we are doing is best for all our students. Certainly the unique bonds that can form between and among teachers and students can point the way toward resolving inequities and misunderstandings, but it is arrogant to assume that we can ever really be sure we know what is “best” for a student or for our classroom community, and teachers must have the humility to accept that.

Dwayne Huebner (1979) reminds us that “Feelings of doubt, inadequacy, fallibility, possible incompetency are endemic to teaching.” In fact, he wonders
whether a teacher who lacks such doubt can be a good teacher. Why? Because to be a
teacher one must be open to others. To meet new young people, people different from
those of past years, always raises questions of doubt and competency. It leaves one open.
(p. 307; emphasis added)

Sadly, many teachers are not “open” precisely because of the felt vulnerability of that position.
Huebner notes, “Concern for competency within the present social structures of education
encourages teachers to interpret these feelings of doubt and fallibility as personal weaknesses, to
be overcome by individual knowledge, proficiency, and more hard work” (p. 308). Those doubts
are not recognized as being “essential to maintain one’s humanness and essential as a source of
continued growth and development” (p. 308). As Jim Garrison (1997) argues, teachers who
embrace their felt vulnerability can be more perceptive. Vulnerable teachers have the “ability to
see the unique needs, desires, and interests of [their] students in unique contexts” (p. 19).

In the United States, there is a sense of individualism that pervades teaching. That is not
to say that colleagues are not friendly, supportive, or caring, but the role of the teacher tends
toward autonomy with classrooms functioning independently of one another and without much
incentive for collaboration. Add to this your average American’s reluctance to show weakness or
share insecurities, and it is easy to see how individualism can propagate feelings of doubt and
inadequacy. Teacher education programs, as well as schools in general, must be sites where fears
and doubts can be confronted openly without their complexity being dismissed (for example, by
a mentor teacher or a teacher educator who just tries to “correct” the pre-service teacher’s
actions). Do pre-service and in-service teachers have the opportunity to meaningfully explore
some of the ambiguities, contradictions, tensions, and paradoxes that can evoke fear and doubt?
Do they examine any educational decisions that fall into the grey area, where right and wrong are
not easily determined, or are they brought up thinking that clear-cut, easy to decide situations are the norm? While it is easy to say, for example, that you want to promote academic excellence and equality, it is another thing entirely to live in the tensions that arise in those moments when their incompatibility bubbles up. What is a teacher to do when he or she is in the classroom and is expected to react to an anomalous situation? As teachers, our responsibility to act can often not be deferred. Whether the circumstance is easily decided or morally ambiguous, many times we are called to act and do not have the luxury of waiting for consensus. Like Jacques Derrida, I believe that ethics and responsibility emerge from our encounters with aporia, and because of that ethics and uncertainty are integrally connected. If part of being a teacher is negotiating the aporetic situations that arise daily in the classroom, then why do reflections and discussions about these situations not play a more prominent role in the teaching profession? Considering that these issues can be some of the most stressful encountered in school, it seems bewildering that they are relegated to the margins. Blind adherence to a method takes us away from the responsibility we have as teachers to negotiate aporetic situations. Veteran and novice teachers must discuss more than just the methods they use.

Cultivating the ability to hold conflicting, even incompatible ideas at the same time is an indispensible part of dwelling in a third space. Teachers must embrace the diversity of thought that surrounds them, because difference is a critical part of relational knowing. By humbly accepting the ambiguity of our positions and the importance of diversity, we can begin to move more freely between and among differing points of view. As Gregory Bateson (1979/2002) reminds us, difference and creativity are interrelated—we learn through our interaction and

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69 Derrida writes, “I will even venture to say that ethics, politics and responsibility, if there are any, will only ever have begun with the experience and experiment of the aporia. When the path is clear and given, when a certain knowledge opens up the way in advance, the decision is already made, it might as well be said that there is none to make” (Derrida, 1991/1992, p. 41; original emphasis). See chapter four for a more in-depth examination of Derrida’s position.
reflection with difference. It is challenging to imagine that opposing views of good teaching must be valued and celebrated rather than dismissed or synthesized. It is understandable to want to reconcile contradictions, to hope for consensus, to long to combine the best aspects from one thing with the best aspects from another. But while there may be cases in which ideas can be harmoniously fused together, more often than not a true synthesis is impossible. Many times the very strengths and weaknesses of a concept are so intertwined that any effort to separate them is doomed to failure. It is not enough to call for balance, because balance is too static. Balance lacks the dynamism so vital to a third space. Instead, by dwelling in a third space, one is in a constant state of negotiation.

Confronting the ambiguities, contradictions, and tensions that induce fears and doubts can be generative. It can lead to new insights into education. But it can also be crippling. It is important to maintain an ever-changing optimum of conflict. Consider Jacques Derrida’s (2002) statement:

Negotiation operates in the very place of threat, where one must [il faut] with vigilance venture as far as possible into what appears threatening and at the same time maintain a minimum of security—and also an internal security not to be carried away by this threat.

(pp. 16-17)

One must constantly negotiate spaces that will permit one to continue to be open to the tensions inherent in teaching without allowing that openness to become crippling. Negotiation requires flexibility of thought; it requires cultivating a sense of non-attachment to a position.

**Concluding Remarks: A New Vision of Teaching**

It is time, as educators, that we stop clinging to the promise of certainty and embrace a third space. Methodization assumes that education is static rather than dynamic and is rooted in a
modernistic quest for certainty. It “tends to radically reduce many registers of history and experience and to cover over the inherent plurality of knowledge” (Meyers, 2003, p. 7). There are no universally applicable models for good teaching. In fact, the very idea of universally applicable models assumes that knowledge is immutable and inert and it fails to bring forward the abundance of the curriculum (Jardine, Friesen, and Clifford, 2006) or its richness (Doll, 1993). When we begin to see the world as in-process, as state of becoming rather than fixed-and-finished, we begin to realize the importance of negotiating a third space. Methodization limits our potential; it obstructs us in our quest for an “original relationship.”

While the ambiguities, contradictions, and tensions of teaching may be minimized, they will never go away. Teaching can be deeply unsettling and conflictive. There are moments of calm and clarity as well as psychically tumultuous moments of paradox and ambiguity. In order to dwell in the tensionality of a third space, teachers must be humble and vulnerable enough to realize that they do not have all the answers. Michel Serres writes (1991/1997), “Thought begins when the desire to know is purged of any compulsion to dominate” (p. 121). While knowledge is often thought of as power, if we allow one way of thinking to dominate, if we do not hold back, then knowledge can kill (Serres, 1977/1983, p. 28). Indeed, for Serres (1991/1997) “humanity begins with holding back” (p. 117). Thus, the fear of being “too right” is the beginning of the humility a teacher needs. Serres insists that “Learning consists of . . . crossbreeding. . . .[and] all pedagogy takes up the begetting and birthing of a child anew” (p. 49). We must, as teachers (indeed, as humans), join others in conversation about things we see differently. We must encourage them to join with us in thinking in new ways, in thinking about how things can be other because “all learning demands this voyage with the other toward alterity” (p. 48). We must do this all the while realizing our beliefs and ideas will not necessarily be harmonious or
commensurable. In no way does this mean that one must become passive and give up on deeply held beliefs. Instead, it impels an active search and holds with it the possibility of becoming even more committed about our beliefs. Tensions, and one’s struggle with them (whether individual or communal), can be beneficial. Tension can beget transformation.
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Vita

Sean Buckreis was born in Flint, Michigan, but soon moved away. By the time he arrived in Baton Rouge to pursue his Doctor of Philosophy, he had lived in 11 states in the United States and three prefectures in Japan. Reflecting on his experiences living and teaching in Japan cemented his commitment to issues of diversity, multiculturalism, and social justice that began when he was a middle school student living on the remote Pribilof Islands in the middle of the Bering Sea in Alaska. Being one of only a handful of students who were not part of the Aleut Indian community that lived on the island profoundly affected Sean, compelling him to examine and rethink taken-for-granted ideas of diversity. Sean’s reflections on these issues have become intricately intertwined with his teaching and studying.

Sean has mentored students of all ages, across many disciplines of study, as well as within widely diverse settings. His classroom teaching experiences have been broad and varied, including teaching in public elementary and middle school as well as instructing various undergraduate and graduate courses.

Sean’s academic interests revolve around teacher education, particularly as informed by post-structural, postmodern, and pragmatic philosophy, as well as complexity science. Themes of his recent work include the ethics of teaching, the aesthetics of mathematics, the complexity of teaching, literary engagement and the curriculum, cultural perspectives and comparative education, and educational equity.