

Reading Comprehension Research and Testing in the U.S.

*Undercurrents of Race, Class,
and Power in the Struggle for Meaning*

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PREFACE

Since the historic signing of the No Child Left Behind Act of 2001 (NCLB) reading comprehension research and testing have become principal research foci in education. The national reading research agenda is informed by a history of reading comprehension research and testing in the United States and other English-speaking countries. Although the illusion of progress is promoted among reading researchers, when viewed historically, concepts, definitions, and theories of reading comprehension—how one understands text (narrowly defined as printed marks on a page) and how to determine (or test) for reading comprehension—has not changed significantly for over a century. Reading comprehension research and testing have been conceptualized, defined, tested, and interpreted in ways that are consistent with dominant ideologies (beliefs, ideas, knowledge, languages, norms, and values) and least informed by the ideologies of subaltern¹ groups. Reading comprehension research and testing are mechanisms of ideological control that privilege dominant ideologies and promote oppressive reading practices and interpretations of test performance. Current reading comprehension research and testing are inadequately conceived to meet the rapidly shifting demographics (class, immigration status, language, and race) of U.S. school children. Collectively, as a group these are the Underserved—children who live in poverty, who are children of Color, whose first language is not English or Standard English, and who have varying immigration status—who have been underserved by our nation's education system. The question becomes: how will reading comprehension researchers and the research they produce respond, adjust, and address the needs of Underserved children?

¹ Subaltern groups (dominated, subordinated, and marginalized people).

This book is an analysis of the ideological hegemony that underpins reading comprehension research and testing. I explore how ideological hegemony historically has operated within reading comprehension research and testing: beginning with the philosophical assumptions that underpin reading comprehension research and testing, to their use as mechanisms by power elites to maintain power and control of education, the reproduction of dominant ideologies in reading materials, and the use media and politics to gain legal and social consent to sustain dominant privileged positions and control of education in society.

In this book I articulate how ideological hegemony operates to reproduce dominant ideologies through education research in general and reading comprehension research and testing in particular. In this context, reading comprehension research and testing are under the ideological control of power elites that historically have been used to sustain, support, and promote their ideas as universal and necessary. This is not meant to suggest a grand conspiracy theory, but to point out how ideological hegemony operates in U.S. society and the role that education and reading comprehension research and testing have played in reproducing and reinforcing dominant beliefs, ideas, knowledge, languages, norms, and values. The crafting of a history of reading comprehension research and testing in this manner demystifies how the philosophical assumptions that underpin reading research emerged and are sustained; centers on the reproduction of dominant ideologies within reading comprehension research and testing; and illustrates the interconnectedness among the social and political forces that inform reading research, researchers, institutions, practices, tests, and testing.

Reading comprehension research and testing are in grave need of reconceptualization and definition as it remains largely anchored in the past and remains isolated from and responsive to political and social realities. This book questions, challenges, and critiques the traditional, sanctioned, or official histories of reading comprehension research and testing as it details the hegemonic processes by which reading comprehension research and testing are mechanisms of dominant groups. For example, traditional historical accounts of reading comprehension present sanitized versions of its complex history without accompanying detail or discussion of the ideological and socio-historical foundations that underpin concepts, theories, research, tests, and interpretations. By way of contrast, this

book presents a more inclusive, although not exhaustive, study of how ideological hegemony operates through dominant ideologies to narrowly conceptualize, define, theorize, test, and interpret reading comprehension as it seeks to perpetuate and legalize dominant ideas. What becomes clear is that misguided efforts are not “righted” by tradition, declarations, repetitions, tests, laws, or coercion.

This book is written to be accessible to researchers, teacher educators, school administrators, teachers, and politicians. The content includes a healthy discussion of how, in order to retain ideological hegemony, dominant groups manufacture consent and coerce allied and subordinate groups to support dominant ideas as needful for the common good. Ideology is the terrain of struggle for control by power elites and opposing groups. In this context, reading comprehension research and testing are understood as mechanisms used by power elites to sustain ideological control. Tracing the role of reading comprehension research and testing as mechanisms of ideological hegemony necessitates (a) understanding the social and political contexts in which reading comprehension research has evolved and (b) presenting counterhegemonic positions and discourses that challenge dominant ideologies. In this book, counterhegemonic positioning is drawn primarily from the work of African American scholars and activists whose ideologies (beliefs, ideas, knowledge, languages, norms, and values) and research have been available but seldom accessed to inform reading comprehension research and testing. Finally, I include suggestions for re-envisioning reading comprehension research and testing in a more adequate and socially just manner.

Overview of the Book

This book articulates and traces associations and interconnections among multiple sources to reveal how ideological hegemony supports dominant ideologies and influences reading comprehension research and testing. In my thinking, the best way to present my analysis is to begin with an introduction that offers a fundamental understanding of hegemony, dominant ideologies, and their connections to reading comprehension research and testing. Specifically, I note how the ideologies of scientism, racism, and classism flow beneath the surface as undercurrents within educational research in general and reading comprehension research and testing specifically.

Then, I use broad and complex layers, thick with detail, throughout the remainder of the book to document and examine change over time, as history occurs in the everyday moments of our lives not just in storied events. This process also helps to clarify how ideological hegemony remakes itself in order to sustain power by dominant groups. To ensure that you remember the big picture and do not get lost in the details, throughout, I offer a modest summing up of key points that have, and were available to, influence reading comprehension research and testing.

Chapters 1 and 2 offer overviews of philosophical assumptions that underpin dominant ideologies embedded in reading comprehension research and testing. This layer consists of philosophical assumptions from Western Europe and the United States typically cited as influential at the onset of education research: biological and Social Darwinism, pragmatism, and Herbartianism as their legacies continue, albeit in altered forms, to influence reading comprehension research and testing. In addition, biographical information about the founders of each philosophical school of thought is shared to understand their sense of agency within the sociohistoric moment in which they lived. None of these philosophies is reviewed in its entirety, in part because each has been extensively reviewed by others elsewhere, and, in part, because what I find intriguing and expose are connections and relationships among the ideologies of scientism, classism, and racism as undercurrents within reading comprehension research and testing.

The introduction of African American scholarship is presented as a counter-hegemonic position reflective of the lived experiences of African Americans in the United States and their resistance to dominant ideologies (beliefs, ideas, knowledge, languages, norms, and values) of power elites. Their individual and collective counter-discourses uncover and deconstruct undercurrents of scientism, racism, and classism within educational research used by reading comprehension researchers, educators and politicians.

I believe that examining the unacknowledged philosophical assumptions of reading comprehension research and testing is an important and necessary first step to understanding how ideological hegemony works through the unconscious adoption of dominant ideologies as they recast themselves throughout history; however, to untangle the myths and commonsense notions that surround reading comprehension research and testing, it also is necessary to illus-

trate how ideological hegemony has shaped our understandings of history through discourse that positions the thinking and actions of the privileged. Chapter 3 begins with a discussion of political, cultural, economic, and social forces throughout the United States that have supported and influenced the evolving role of education as an institution of the government. Then, I review reading comprehension's role in inculcating dominant ideologies through school textbooks, professional materials, and teachers' manuals that illustrate (a) how reading material was used to inculcate dominant ideologies as common sense, (b) how publishers and teachers believed that gaining meaning from reading textbooks was an important skill to acquire, and (c) how books written for African American school children were designed to reproduce dominant ideologies as natural, commonsensical, and universal.

Chapter 4 adds another layer, typically where traditional histories of reading comprehension begin, in the late 1800s. In this chapter, I continue my analysis of how ideological hegemony evolves within institutions with a focus on the academy and early attempts at reading comprehension research and testing. My review takes a genealogical approach to the lives, research, and relationships among three prominent reading comprehension researchers as I unveil their collective support of dominant ideologies within reading comprehension research and testing.

Chapter 5 continues the layering with a discussion of the growing interest in reading comprehension research and testing prior to, and including World War I. I specify how leading reading researchers and educational psychologists, who firmly believed in dominant ideologies, created and interpreted standardized intelligence tests constructed for U.S. Army officer recruitment in concert with their beliefs, values, and practices. With modifications, these tests were redesigned as national intelligence tests for school children. The use of standardized intelligence tests stirred debate among journalists and scholars, especially scholars of color, who called into question the veracity of the notion of general intelligence and the ability to measure it with a test. These scholars, and their allies, alleged that the reading sections of intelligence tests were constructed to reflect ideas, beliefs, values, interests, and experiences of dominant groups. Included in this chapter is an extension of Franklin's (1980) examination of African American scholars' responses to and research of

intelligence testing among African American children and excerpts from the 1922 Lippmann and Terman debate.

Chapters 6 and 7 offer deep layers that review reading comprehension research and testing from the 1920s through the 1990s, with a special focus on research among White, middle-class, native English speakers, as researchers sought to normalize, standardize, and promote their reading comprehension performances as ideal. These chapters document how privileged leaders in the field of reading comprehension research and testing, within a span of a few years, sought to manufacture the consent of subaltern groups through federally and philanthropically supported research as well as through federal legislation. In each chapter, I contextualize historical moments by sharing events that should influence reading research and illustrate that there were resistance and counter-discourses that challenged dominant ideologies. These counter discourses envisaged the role of language and culture in reading and comprehension differently, especially for underserved children.

A final layer, Chapter 8, concludes my analysis of reading comprehension research and testing as mechanisms to promote dominant ideologies by chronicling efforts of the federal government to (a) gain consent of the public by fabrication or illusion and (b) coercion of the public's acceptance of dominant ideologies by federal and state law, rules, and esoteric credentialing. I highlight the role of government institutions, agencies, and leaders as they resurrect scientism as the best (and only government supported) form of reading comprehension research and testing. Their actions also inherently legalize racist and classist ideologies embedded in reading comprehension research and testing while simultaneously promoting and advertising the false impression of working in the best interests of the underserved.

Given the context of this discussion, the growing population of Underserved schoolchildren in U.S. public schools, and the shrinking federal funding of education, reading comprehension research and testing are desperately in need of more complex, adequate, and flexible understanding of how ideological hegemony has functioned to delimit research that is inclusive, democratic, and socially just. The postscript aims to revolutionize how reading comprehension is conceived and theorized for all children.

Robert Bernstein (2007) in a news release by the U.S. Census Bureau reports that the U.S. minority population tops 100 million. Census Bureau Director Louis Kincannon claims, “About one in three U.S. residents is a minority. . . there are more minorities in this country today than there were people in the United States in 1910” (<http://www.census.gov/Press-Release/www/releases/archives/population/010048.html>).

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They, however, are not responsible for the content of this book; that is mine alone, the good and the bad, the beautiful and the ugly. I also want to thank Naomi Silverman whose patience and faith in me, and in this project, have been a blessing. Finally, I thank and owe a tremendous debt of gratitude to the reviewers of the manuscript: Allan Luke, University of Queensland; Richard J. Meyer, University of New Mexico; and Rose-Marie Weber, University of Albany.

Introduction

Histories, including this one, are socially constructed narratives that represent an interpretation of primary and secondary sources within a historical moment. As a constructed narrative, this account presents an alternative construction of the history of reading comprehension research and testing. Academic research is constrained by the perspectives of the researcher and her beliefs and values as well as the traditions and practices within the discipline. For instance, I believe that people's lives, the entirety of their lives—what they believe, value, and desire—affect their work, whether scholarly or otherwise. People simply do not live unaffected and vacuous lives that are disconnected to their beliefs, values, and desires. Nor do people's lives become divorced from the political, social, cultural, and economic status within their nation or locale. It is as true today as it was in the 18th century. These beliefs help frame my research.

I like to think of writing history as a process that articulates the complexity of relationships among multiple sources of influence. Herein, I use the notion of articulation similar to that used by critical and cultural studies theorists in an effort to avoid reducing all issues to one cause. I examine the complexity of relationships among multiple sources that have influenced, and some that continue to influence, how reading comprehension research and testing are conceptualized, defined, theorized, tested, interpreted, and promoted. In this way, I unveil notions of personal agency as well as relationships and connections among political and social events and their influence on reading comprehension and testing. Drawing from multiple sources complicates as well as intensifies the discussion, as layer upon layer of documentation requires fine-tuned analyses. However, the layering is important because it helps to establish and trace relationships and connections among disparate sources that

have influenced reading comprehension research and testing in the United States.

Typically, histories of reading and related interests, i.e., comprehension, from both groups have adopted a nonthreatening, allegedly neutral, reasoned approach that seldom questions, challenges, or critiques the past. On the one hand, historians write rich and complex histories that encompass broad understandings of ideologies and contexts of reading and its role within U.S. history. On the other hand, reading researchers typically write celebratory and uncomplicated historical accounts that cover esoteric understandings of concepts and methodology in the field. However, as Best (1995) points out, adopting a cultural or neutral position is to write history as myth.

In short, both types of historical writing about reading comprehension research, testing, and progress have presented accounts that begin and end with the experiences of the dominant group. Thus, they have only told part of the story, a much more complex story has been left untold.

Traditional histories of reading comprehension research and testing also have been written from the perspective of a dispassionate observer, an interloper who peers into the work of others. This form of historicizing also is a myth. Seldom have histories of reading comprehension research and testing included biographies or tied individuals to their philosophical beliefs. Significantly, these histories have not explained why leaders espouse philosophical positions and how their beliefs, values, and ideas have influenced their research. Ironically, the history of reading comprehension research and testing, as well as the lives the educational psychologists and reading researchers, were lived with a great deal of passion and gusto. Their passion was not the unbridled lust of film, though a case could be made in the lives of a few; it was more often passion for sustaining the dominant ideologies.

The ideas I examine in this book center on our understanding of the role of reading comprehension in sustaining the ideological hegemony of the dominant group. This examination includes understanding how dominant ideologies are linked to social and political forces and why this all matters now. I argue that it matters because understanding why and how reading comprehension was conceived, defined, and measured is the first step in dismantling its power to control the thinking of U.S. school children. I am not suggesting some grand conspiracy theory or suggesting that read-

ing comprehension research and testing are fulcrums on which the fate of the world rests. But what I am strongly advocating is that in a just and democratic society, we need a revolutionary alternative that embraces issues of difference, especially race, class, and power. A new definition of reading comprehension would welcome, appreciate, value, and support the cultures, knowledge, languages, and understandings that all children bring to the classroom, but most especially the growing number of underserved children who historically have been disserved by the concept and structure of reading comprehension tests.

What Is Reading Comprehension and Can it Be Measured?

The most fundamental question that underscores reading comprehension research and testing is, what is reading comprehension? The answer, yet to be determined, at least a definitive one, has puzzled researchers for hundreds of years. Researchers with varying points of view have used an array of methods of inquiry as they sought to answer the question. What we can say with some certainty, sans neurological brain scanning images, is that reading comprehension is an elusive act, one that is difficult to capture, and one that is even more difficult to test.

My response to this query is twofold. First, I believe that reading comprehension is a fluid, cognitive, linguistic, and social process that defies exactitude. It is at once and simultaneously invisible, individual, and intimate yet it is affected by a host of influences beyond the control of the reader. Attempting to capture it, whether through standardized reading comprehension tests, informal assessments, or oral reading, is synonymous to catching water with your fingers. There will be seepage, there will be missed ideas, and there will be misunderstandings of the process. Despite the rhetoric in reading comprehension for the correct answer or the best answer, Hall (1984) persuasively argues that an “‘essential, true, original’ meaning is an illusion. No such previously natural moment of true meaning, untouched by the codes of social relations of production and reading exists” (p. 157). I agree and use his declarations as a springboard in this study in which I illustrate how ideological, cultural, social, and political codes shape reading comprehension research and testing. And, given that codes shape reading comprehension research and

testing, I seek to understand for what purpose, and for whose purpose, are these codes shaped? Put another way, who (or what groups) is best served by current definitions of reading comprehension and the standardization of the reading comprehension tests?

Second, I believe that reading comprehension research and testing are politically and socially constructed mechanisms used to reproduce dominant ideologies. These ideas were created to describe the invisible, individual, and intimate process of communicating one's understanding of text (narrowly defined as printed words on a page). An individual's personal history (as well as collective or group history), race, class, gender, and native language can also influence how and what a person understands or how he or she makes meaning from text broadly defined.

Reading comprehension should be understood as a natural meaning seeking process. Given that many children learn to read in schools, are exposed to the idea of reading comprehension, and are tested for reading comprehension, it would be fair to say that schools are institutions that can nurture or inhibit how well students comprehend. In addition, the interactions, or lack of interactions, between the reader and the instructor, between the reader and the text, and between the reader and the context in which reading occurs have unfathomable consequences. What occurs in the translation of the idea of reading comprehension and uses of reading comprehension tests also is part of larger ideological and cultural discussions about reading comprehension's role in society and schools. In the context of this book, schools as institutions are important sites used by dominant groups to sustain ideological hegemony. Schools are where dominant groups have the power to use reading comprehension research and testing as mechanisms to inculcate, perpetuate, and sustain dominant ideologies.

The ideas, beliefs, values, and practices of dominant groups, historically, have shaped reading comprehension tests. Since tests were developed, most have consisted of short or long passages followed by several questions. The most popular form of question is the multiple-choice question where there is allegedly one best answer (the lingo that has replaced one right answer). Too often the preselected answers or responses leave little room for real-world responses, for responses that demonstrate "emotions, imagination, vitality, spontaneity, individuality" (Best, 1995, p. 8). In their place, researchers have sought to persuade readers that there is one best answer, one way

to understand the text, one way to see the world in a way that, not surprisingly, reflects a very Anglocentric point of view. Best (1995) captured the problem by stating that there is a

proclivity of the White middle classes of European descent to proclaim themselves the representatives of all humanity and to project their own values and interests onto other cultures ... to represent their ideas as the only valid ones, grounded in nature itself. (p. 10)

I believe Best, although I have often wondered if White reading comprehension researchers consider race at all when conducting research. I also wonder whether they realize how their beliefs and attitudes about race influence the very air they breathe and how the moment-to-moment decisions they make affect, usually negatively, underserved children (children of color, children living in poverty, children who are recent immigrants, children whose first language is neither English nor Standard American English). The proclivity that Best mentions may be especially true in the area of reading comprehension research and testing, where the ability to comprehend is understood as demonstrated when students are asked to read text, that is, text most often written by Whites and assumed to be acultural and possessing universal appeal. To be fair, there are occasions in which the text used on standardized reading comprehension tests includes excerpts from literature written by authors of color. However, the questions and responses or answers have been preselected to fit the researchers' understanding of the text. Furthermore, there are few opportunities during reading comprehension testing to construct written responses, and fewer opportunities when the written responses are positively scored and assessed if they represent multicultural, multilingual, imaginative, or unorthodox responses.

I draw from my own life experiences to illustrate my point. First, over 30 years ago, during my pre-service teaching experiences, I volunteered my time at an elementary school in my hometown. One event remains with me today—the reaction of a student in a racially mixed first-grade classroom to reading comprehension questions that followed the story. Here's how it happened. After I had led the “low” reading group through a story in their out-of-date basal readers, I diligently followed the scripted directions for teachers and began asking the group the list of reading comprehension questions following the story. I asked the group what they thought Alice and Jerry were doing in the story. An African American male responded, “I don’t

give a shit 'bout no Alice and Jerry.” His petulant response caught me off guard. I do not recall how I responded, to be sure with some teacher-like gibberish about what is or is not appropriate language for school. What I did not do then is ask him why he made the comment. What is clear now, as then, is that the reader did not engage the text.

Second, not so long ago while helping my son prepare for a national college examination, we used available pretest materials produced by the company. Among the passages he read was an excerpt by Stephen McCauley (1987) where a kindergartner is caught in a custody battle between his wealthy parents. The text explains in detail the wealth of his parents from references to executive incomes, BMWs, and Volvos, and international excursions on expensive jumbo jets. In this passage, the child travels to Paris one weekend. While there, he is taken to the Louvre to see the Mona Lisa, on a boat ride down the Seine, and to visit the Eiffel Tower and Notre Dame. The obvious class issues notwithstanding, this is not a particularly engaging piece and I question its inclusion, even on a sample test (but that’s a story for another time). One multiple-choice question asks the reader to identify a character, Theodora, from the passage that contains limited dialogue among the characters. The options given are (a) sister, (b) French babysitter, (c) mother, and (d) teacher. The scoring key with explanations suggests that the “best answer” is (c) mother. My son did not select this answer. When I asked him why he had selected (a) sister, he replied, “What kindergartner calls his mother by her first name?”

His response, which makes perfect sense given his cultural and linguistic background, was not the correct or *the best answer* (which is a slippery choice of wording that suggests there are other possible answers that receive credit and might be worth considering, but there is only one best answer, the one selected by the test developers). His response, which would have been scored incorrect, would have been interpreted as a reflection of poor comprehension, an inability to recognize text structure, or a misreading. I argue, as have countless scholars of color before me, that it is altogether something else. My son had comprehended the text as well as the question; however, he elected to answer the query in concert with his frame of reference, his reality, and his world. The preferred answer (this is a term used by Stuart Hall and one I will say more about later) was one that he rejected as nonsensical.

Do this passage, test item, and best answer reflect the proclivity of Whites to order the world, and do they “deny the histori-

cal and subjective constitution of knowledge” as Best (1995, p. 16), suggested? I am not sure; I do not know how White students would answer the question, but I do know that at least one African American child (and I can only guess others) would not have selected the “best answer” because it would be inconceivable to think that a young child would address adults using their first names. My son not only read and understood the text and the options for answering the query, but he read beyond the text, to his world, his reality, and selected a response that was more aligned with his understanding of the world. His response was not made in opposition to the text (as a form of protest), and he had not elected to negotiate his thinking to fit dominant ideas, beliefs, values, and practices. Is this a singular, unique, or special incident on a reading comprehension test? Or do passages like this one befuddle children whose lives are not reflective of dominant groups? Do readers reason and negotiate among possible explanations? Does this type of reasoning go on all the time, where underserved students move back and forth between their worlds, their realities, their frames of reference, and the text? Are some underserved readers being asked to to compromise or negotiate meaning more than dominant group readers? Does the movement between worlds, realities, and frames of reference by underserved readers slow comprehension, alter comprehension, cause confusion? What must a reader relinquish of himself? If he elects to negotiate among the alternatives, must he forsake his own thinking, or must he embrace the worlds, words, realities, and frames of reference used by reading researchers in order to perform well on reading comprehension tests? Is reading comprehension more invisible, individual, and intimate a process than we have considered in the past? Manguel (1996) captured the process:

It is true that on occasion the world of the page passes into our conscious *imaginaire*—our everyday vocabulary of images—and then we wander aimlessly in those fictional landscapes, lost in wonder ... but most of the time we tread firmly. We know that we are reading even while suspending disbelief; we know why we read even when we don’t know how, holding in our mind at the same time, as it were, the illusory text and the act of reading. We read to find the end, for the story’s sake. We read not to reach it, for the sake of the reading itself. We read searchingly, like trackers, oblivious of our surroundings. We read distractedly, skipping pages. We read contemptuously, admiringly, negligently, angrily, passionately, enviously, longingly. We read in gusts of sudden pleasure, without knowing what brought the pleasure along ... we don’t know: we read ignorantly. We read in slow, long motions, as if drifting in space, making

excuses for the text, filling gaps, mending faults. And sometimes, when the stars are kind, we read with an intake of breath, with a shudder, as if someone or something had “walked over our grave,” as if a memory had suddenly been rescued from a place deep within us—the recognition of something we never knew was there, or of something vaguely felt as a flicker or a shadow, whose ghostly form rises and passes back into us before we can see what it is, leaving us older and wiser. (p. 303)

Reading comprehension, in this sense, requires a reading of the world and the word. Manguel’s notion of reading depicts “images, concepts, and premises which provide the frameworks through which we represent, interpret, understand and ‘make sense’ of some aspect of social existence” (p. 18). To delimit reading comprehension to interactions with select text with preselected interpretations misses or underestimates relationships and associations with, and in, the world in which ideas are formed, acted upon, and silenced. What I find most intriguing is that we continue to encounter underserved students who respond to text in ways that are similar to those expressed by the first-grade reader and my son. Their engagement with text is representative of how many, but certainly not all, underserved children engage and comprehend text that is removed from their ways of knowing, life experiences, and languages. Many of these children have been labeled as ineffective comprehenders, castigated for lowering a district’s or school’s standardized test performance, without anyone asking why.

Research Perspective

According to Gramsci (1971), history illustrates “how thought has been elaborated over the centuries and what a collective effort has gone into the creation of our present method of thought which has subsumed and absorbed all this past history, including all its follies and mistakes” (p. 327). Obviously, one book cannot cover every possible ideology, philosophy, approach, or personality that has influenced reading comprehension research and testing. Based on my own perspective and patterns that emerged when reading documents, I have constructed a history of reading comprehension research and testing that details and deconstructs how the idea of reading comprehension emerged and evolved.

I liken the idea of reading comprehension and testing to fine threads that are woven through a tapestry. These threads appear, dis-

appear, and reappear throughout the fabric. Some ideas are like brilliant threads that stand in contrast or as complements to the threads that surround them. At other times, these same threads appear camouflaged, nearly inseparable from threads around them. Regardless of their position in the fabric, the fine threads exist as part of a much larger whole that binds the fabric together. In a similar way, Gramsci (1971) stated that we must understand history and the role of an idea in society:

What must be explained is how it happens that in all periods there coexist many systems and currents of philosophical thought, how these currents are born, how they are diffused and why in the process of diffusion they fracture along certain lines and in certain directions. (p. 327)

Reading comprehension is an idea that belongs in the sea of ideas that historically have constituted our thinking about the reading process. As such, it is an idea that has been considered and reconsidered throughout its history in the field of education, educational psychology, linguistics, and so forth. Some concepts often are associated with reading comprehension, including vocabulary, rate or speed, and text or context. Other concepts seldom are associated with reading comprehension, including hegemony, ideology, and power. The latter group of concepts is essential to a history of reading comprehension research and to this book.

Given my desire to question, challenge, and critique current understandings of reading comprehension research and testing, I draw on these interwoven ideas: hegemony and ideology to represent a history of reading comprehension research and testing in a much more complex and dynamic manner.

Hegemony

There are multiple definitions and shades of meaning attributed to the idea of hegemony. It is an overused and misused term that has its roots in Marxist thought. Gramsci (1971) equated hegemony with leadership (p. 128f) and distinguished leadership among rulers, leaders, and intelligentsia. In addition, he renamed the ruling class, the dominant class or dominant group and all other classes or groups, allies or subalterns. Unlike Marx, he envisaged hegemony as “‘cultural, moral, and ideological’ leadership over allied and subordinate

groups” (Forgacs, 2000, p. 423). He also identified two functions of hegemony, either to encourage spontaneous consent or to use power coercion (legal enforcement) to secure support and the adoption of dominant ideas by subaltern groups.

Other scholars, Hall, Strinati, Williams, and Kellner, have applied the concept to contemporary life. Hall (1982) asserted, “Hegemony is understood as accomplished, not without the due measure of legal and legitimate compulsion, but principally by means of winning the active consent of those classes and groups who were subordinated within it” (p. 85). Strinati (1995) added that within society, dominant groups “maintain their dominance by securing the ‘spontaneous consent’ of subordinate groups, including the working class, through the negotiated construction of a political and ideological consensus which incorporates both dominant and dominated groups” (p. 165). Williams (1977) described hegemony as part of the social process that includes discussions of power and influence. Defining hegemony along the lines of class and inequalities, he wrote, “To say that ‘men’ define and shape their whole lives is true only in abstraction. In any actual society there are specific inequalities in means and therefore in capacity to realise this process” (p. 108). Finally, Kellner (1999) believed that hegemony involves “both analysis of current forces of domination and the ways that distinctive political forces achieved hegemonic power” (p. 4). He also pointed out that discussions of hegemony should include “delineation of counterhegemonic forces, groups, and ideas that could contest and overthrow the existing hegemony” (p. 4). Hegemony is therefore used as both process and analysis.

Hegemony, as Gramsci and Hall noted, is never complete; it is always being revised and renegotiated. Williams (1977) put it this way: “Hegemony does not just passively exist as a form of dominance. It has continually to be renewed, recreated, defended, and modified. It is also continually resisted, limited, altered, challenged by pressures not at all its own” (p. 112). In addition, Laclau and Mouffe (1985) in their seminal work, *Hegemony and Socialist Strategy*, appended their support to the notion of hegemonic change. They argued that hegemonic change is not revolutionary but occurs gradually, especially given the diversity of subordinate groups and their struggles in modern industrialized societies. In sum, notions of hegemony convey relationships among leadership, rule, power, domination, and the influence of one group over allied and subordinate groups. These

ideas have given rise to various descriptors of hegemony as cultural, ideological, intellectual, racial, social, and political.

How does hegemony work in a society? The ruling or dominant class must convince the allied and subordinate classes to believe in the dominant ideas, values, morals, and practices. To do so, the dominant class encourages allied and subordinate classes to adopt, accept, and internalize dominant ideas, values, morals, and practices as their own, projecting them as natural and commonsensical. The dominant class also attempts to shape the thinking of allied subordinate classes through leadership (cultural, intelligentsia, or political/rulers). To Gramsci (1971), the real struggle in society is over the ideas, or the struggle for meaning. He suggested that those who have the power to name and define which ideas are most worthy is the dominant group and their ideas are the dominant ideas, or dominant ideologies.

Ideology

A key concept to grasp here is that the dominant class or group seeks to legitimize its ideas through ideology. The terrain of struggle is ideology. It is through ideology that the dominant group uses its power and influence to force other groups to believe that the dominant interests are in the best interest of everyone as common sense. Sallach (1974) asserted that this form of power is important to understand because of its “ability to define the parameters of legitimate discussion and debate over alternative beliefs, values, and world views” (p. 68). Gramsci and his followers believed that the dominant group uses institutions, including schools, to inculcate their ideology and to presumptively win the consent of the masses or, in his words, the “fabrication of consent.” At other times, the state uses legal coercion to force subaltern groups to adopt dominant ideologies.

Kincheloe and McLaren (2000) also submitted that an ideology is “a highly articulated worldview, master narrative, discursive regime, or organizing scheme for collective symbolic production” (p. 303). Hall (1982) by extension defines ideology as “mental frameworks—the languages, the concepts, categories, imagery of thought, and the systems of representation—which different classes and social groups deploy in order to make sense of, define, figure

out and render intelligible the way society works” (p. 26). Later, Hall (1995) lists three key features of ideology:

- (1) ideologies do not consist of isolated and separate concepts, but in the articulation of different elements into a distinctive set or chain of meanings. (p. 18)
- (2) ideological statements are made by individuals: but ideologies are not the product of individual consciousness or intention. Rather we formulate our intentions *within ideology*. (p. 19, italics in the original); and
- (3) ideologies “work” by constructing for their subjects (individual and collective) positions of identification and knowledge which allow them to “utter” ideological truths as if they were their authentic authors. (p. 19)

Drawing on Hall’s outline of ideology, I have identified scientism and racism within several philosophical schools of thought that guided reading comprehension research and testing. To understand dominant ideology(ies) and their role in society it is imperative that we deconstruct how they arise and explain why alternative ideologies exist. Therefore, this book includes a judicious mélange of political and social movements that occurred as reading comprehension research and testing evolved.

In the context of this book, schools as institutions are important sites used by dominant groups to sustain ideological and cultural hegemony. Schools are where dominant groups have the power to use reading comprehension research and testing as tools to inculcate, perpetuate, and sustain dominant ideology.

It illustrates how different but related currents of philosophical thought arose, coexist, and continue to influence reading comprehension research and testing.

Advocates of scientism believe that science, as a method of observation and experimentation informed by physical science, can be applied to all activity and results in facts, laws, or theories, as the only true source of knowledge. Common definitions of *scientism* note; (a) it is the belief that the investigative methods of the physical sciences are applicable or justifiable in all fields of inquiry; (b) it is the principle that scientific methods can and should be applied in all fields of investigation; (c) it [science] alone can render truth about the world and reality; (d) it is a single-minded adherence to only the empirical, or testable; and (e) it requires one to do away with most, if not all, metaphysical, philosophical, and religious claims as truths.

In short, scientism holds that only science and the scientific methods used in the physical sciences permit justifiable access to the truth. Advocates maintain that scientific methods be extended to all the sciences, including social science, and prevent or marginalize alternative ideas or challenges to come to light.

The notion of scientism appeals to me because its central ideas draw from positivism, social Darwinism, and biological determinism, all philosophies that are accepted as foundational to educational research in the United States. Although these philosophies are not practiced in their original forms today, their assumptions are deeply embedded in the thinking of many reading comprehension researchers and test developers. More importantly, scientism reflects the history of theories and practices used in reading comprehension research and testing.

Philosophers have offered varying definitions of scientism. Habermas (1974) defined scientism as “science’s belief in itself: that is, the conviction that we can no longer understand science as one form of possible knowledge, but rather must identify knowledge with science” (p. 4). In another instance, Federici (1999) argued that scientism is “grounded on the assumption that facts can be distinguished from values. Facts, it is claimed, are derived from the scientific method, whereas values are the products of uncritical human constructions” (p. 16). Furthermore, he articulated that scientism is “predicated on the belief that the scientific method provides a universal standard for the discovery of truth. Scientifically derived truth, then, provides a body of knowledge that forms the foundation of political and social consensus” (p. 16). Scientism rests on the assumption that knowledge is discovered only through the use of scientific methods and will ultimately inform politics and society as well as lead to new knowledge and truth. Historically, in Western European, and subsequently U.S., social thought, there has been an inordinate faith in science. Popkewitz and Tabachnick (1981) observed that since the mid-1800s, U.S. philosophers have maintained, “science seeks to impose rigor by demanding that theoretical concepts be reducible to variables that can be statistically manipulated from which formal, logical statements can be derived” (p. 15). This faith in humankind’s ability, through science, to discover new knowledge has had profound effects on educational thought. Harding (1991) argues, “The conventional notion of a value-free, impartial, dispassionate objectivity that is supposed to guide scientific research” (p. 138) does not

exist for all scientists, especially feminists. Some of the first dissenters of the alleged claims of scientism were African American scholars, activists, and educators. Among the varied reasons for their dissent is the inherent racism within scientism (see Lewontin, Rose, and Kamin's book *Not in our Genes*, 1984). Other scholars also have offered comprehensive discussions of the history and philosophy of science (Giere, 1988; Harre, 1972; Koch, 1959–1963; Kourany, 2003; Kuhn, 1996; Suppe, 1974) and the history and philosophy of education research (Lagemann, 2000; Shepard, 2000).

A note of caution is therefore warranted: as philosophers of education are quick to point out (R.P. Page, personal communication, September 14, 2003), intellectual developments in Western Europe from 1700 to the 1900s not only gave the world scientism, they also gave rise to liberalism, out of which it is possible to critique scientism. Liberalism yielded individual rights, the power of reason to supplant privilege by birth, and so forth. Collectively, these traditions are somewhat related; faith in science, technology, and reason were central components of the rationale to extend the rights to individuals. Their symbiotic relationship makes any separate treatment of them tricky, but I believe necessary.

Let me be clear, I am not antiscience. I support the idea of science as promoted by the late paleontologist Stephen J. Gould (1941–2002). His notion of science eloquently embraces the humanness of science and scientific study as well as lends itself to a critical understanding of science as an ideological and cultural force:

Science, since people must do it, is a socially embedded activity. It progresses by hunch, vision, and intuition. Much of its change through time does not record a closer approach to absolute truth, but the alteration of cultural contexts that influence it so strongly. Facts are not pure and unsullied bits of information; culture also influences what we see and how we see it. Theories, moreover, are not inexorable inductions from facts. The most creative theories are often imaginative visions imposed upon facts; the source of imagination is also strongly cultural. (1981, pp. 21–22)

Few hard scientists would disagree with Gould's notion of science. By contrast, historically in education research, there has been a resolute and unchallenged belief in scientism among reading comprehension researchers (most of whom were educational psychologists).

Another important facet of the dominant ideology that, like a fine thread, appears, camouflages, and reappears throughout the history of reading comprehension research and testing is racism. It is an idea

that existed before scientism, and its history is difficult, if not impossible, to trace. What I explain in the book is that racism is inherent in the philosophical assumptions on which dominant ideologies are based and the interpretations made by adherents of scientism in reading comprehension research and testing.

Why is a discussion of racism and classism important to a history of reading comprehension research and testing? Too often racism and classism are undercurrents that flow beneath the surface of reading comprehension research and testing where children of color are used as fodder to bolster claims of White children's intellectual superiority. Examples of these undercurrents are most clearly seen in the comparisons made between groups with unequal access to education as an indicator of the superiority/inferiority between groups. Moreover, power is exhibited when dominant groups promote the performance differences—verified by science, scientific methods, or experimental and quasi-experimental research—between unequal groups on reading comprehension tests and tasks as fact. Collectively they anchor, literally and figuratively, reading comprehension research and testing to their ideological terrain, the terrain of struggle for meaning. An ideological terrain is a way of representing the order of things, presenting them as natural or divine, inevitably making them appear universal, natural and coterminous with “reality” itself (Hall, 1982).

Reading comprehension research and testing reflect scientism, racism, and classism in the concepts, definitions, theories, tests, and interpretations that inform practice. It is this terrain in which the struggle for meaning is fought, where consent is manipulated, and where coercion exists.

Questions that arise for me, include: (a) How do reading comprehension research and testing include and sustain dominant ideologies? (b) How have political, social, and educational movements and traditional beliefs and values in educational research helped to shape reading comprehension research and testing? (c) Which individuals and whose collective efforts have helped frame our ideas of reading comprehension research and testing? How long will the reading comprehension research community continue to bastardize the systems of knowledge, culture, and languages that differ, challenge, and resist dominant and oppressive ideologies and reading research traditions? These questions are answered, in part, through the documentation of reading comprehension's power to determine

the roles of language, culture, and thought that are transmitted by dominant groups as well as their ability to disempower alternatives presented by opposing groups. Although hegemony as an idea is not perfect, as a means of analysis it is, I believe, superior to previous attempts to account for the layers of complexity and lack of change in reading comprehension research and testing. Where appropriate, I have acknowledged the relationship between culture and language as well as given examples of how groups and individuals have opposed and resisted ideological and cultural hegemony by proposing counterhegemony, sustaining countervailing ideologies, and using counterdiscourse.

It is an optimal time to transform how reading comprehension research is conceived. Reading comprehension research can help to dismantle the reproduction of oppressive and dominant ideologies that hinder the scholastic progress of underserved children by transforming its role within the hegemonic process and by embracing beliefs, cultures, ideas, knowledge, languages, norms, and values of a broader, global, and democratic world.

Western European Philosophical Foundations of Reading Comprehension Research and Testing

Reading researchers seldom acknowledge the multiple Western European philosophical assumptions that inform reading comprehension research and testing, including positivism, Social Darwinism, and biological determinism. In the United States these philosophies were present at the onset of educational research in general and reading comprehension research, in particular. Reading comprehension research continues to draw on these philosophical assumptions popularized in the past with some modifications. For example, positivistic theorizing underscores much of the current educational debate on reading and federal funding. It is not my purpose to examine each philosophy in detail, because their influence on research in education is covered extensively by Karier (1986), Lagemann (1997), and Popkewitz (1984), among others.

Herein the connections among these select Western European philosophical assumptions and U.S. education and reading comprehension are disentangled. Along with a brief discussion of the key points of each philosophy and biographical sketches of philosophers (and great thinkers), I illustrate that philosophical assumptions, beliefs, values, and worldviews are human inventions and social enterprises that influence, and are influenced by, the political, social, and economic contexts of the society in which they are conceived. In addition, because these philosophies underpin reading comprehension research and testing, I also review how each philosophy has addressed issues of race, class, and power primarily through the writings of the founders or leaders of each philosophical school of thought. In this way, the undercurrents of race, class, and power, key ideologies are revealed.

This chapter includes a basic review of the philosophical assumptions that underpin historic and current forms of reading comprehension research and testing. It also is important to place philosophical opinions that have informed past investigations within their historical and social settings so as to account for the pervasiveness of the opinions beyond academia. At any one time in history, there are multiple philosophies available. In this context, definitions of reading comprehension used today are the sum total of the history of reading comprehension research and testing, the “collective” effort of countless researchers.

Comte, Spencer, and Darwin are the founders and advocates of positivism, Social Darwinism, and biological determinism, respectively. These men lived with passion and were affected by their beliefs, values, and practices while simultaneously affecting and reflecting the worlds in which they lived. International, national, and local events, along with marriages, affairs, divorces, births, and deaths of children and spouses, affected the lives and work of each man, just as these life events affect the lives for people today. These philosophers were not exceptional men, although they were all members of small intellectual groups within their respective locales that believed they could help ameliorate society’s woes. The lives and work of these men reflected the intellectual and cultural ethos of their era as well as their individual beliefs, values, and worldviews. Their thinking about society, for example, is made clear in their discussions of race and, to a lesser extent, gender.

There are countless biographies describing the lives of Comte, Spencer, and Darwin that reflect shifts in approaches to science and the scientific study of education. While I find the biographies of each man a fascinating study within itself, for this work what is important are the linkages between and among their work and reading comprehension research and testing. The academic documents from which my comments are drawn reflect only shadows of these men and their lives. Their philosophical assumptions, with some modifications, continue to influence and delimit how reading comprehension is researched and tested.

Positivism, Social Darwinism, and Biological Determinism

To begin, it is important to point out similarities among these philosophers. As Europeans of wealth and privilege, they had access to

education and leisure to study and pursue their life's work. Comte's early academic training, for example, differed markedly from Spencer's, yet both are recognized as founders of sociology. Typically, their lives changed once they challenged their fathers' ideas and moved forward with ideas of their own. Each man sought to please his parents, particularly his father, usually around notions of religious devotion. Although each man's religious views ranged from devotion to denominationalism to agnosticism to atheism, during each man's lifetime, the most profound and lasting shift came with his adoption or replacement of religion with scientism. That is, the belief in the ability of science to lead to greater knowledge, and for some, Truth, is what drove each man's passion, but not without cost. Each man suffered physically and emotionally from his beliefs and constant study, often resulting in a nervous breakdown. Finally, Comte, Spencer, and Darwin were completely devoted to their beliefs and life's work. Comte died poverty-stricken, Spencer became famous, and Darwin became both famous and infamous.

The adoption of these Western European philosophies by thinkers in the United States and the publicized support fueled conflicts simmering between those with traditional religious beliefs and those with belief in a new religion: science. These philosophies threatened traditional religious beliefs, namely, the triune Godhead. Traditional beliefs in a supernatural God, religion, and theology were pushed aside as self-proclaimed agnostic researchers embraced Western European philosophies. One of the great appeals of these philosophies was their focus on the future, as opposed to theology that tended to revere the past and promise a future in the hereafter. Scientism suggested that the present was controllable and the future predictable through scientific knowledge.

Positivism

Auguste Comte believed that science and scientific knowledge were all that was needed to perfect society. Living in a time of social and political reconstruction in France, Comte (1848/1971) argued, "The primary object, then, of Positivism is twofold: to generalize our scientific conceptions and to systematize the art of social life" (p. 3). In his thinking, all knowledge existed in the universe in an external order and could be uncovered through the positive, or scientific,

method. His ideas grew in popularity in a country reorganizing itself from aristocratic and military elites to economic and political elites. His philosophic views were supported among many of his contemporaries, such as George Eliot and J. S. Mills, in England, and Albion Small and Lester Ward in the United States, among others. Collectively, these thinkers and writers were drawn to Comte's notion of science directing social policies.

Comte promoted his idea of the Law of Order, where he sought to demonstrate that all sciences could benefit from the use of the scientific method—observe, hypothesize, test the hypothesis (predict and experiment), conclude (and evaluate), form a new hypothesis, and repeat the process. He claimed that the scientific method was a logical process and reasoned that it existed outside of the emotions of the scientist. Furthermore, in his notion of sociology, he sought to apply the scientific method used in the physical sciences to discover the natural social laws that he believed governed society. According to his theory, advances in science would lead to laws and truths that, in turn, would lead to greater intellectual development and eventually to the perfection of mankind and society.

With increased human intelligence, Comte reasoned, mankind could control society and the environment. He thought that the discovery of general laws or principles allowed the formation of theories based on verification of the “facts.” Comte maintained that the result of positive inquiry could be used to predict human behavior because the methods were objective and should be tested through observation, experimentation, comparison, and verification. Ideas central to Comte's version of positivism remain (in altered form). For example, he claimed (and some researchers continue to claim) that science is: (a) a way to Truth; (b) deterministic; (c) mechanistic; (d) objective, unbiased, and unemotional; (e) able to uncover laws and theories; and (f) able to predict human behavior and society. Positivism captured the thinking of nonscientists, that is, social thinkers and educators, but had very little impact on practicing scientists. Few “hard” scientists supported his ideas.

Comte also proposed an educational system based on his hierarchy of the sciences and using scientific methods, where observations are made, data collected, and predictions made by educators. In concert with his thinking, he envisioned education's role as a means to increase society's role over nature and thereby control society. Comte (1855/1979) predicted a positive scientific society in which “a

universal system of positive education would teach men to know and do their duty in such a way as to diminish, if not eliminate, conflict between individuals” (p. 473). He believed that once men were taught to accept their place in the social order and to accept their role in society, the social order would lead to social perfection without conflict. The education of children he divided into two broad time periods, pre- and postpuberty. In addition, his deep respect for the intellect of White men and his belief in the superiority of White men’s thinking, over the thinking of other groups, continues to be a vital part of the academy.

His observations of French society led him to assert that all knowledge progresses in a deterministic pattern, which he tried to tie to his hierarchy of the “hard” sciences. Drawing on Lamarckian theories of evolution in human institutions and social progress, he proposed,

Every sociological analysis supposes three classes of considerations, each more complex than the preceding: viz., the conditions of social existence of the individual, the family, and the society; the last comprehending, in a scientific sense, the whole of the human species, and chiefly, the whole of the WHITE RACE. (Comte, 1842, p. 268, emphasis added)

Comte did not view all humankind as equal, although he was not a proponent of slavery (he explained his views on slavery as part of human history). He believed that some racial groups were worthy of being part of the human race and others should be eliminated. He so revered the intelligence of (White) men that he created a calendar of male intellectual geniuses (from Prometheus to Gall). Not surprisingly, according to Comte, French men were the most intelligent (Comte, 1854). Furthermore, he believed that women, working classes, and people of color were inferior to White men of intelligence (i.e., educated White men).

Comte maintained that each stage of human intellectual development represented a stage of knowledge that paralleled the evolution of the individual mind (Law of Three Stages). His stages included a theological stage (belief in gods and spirits for the occurrence of natural events and governed by priests and military rulers); a metaphysical stage (other unobservable causes that explain natural events and governed by clergymen); and a scientific or positive stage (quantifiable descriptions and explanations for natural events or descriptions, predictions, and control are governed by industrial

leaders and the rules of science). He maintained that science should be conducted without religion or theocracy. Ironically, his denial of the role of religion in the life of humankind led him to mysticism and, finally, to the point where he embraced positivism as a religion. In the United States, his ideas about science, the importance of the scientific method, and the use of science as a means to perfect society were more widely accepted than was his theology.

Twenty years after Comte's death, Ribot (1877) wrote a series of articles that expounded the philosophical advances in France and discussed a distinction among Comte's followers. He argued that Comte's work consisted of three main divisions: a philosophy, a polity, and a religion. The followers of Comte were in one of two camps: those who followed the entirety of his work or those who adopted his philosophy but disregarded his polity and religion.

Habermas, a more contemporary critic, wrote "Positivism stands and falls on the principle of scientism" (1971, p. 67). In fact, he argued that positivism "contradicts the intention of an unprejudiced critique of knowledge" (p. 67) because it assumes a priori the answer to the inquiry. In this view of science, what is most important is a strict adherence to methods or procedures. What is most troubling, however, about this approach to science and the study of education is that it is detached from the specific contexts in which learning occurs. Habermas (1973), in a scathing review of the import of positivism, wrote:

Interest and inclination are banished from the court of knowledge as subjective factors. The spontaneity of hope, the act of taking a position, the experience of relevance or indifference, and above all, the response to suffering and oppression, the desire for adult autonomy, the will to emancipation, and the happiness of discovering one's identity—all these are dismissed for all time from the obligating interest of reason. (pp. 262–263)

In reading comprehension research, the appeal to science (i.e., the use of scientific methods) is an appeal to positivism, an appeal that recently has been resurrected to support and fund reading comprehension test research.

Social Darwinism

Herbert Spencer (1820–1893), who is often paired with Comte as a cofounder of sociology, developed the idea of social Darwinism,

which helps to fill in a social gap in positivistic thought. In 1848, he became a subeditor for the *London Economist*, and three years later, published his first book, *Social Statics, or the Conditions Essential to Human Happiness*. The text, informed by Comte's notion of social dynamics, or human progress, outlines Spencer's views on evolution. In addition, it describes his theory of social evolution as a process of "individuation." He believed that individualism (the belief that society exists for the benefit of the individual, who must not be constrained by government interventions or made to subordinate to collective interests) is a means to greater human progress.

Although recognized as a cofounder of sociology, Spencer (1864) explained there were differences between his thinking and Comte's in the article, "Reasons for Dissenting From the Philosophy of M. Comte":

What is Comte's professed aim? To give a coherent account of the progress of human conceptions. What is my aim? To give a coherent account of the progress of the external world. Comte proposed to describe the necessary, and the actual, filiation of ideas. I propose to describe the necessary, and the actual, filiation of things. Comte professes to interpret the genesis of our knowledge of nature. My aim is to interpret . . . the genesis of the phenomena which constitute nature. The one is subjective. The other is objective. (p. 7)

Despite his lack of scientific training, Spencer strongly upheld the primacy of science and scientific knowledge for the understanding of society and attempted to use natural selection theories to explain societal and racial differences. The most extensive explanation of his thinking is his nine-volume *System of Synthetic Philosophy* (1862–1896), based on his theories of social evolution. He explains that he sought to "reconcile science and religion and to lay the metaphysical underpinnings of evolution" (Spencer, 1862, p. 570). Specifically, he attempted to integrate themes from biology and sociology with the general culture of his time by replacing theological explanations of life with scientific explanations.

Spencer's views on evolution are attributed to his understanding of the theories espoused by Lamarck (1744–1829) and Malthus (1776–1834). From the former, Spencer gathered his ideas about inherited acquired characteristics and from the latter, Spencer imagined that human suffering (i.e., war, famine, disease) were a part of nature. He drew most heavily from the work of Lamarck, who opined that species inherited characteristics, some of which were developed as they adapted to their environment and were passed on to the next generation.

His theory of evolution rested on the notion of the inheritance of acquired characteristics explained in his 1852 article, "The Developmental Hypothesis." He believed that the connection between physical and mental characteristics was hereditary and that all humanity was generated from a common stock. In an 1852 essay, "A Theory of Population," Spencer summarized his ideas about evolution and coined the phrase "survival of the fittest." He held that the more "fit" acquired unique characteristics that advantaged them over others, and, thus, the "fit" survived (this idea is a misappropriation of Darwin's work, but it was catchy and remains a familiar maxim). He added that differences were exhibited due to the ability of preceding generations to assimilate, accommodate, and adapt themselves to circumstances.

Spencer also believed that natural laws were deterministic. Thus, as the lower species evolved into a higher, more complex species, those most able to cope with change would change and adjust, to survive. Applying his theory to society, he argued that the upper classes of society were genetically superior to the lower classes and more deserving of continual survival. Furthermore, he maintained that the evolutionary process was inherent within each race and each child of each specific race. In his view, the weak, the poor, and the unfit would die off. Thus, he coined the phrase "the elimination of the unfit, through struggle" as a corresponding phrase to his "the survival of the fittest" maxim. For Spencer, this meant that the best adapted individuals in society, which he identified in terms of race, class, and gender, should survive. He was a vocal opponent of all reform, any benevolent support that would allow the survival of the unfit (poor, needy, and less intelligent), and any support that would permit the unfit to pass on their (alleged) weaknesses. He believed that those who survived were chosen by nature to do so.

A self-described agnostic, Spencer argued that the process of evolution was determined by the unknowable's selection of which species would survive and the species' adaptations. He argued, "The poor, the weak, the downtrodden, the stupid, and the lazy must be allowed to die off" (Spencer, 1892, p. 79). He argued that the government should not interfere with nature: If some were poor, Black, or uneducated, and could not help themselves, the government should not intervene. Spencer's views on race made clear that racial hatred, sans America's peculiar institution of slavery, was not unique. His

ideas of racial superiority and inherited intelligence were part of the “common sense” of Western Europeans. He called for individualism, where one sought his own means of survival and did not look for, or expect, government intervention.

Spencer found a ready body of believers for his social evolutionary theory in both Europe and the United States. In Europe, his theories seemed to fit the existing hierarchy of the social class system. In the United States, where the same social class system did not exist in such exaggerated form, many Euro-Americans accepted his ideas as they struggled to regain the power and prestige that some felt they had lost during and immediately following the Civil War. Spencer’s philosophic views became even more popular in the United States and increased after his lecture tour in 1882. He promoted what he believed was the common sense notion of the genetic and racial superiority of Whites over all other groups. Spencer’s thinking was widely disseminated in scholarly journals, books, magazines, and newspapers. Social Darwinism also was a welcomed idea to fledgling U.S. psychologists who embraced scientism because it permitted science to be perceived as an authoritative replacement for religion by supplying an unknowable force to science.

Lester Ward (1896), for example, in a series of articles on the purposes of sociology, noted Spencer’s popularity in the United States, where “American writers are virtually disciples of Spencer” (p. 447). Not surprisingly, in the aftermath of the Civil War, some White U.S. citizens were willing to anchor themselves to his new philosophy, which seemed to validate, for White Americans, what some had always thought was true: They were genetically superior to others, especially people of color; they were of a genetically superior breed—biologically, physically, morally, and mentally or intellectually; and their superior physical and mental qualities were biologically inheritable. Spencer’s ideas seemed to lie at the core of an evolving Americanism that saw inequalities as a “natural” part of social evolution and that was used to support capitalism, imperialism, colonialism, and racial discrimination.

Spencer’s philosophic assumptions also influenced American educational thinking in the late 1800s. In his 1861 article (1861/1963) “Education: Intellectual, Moral, and Physical,” he queried, “What knowledge is of most worth?” His answer was knowledge from science. His most popular and widely read book in the United States

was *Essays on Education* (1911/1949), a collection of four essays in which he expanded his basic theory of evolution and applied it to education. He viewed the education of children in evolutionary terms similar to those he outlined for the human race: “The education of the child must accord both in mode and arrangement with the education of mankind, considered historically The genesis of knowledge in the individual must follow the same course as the genesis of knowledge in the race” (p. 60). Although he appears to speak broadly of the human race, his thinking is understood to mean the “superior” White race. He believed that each race followed a similar pattern, and Whites were more advanced. Spencer placed great importance on the inheritability of characteristics and individual effort to progress, succeed, and survive, with little respect for the contexts in which one lives (or is educated). In his view, the strongest individuals were middle- and upper-class White males, who had inherited intellect, power, and wealth.

His assumptions remain in the thinking of some education researchers who disregard sociohistorical contexts as important considerations and factors that affect reading comprehension research and testing. As powerful as Social Darwinism was in the United States, the publication of Darwin’s notion of evolution by natural selection was unparalleled, for it challenged theological views of creation and humankind’s dominion over nature, especially after the Second Great Awakening (1790–1840) had moved Protestantism from its Calvinist roots to the local preacher, along came Darwinism with an alternative view about the Divine source of knowledge.

Biological Determinism

Although Charles Robert Darwin (1808–1882) is best known for his ideas on evolution by natural selection, many other scientists espoused similar ideas earlier, including his grandfather Erasmus Darwin. Charles’s version also drew on the work of Malthus for his theory of evolution by natural selection, as he indicates in his autobiography:

I happened to read for amusement Malthus on Population, and being well prepared to appreciate the struggle for existence . . . it at once struck me that under these circumstances favourable variations would tend to be preserved, and unfavourable ones to be destroyed. The results of this would be the formation of a new species. (quoted in Barlow, 1958, p. 69)

Darwin was recalling his reading of Malthus' (1798) *Essay on the Principles of Population*, which reflected early observations of political, social, and industrial revolutions in England, France, and the United States. Collectively, these revolutions help to prompt massive changes in the political and social life of the most powerful nations in the world. England began to expand its empire in Australia, Canada, and New Zealand and was aggressively colonizing Africa (Kenya, Rhodesia /Zimbabwe, and South Africa), as well as British Guyana, Ceylon, Cyprus, Hong Kong, Singapore, and the Middle East (Bangladesh, India, and Pakistan). Malthusian theory suggested that as the population increased, food supplies would decrease to such an extent that there would be a struggle for existence. He opined that if left unchecked, increases in population growth would create a minimal existence for most, unless war, famine, poverty, or birth control stymied growth. Darwin's adaptation of Malthusian theories resulted in his idea of artificial selection, later labeled natural selection.

During his 5-year voyage around the world from England, two significant changes occurred in Darwin's life. First, he kept copious notes on his evolving thinking, which were published in 1839 as *Journals of researches into geology and natural history of the various countries visited by J. M. S. Beagle under the command of Captain FitzRoy, R. N. from 1832–1836*. Second, he began to doubt his strict religious upbringing and denounced his faith in the divine explanation of life. He replaced his belief and trust in the Holy Scriptures with doubts and suspicions of their accuracy based on his close observations and classifications. Darwin (1859/1979) wrote, "In nature the species that are better adapted than others to life in particular environments are likely to leave more descendants, while the species that were less well adapted may diminish and become extinct" (p. 37). In response to his observations of variations of species, Darwin developed his theory of evolution. He defined evolution as "a result of the change that species undergo in reaction to their adaptation to their environment ... at the improvement of each organic being in relation to its inorganic conditions of life" (1859/1979, p. 2). He suggested that evolution is the process of change that a species undergoes as it makes adaptations and accommodations to its environment.

Darwin's theory suggested that organisms best suited to survive in their environment are more likely to reproduce and pass their genetic material to the next generation, whereas those with weaker traits are least likely to reproduce and survive. He observed: