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A Historical Perspective on Reading Research and Practice

Patricia A. Alexander and Emily Fox

At the time the International Reading Association was created in 1956, the reading research community was poised at a new juncture in its history (Monaghan & Saul, 1987). The efforts of researchers during this period gave rise to extensive literature on learners and the learning process that remains an enduring legacy for the domain of reading. Yet, this was not the only period of significant change the reading community has experienced in the past 50 years. In fact, reading has periodically responded to internal and external forces resulting in both gradual and dramatic transformations to the domain—transformations that have altered reading study and practice. Our purpose here is to position those transformations within a historical framework. As with others (e.g., VanSledright, 2002), we hold that such a historical perspective allows for reasoned reflection and a certain wisdom that can be easily lost when one is immersed in ongoing study and practice. That is because a historical perspective broadens the vista on reading and adds a critical dimension to the analysis of present-day events and issues.

To capture this historical perspective, we survey eras in reading research and practice that have unfolded in the past 50 years and that symbolize alternative perspectives on learners and learning. For each era, we describe certain internal and external conditions that helped to frame that period, as well as the views and principles of learning that are characteristic of that era. Moreover, we explore both the prevailing views of learning within those periods and rival stances that existed as educational undercurrents. To bring this historical vista into focus, we highlight exemplary and prototypic works that encapsulate the issues and concerns of the time. Of course, we recognize that the boundaries and distinctions we draw between these eras are approximations of permeable and overlapping periods of reading research and practice. Nonetheless, these eras remain a useful platform from which the subsequent contributions in this volume can be explored.

The Era of Conditioned Learning (1950–1965)

The Conditions for Change

As early as the first decades of the 20th century, during the nascence of psychology, the processes of reading were already of passing interest to educational researchers (e.g., Buswell, 1922; Huey, 1908; Thorndike, 1917). However, it was not until much later in that century that reading became a recognized field of study with systematic programs of research aimed at ascertaining its fundamental nature and the processes of its acquisition. Although reading had long been a basic component of formal schooling in the United States, there was little concerted effort to marry research knowledge and instructional practice until much later in the 20th century. Instigation for that marked change came as a result of a confluence of social, educational, political, and economic factors during the 1950s.

The postwar United States was a fertile ground for transformations in reading research and practice for several reasons. For one, the high birth rate during and immediately following World War II resulted in record numbers of children entering the public school system (Ganley, Lyons, & Sewall, 1993). This baby boom contributed to both quantitative and qualitative changes to the school population. One of the qualitative changes was a seeming rise in the number of children experiencing difficulties in learning to read. Such reading problems, although nothing new to teachers, took on particular significance in the age of Sputnik, as America's ability to compete globally became a defining issue (Allington & McGill-Franzen, 2000, see #1 this volume). The outcome was a growing public pressure on the educational community to find an answer to the "problem" of reading acquisition.

One of the groundbreaking but controversial publications of this period was *Why Johnny Can't Read—And What You Can Do About It* by Rudolf Flesch (1955). This book exemplified a growing interest in reading research and its relevance to educational practice (Ruddell, 2002). In arguments reminiscent of contemporary debates, Flesch attacked the prevailing look-say method of reading instruction as a contributor to the reading problems experienced by many U.S. students. As the basis for his attack, Flesch referenced research that established the effectiveness of phonics-based techniques over those that relied on a whole-word approach. Before long, books such as *The New Fun With Dick and Jane* (Gray, Artley, & Arbuthnot, 1951), with their look-say approach, gave way to controlled vocabulary readers and synthetic phonics drill and practice in such approaches as the *Lippincott Basic Reading Program*, *Reading With Phonics*, and *Phonetic Keys to Reading* (Chall, 1967).

The burgeoning interest in finding an answer to children's reading problems interfaced with psychological research in the guise of Skinnerian behaviorism, the prevailing research orientation at the time (Goetz, Alexander, & Ash, 1992). With its promise of bringing a scientific perspective to the reading "problem," behaviorism seemed suited to the task at hand (Glaser, 1978). In effect, it

was time to turn the attention of the research community to the fundamental task of learning to read and apply the same principles of analysis that explained and controlled the behavior of animals in the laboratory to children's language learning. Such an analysis would presumably result in pedagogical techniques based on an understanding of the physiological and environmental underpinnings of human behavior (Glaser, 1978).

Based on this perspective, the processes and skills involved in learning to read could be clearly defined and broken down into their constituent parts. Those constituent parts could then be practiced and reinforced in a systematic and orderly fashion during classroom instruction (Pearson & Stephens, 1994). With this analytic view, there was a growing tendency for problems in the reading act to be looked on as deficiencies in need of remediation, just as physical ailments require medical remedies. Indeed, it was a medical metaphor of reading, with its diagnosis, prescription, and remediation, that came to the foreground in the 1950s. Moreover, despite the claims of some within the reading research community that little of significance occurred in reading until the 1960s (Weaver & Kintsch, 1991), the continued influence of behaviorism on educational practice remains evident today.

Guiding View

Because of the prevailing influences of behavioristic theory in educational research and practice, reading during this period was conceptualized as conditioned behavior, and just another process susceptible to programming. The Skinnerian or strict behaviorist perspective was that learning should not be conceived as growth or development, but rather as acquiring behaviors as a result of certain environmental contingencies. As Skinner (1974) stated,

> Everyone has suffered, and unfortunately is continuing to suffer, from mentalistic theories of learning in education.... The point of education can be stated in behavioral terms: a teacher arranges contingencies under which the student acquires behavior which will be useful to him under other contingencies later on.... Education covers the behavior of a child or person over many years, and the principles of developmentalism are therefore particularly troublesome. (pp. 202–203)

In this theoretical orientation, learning resulted from the repeated and controlled stimulation from the environment that came to elicit a predictable response from the individual. This repeated pairing of stimulus and response, often linked with the application of carefully chosen rewards and punishments, led to the habituation of the reading act. For example, the child presented with the symbols C-A-T immediately produces the desired word, *cat*, seemingly without cognitive involvement.

The philosophical grounds for this stance lay in the works of the empiricist David Hume (1777/1963) and his narrow conception of knowledge as perception and learning as habituated association (Strike, 1974). The investigation of academic learning, thus, involved identification of the requisite desired behaviors and

determination of the environmental conditions (i.e., training) that produced them. Depending on how strictly the behaviorist paradigm was followed, hypotheses and conclusions were more or less restricted to discussion of observable behaviors and the environmental stimuli that preceded them (Strike, 1974).

The task for this generation of reading researchers, therefore, was to untangle the chained links of behavior involved in reading so that learners could be trained in each component skill. The act of reading consisted of the competent and properly sequenced performance of that chain of discrete skills. Research was additionally concerned with the structuring and control of materials effective in the delivery of environmental stimulation and practice opportunities (Glaser, 1978; Monaghan & Saul, 1987). There was also a concomitant interest in the identification and remediation of problems in skill acquisition, which would require even finer-grained analysis of the appropriate behaviors so that skill training could proceed in the smallest of increments (Glaser, 1978).

Resulting Principles

Out of the labors of the reading researchers of this era came a body of literature on the multitude of subskills required for reading. The interest in the study of the components of reading processes was exemplified by such efforts as the interdisciplinary studies at Cornell University that became the Project Literacy program (Levin, 1965; Venezky, 1984). As a result of the behaviorist emphasis on studying observable behavior, there was a particular focus on reading as a perceptual activity. Such perceptual activities included the identification of visual signals; the translation of these signals into sounds; and assembly of these sounds into words, phrases, and sentences (Pearson & Stephens, 1994). Phonics instruction came to be seen as part of the logical groundwork for beginning to read (Chall, 1967, 1995) and had the desirable attribute of being eminently trainable. The counterpart of this emphasis on skills was an interest in developing and validating diagnostic instruments and remedial techniques (Smith & Keogh, 1962). Where there were problems in skill acquisition, the solution was likely to be an individually paced training program (Glaser, 1978).

Rival Views of Learner and Learning Process

Although the behaviorist perspective dominated the psychological research of the time, alternative theories of human learning operated beneath the surface. The legacy of William James (1890) endured in the notion that human thought mattered in human action and that introspection and self-questioning were effective tools for uncovering those thoughts. According to James (1890), reading would be best described as mindful habit. As such, reading would be best examined through a psychological lens via introspection rather than through the behaviorists' physiological lens of observation of measurable behaviors. From such mental inspection, hypotheses as to the nature of reading could be forged (Jenkinson, 1969). This

approach stood directly against the behaviorist antagonism to "mentalism" and insistence on observation of overt behavior only. When researchers addressed questions about the reasoning involved in reading, they leaned toward a Jamesian stance, and away from strict behaviorism (Alexander, 2003).

From another angle, the reductionist aspect of behaviorism—with its intended training program of bottom-up assembly of linked sets of behaviors to create a coherent activity such as learning to read—stood in opposition to Gestalt theory (Wertheimer, 1945/1959). For Gestalt theory, understanding phenomena as wholes was essential and could never be achieved by concatenation of individual facts, skills, or observations (Wulf, 1922/1938). Although explanation of perceptual processes occupied much of the attention of Gestalt theorists, their focus was on the phenomenon as a whole rather than on its elements. Human beings brought to the tasks of perception the propensity and ability to synthesize and make coherent sense out of their perceptual data. Such coherence and sense could not be achieved by assembly alone. The top-down perspective of the holistic Gestalt modality was evident in the orientation to reading development held by those Chall (1967) identified as "linguistic" proponents, who emphasized whole-word recognition, the importance of context in comprehension and word identification, and the consideration of reading as a unique human activity with its own definitive characteristics.

The Era of Natural Learning (1966–1975)

The Conditions for Change

By the mid-1960s, there was already a general unrest in the reading community with the precepts of Skinnerian behaviorism (Ryle, 1949) and with the conceptualization of reading as discrete skills passively drilled and practiced until reflexively demonstrated. Several factors served to hasten the transition in research on the learner and the learning process. One of those factors was an increased interest in internal mental structures and processes sparked by advances in neurology and artificial intelligence (Ericsson & Smith, 1991). Both of these movements turned attention back inside the human mind and away from the environment.

Another factor in this theoretical transformation was the fact that the dissatisfaction with behaviorism as an explanatory system was shared by diverse segments of the educational research community whose views on many other issues were frequently at odds (Pearson & Stephens, 1994). In the mid-1960s, a U.S. federally funded nationwide cooperative research venture, the First Grade Studies (Bond & Dykstra, 1967), brought together researchers on 27 different reading projects in a systematic comparison of various approaches to instruction in beginning reading. The attention of researchers in a wide range of disciplines had been drawn to the investigation of the reading process, the effect of which

was an interdisciplinary perspective on the nature of reading and the teaching of reading that remains a hallmark of the field.

Two communities of theorists and researchers were especially influential in setting the stage for this period of reading research, linguists and psycholinguists. On the one hand, linguists following in the tradition of Chomsky (1957, 2002) held to a less environmentally driven and more hard-wired view of language acquisition, and hence of reading. Psycholinguistic researchers, on the other hand, felt that the attention to discrete aspects of reading advocated in behaviorism destroyed the natural communicative power and inherent aesthetic of reading (Goodman & Goodman, 1980; Smith, 1973, 1978). Given these circumstances, the stage was set for a new era of reading research.

Guiding View

In this new era of reading research, the conceptualization that served as the formative stance was of learning as a natural process. Language, as with other innate human capacities, was to be developed through meaningful use, not practiced to the point of mindless reaction, as behaviorists proposed. This notion of "hard-wired" capacities blended the explanatory language of physiology and psychology (Chomsky, 1965). It was assumed that human beings were biologically programmed to acquire language under favorable conditions. This programming involved the existence of mental structures designed to perform the complex task of assimilating and integrating the particular linguistic cues provided by a given language community (Chomsky, 1975).

Such a view of the language learner was strongly influenced by the writings of linguist Noam Chomsky (e.g., 1998, 2002) and marked a dramatic shift from the behaviorist view of learning as conditioning. In his classic volume *Syntactic Structures*, Chomsky (1957) helped establish the field of generative grammar, which focused on the assumed innate mental structures that allowed for language use. Chomsky argued that it was critical to separate human mental competencies from subsequent performance, an argument that distinguished him from the majority of linguists of the time concerned with the performance end of language (i.e., transformational grammar). In framing his theory, Chomsky was influenced by the emerging research in neuroscience and cognitive science (Baars, 1986). He saw unquestionable relations between the universality of neurological structures and the universality of grammatical structures. His assertion was that humans emerge from the womb with a preexisting template that guides language use. "Languaging" was thus perceived to unfold naturally, to follow a developmental trajectory, and to involve not just the action of the environment on the individual but also the individual's contribution in the form of a predisposition or innate capacity (Chomsky 1957, 1998). This shift in the view of language acquisition from conditioned behavior to natural process inevitably reverberated in the reading research community in the form of psycholinguistics (Goodman, 1965;

Smith, 1973). As with the generative grammarians, psycholinguists argued that because all human languages follow similar production rules, the capacity for language must be built-in. Psycholinguists carried this assumption beyond oral language into print or reading. They also focused on semantics and how meaning is acquired, represented, and used during the process of reading. Consequently, learning to read, the written counterpart of acquiring an oral language, came to be viewed as an inherent ability, rather than a reflective act involving the laborious acquisition of a set of skills (Harste, Burke, & Woodward, 1984). Just as children came to understand the spoken language of their surrounding community (Halliday, 1969), they would come to understand its written language given enough exposure in meaningful situations (Goodman & Goodman, 1980).

While generative grammarians and psycholinguists sought for the universals underlying human language acquisition and use, others during this time period became interested in the interaction of language as a system and language in its particular social uses. Sociolinguistic investigations such as those of Labov (1966) and Shuy (1968) began to explore variations in everyday language use and the relationship of those variations to social roles (Labov, 1972). The contrast between the everyday language of children growing up in different social settings and the language demanded in an educational setting began to surface as an issue for educational research and practice (Labov, 1971; Shuy, 1969).

Resulting Principles

With the view that language development was a native capacity of human beings, significant changes occurred not only in perceptions of the nature of reading but also in the position of reading relative to other language processes and in preferred modes of diagnosis and instruction. Specifically, because the premise underlying this "natural" movement was that language had a natural and rule-governed structure, it became essential to unite all manner of language acquisition and use. To assume that the process of acquiring and using written language was somehow unique from that of speaking or listening would be disruptive to the theoretical premises on which this perspective was founded. Thus, in this period and for subsequent eras of reading research, we see a tendency toward the aggregation of the language arts into the unified field of literacy (Halliday & Hasan, 1976).

Concurrent with this new view of reading as natural process, investigations into the inferred mental structures and processes of reading in relation to performance took shape. For one, the learner was cast in the role of an active participant, a constructor of meaning who used many forms of information to arrive at comprehension (Halliday, 1969). Learning to read was not so much a matter of being taught, but a matter of arriving at facility as a result of a predisposition to seek understanding within a language-rich environment.

For another, reading diagnosis within this period was less about isolating and correcting problems in the underlying skills of reading than it was about

understanding how readers arrived at their alternative interpretations of written text (Clay, 1967, 1976). Unlike the diagnostic studies of the preceding period (Christenson & Barney, 1969; Smith & Keogh, 1962; Snyder & Freud, 1967), this new model of diagnosis did not focus on identifying and eradicating the source of readers' errors. Rather, the goal was to ascertain how the unexpected responses readers produced were reflective of their attempts at meaning-making (Goodman & Goodman, 1980). The groundbreaking work by Goodman and colleagues on miscue analysis was prototypic of this reconceptualization occurring in reading diagnosis (e.g., Goodman, 1965).

Rival Views of Learner and Learning Process

It is interesting that some of the very conditions that sparked the "reading as natural process" movement helped to establish a rival view of reading that came to dominate in the subsequent decade (Fodor, 1964; Fodor, Miller, & Langendoen, 1980). Specifically, a number of individuals invested in cognitive science and artificial intelligence were equally fascinated with the internal structures and processes of the human mind, as were generative grammarians and psycholinguists. However, for these researchers, the focus was more on how those processes and procedures could be best represented symbolically and transferred into computer programs that could approximate human performance (Fodor, 2001). In effect, these individuals were interested in creating "intelligent machines" that mimicked the problem solving of intelligent humans (Alexander, 2003).

What was significant about this alternative view of learners and learning was the lack of any presumption that the mental structures and processes being uncovered via neuroscience meant that resulting performance was somehow innate or hard-wired. To the contrary, the variability in human performance these researchers observed and documented suggested that seeming similarities in human language processes were likely the result of acquired or learned knowledge and processes combined with innate mental capabilities. This seemed especially true for written language, which required the manipulation of a symbolic system not required in oral communication or in other problem-solving domains, such as history or biology (Chi, Glaser, & Farr, 1988).

Although human neurology had a role to play, it was not as a regulator of language use. Within this rival group, there was a growing interest in text-based performance because of the opportunity it provided to investigate the subtle and not-so-subtle differences between experts and novices in terms of their memory, recall, and problem-solving approaches. The level of detail required to approximate even the simplest of human actions resulted in a growing appreciation for the power of individual differences and for the degree to which the specific domain of study and the task altered mental processes (Chase & Simon, 1973). For example, researchers of this period found chess to be an excellent venue for study because it is a game with a rigid and limited rule structure. Yet, there were

clearly those who excelled at this mental game. Researchers studied the knowledge and processes of expert chess players to understand how experts visualize tasks, anticipate the moves of their opponents, and act to counter those moves. From this vantage point, any attempt to unify all forms of language acquisition and performance would be discounted within the rival group. Rather, reading as the processing of written text needed to be examined in its own right and not subsumed under the process of acquiring and using oral language.

The Era of Information Processing (1976–1985)

The Conditions for Change

By the mid-1970s, the reading research community again was poised for theoretical transformation. Conditions for that change included the growing attention to the structure and processes of the human mind and increased U.S. federal funding for basic reading research (Alexander, 1998a). The effects of these converging conditions were the creation of research centers dedicated to reading research and, concomitantly, a significant influx of theorists and researchers into the reading community whose interests were more in basic than applied research and whose roots were primarily in cognitive psychology (Pearson & Stephens, 1994). The interdisciplinary character of these centers, most notably the Center for the Study of Reading at the University of Illinois at Urbana-Champaign, involved individuals from psychology and reading-related fields such as English, literature, communications, and writing.

Given their more basic research agenda and their strong cognitive roots, these alliances forwarded a perspective on reading that deviated markedly from the orientation that had dominated. Specifically, this new perspective held little regard for the innateness or naturalness of reading and little interest in the amalgamation of literacy fields. As would be expected, some within the reading research community felt uneasy about this basic research emphasis, arguing that it had the "deleterious" effects of "squeezing out" reading educators and undervaluing instructional practice (Vacca & Vacca, 1983, p. 383).

Guiding View

On the basis of research published between 1976 and 1985, it was cognitive psychology, and more specifically information-processing theory, that dominated the domain of reading (Anderson, 1977). However, a psycholinguistic undercurrent remained evident during this period and gained momentum as new constituents joined the reading community. Even given the continuing presence of psycholinguistics, this remained the era of cognitive psychology characterized by unprecedented research on knowledge, especially the construct of prior knowledge (Alexander, 1998a). Much of this knowledge research was influenced by the philosophy of Immanuel Kant (1787/1963). Kantian philosophy was

significant for its distinction between the sensible world and the intelligible world as varied sources of human knowledge.

> By "sensible world" [Kant] meant the world as perceived by the senses; he would later call this also the phenomenal world, or world of appearances. By "intelligible world" he meant the world as conceived by the intellect or reason.... Here Kant already laid down his basic theses: that space and time are not objective or sensible objects, but are forms of perception inherent in the nature and structure of the mind; and that the mind is no passive recipient and product of sensations, but is an active agent—with inherent modes and laws of operation—for transforming sensations into ideas. (Durant & Durant, 1967, p. 534)

Thus, this new generation of reading researchers searched for general processes or "laws" that explained human language as an interaction between symbol system and mind. With the burgeoning studies in expert/novice differences and artificial intelligence (Chi, Feltovich, & Glaser, 1981; Ericsson & Smith, 1991; Schank & Abelson, 1977), the medical metaphor of diagnosis, prescription, and remediation that reigned in the 1950s and the learning-as-natural metaphor of the 1960s were replaced with a mechanistic information-processing metaphor (Reynolds, Sinatra, & Jetton, 1996). Text-based learning was about knowledge, which was organized and stored within the individual mind, and resulted from the input, interpretation, organization, retention, and output of information from the individual's environment (Samuels & Kamil, 1984).

Resulting Principles

As noted, the construct of prior knowledge and its potent influence on students' text-based learning were enduring legacies of this era (Alexander, 1998a; Alexander & Murphy, 1998). Specifically, the readers' knowledge base was shown to be *powerful*, *pervasive*, *individualistic*, and *modifiable*. Prior knowledge was linked to individuals' perspectives on what they read or heard (Pichert & Anderson, 1977), their allocation of attention (Anderson, Pichert, & Shirey, 1983), and their interpretations and recall of written text (Bransford & Franks, 1972; Lipson, 1983). In addition, significant associations were established between readers' existing knowledge and their subsequent reading performance (Stanovich, 1986, see #17 this volume), comprehension (Alvermann, Smith, & Readence, 1985), memory (Anderson, Reynolds, Schallert, & Goetz, 1977), and strategic processing (Alexander & Judy, 1988; Garner, 1987).

Because of the primacy of reading-specific studies during this period, there arose an extensive literature on text-based factors, particularly in relation to comprehension. Writings on story grammar, text cohesion, text structure, and text genres proliferated (Armbruster, 1984; Kintsch & van Dijk, 1978; Mandl, Stein, & Trabasso, 1984; Meyer, 1975; Taylor & Beach, 1984). Further, in parallel with the focuses within the broader cognitive field, reading theorists and researchers

investigated the organization of knowledge in the mind (Anderson, 1977; Rumelhart, 1980) and how that organization distinguished novice readers from more expert readers (Allington, 1980; August, Flavell, & Clift, 1984; Lundeberg, 1987; Paris & Myers, 1981).

The information-processing research of this period resulted in a multitude of cognition-related constructs. Of the many constructs articulated in this decade, schema theory remains one of the most potent legacies of the time. In fact, Baldwin et al. (1992) described schema theory as "one of the hottest topics in the history of NRC [National Reading Conference]" (p. 507). The theoretical construct of schemata—what Rumelhart (1980) called the building blocks of cognition, drew explicitly from the philosophy of Kant (Anderson et al., 1977) and embodied the power, pervasiveness, individuality, and modifiability of knowledge previously mentioned. Even those forwarding alternative explanations for the structure of human knowledge and the processing of information have had to counter the tenets of schema theory and the body of supporting evidence (Sadoski, Paivio, & Goetz, 1991).

One of the distinguishing characteristics of this research period was its focus on the individual mind. Such an individualistic perspective was understandable for several reasons. First, the computer-based guiding view that shaped this era was fundamentally a model of individual knowledge acquisition and use. There was little, if any, consideration of sociocultural or contextual influences on the processing of linguistic information. Second, the research studies generated during this period strongly supported individualistic interpretations of written text. In effect, any presumption that only one interpretation would result from reading text was empirically disputed (Brewer, 1980).

Finally, the research activities of this period demonstrated that students' knowledge could be significantly modified through direct intervention, training, or explicit instruction (Paris & Winograd, 1990; Pressley, Goodchild, Fleet, Zajchowski, & Evans, 1989; Weinstein, Goetz, & Alexander, 1988). This body of strategy research highlighted the modifiability of individuals' knowledge bases and their approaches to information processing. These studies targeted a spectrum of general text-processing strategies, including summarization, mapping, self-questioning, and predicting (Brown, Campione, & Day, 1981; Hansen, 1981; Raphael & Wonnacott, 1985; Tierney, Readence, & Dishner, 1990). There also was consideration of instructional environments and pedagogical techniques that contributed to improved comprehension of text (Duffy, Roehler, Meloth, & Vavrus, 1986; Pearson, 1984; Pressley, Lysynchuk, D'Ailly, Smith, & Cake, 1989).

Rival Views of Learner and Learning Process

Among the most vocal critics of the information-processing approach to reading research were those who held to a more naturalistic and holistic view of reading

(e.g., Smith, 1985). Many of the psycholinguists who had fueled the "natural" movement were significant forces in this rival perspective. However, there were several important distinctions between this iteration of the natural movement and its predecessor. For one, there was a shift away from the neurological or physiological arguments central to that earlier period and more concern for naturalism in the materials and procedures used to teach reading. One reason for this shift in emphasis was the new alliances that invigorated this alternative view. Specifically, there was an influx of literature and writing researchers into the reading community who were more interested in the unity within the language arts than in any potential dissimilarities. The expanding literature on the common bases of reading and writing was indicative of this integrated view (Spivey & King, 1989; Tierney, Soter, O'Flahavan, & McGinley, 1989), as were the studies on discussion (Alvermann & Hayes, 1989; Bloome & Green, 1984; Heath, 1982).

Characteristic of this rival view was an increased concern for the aesthetic of reading over the rational (Rosenblatt, 1978/1994). One outcome of this philosophical reorientation was a rather negative attitude toward knowledge as the "residue" of information getting or fact-finding (Rosenblatt, 1978/1994, p. 23). This unfavorable view of knowledge as information getting is well represented in the writings of Louise Rosenblatt, especially her classic treatise *The Reader, the Text, and the Poem: The Transactional Theory of the Literary Work* (1978/1994). With her writings, Rosenblatt framed several decades of literacy research around the notion of reader stances or responses to text (e.g., Britton, 1982; Cox & Many, 1992; Fish, 1980).

Rosenblatt contended that, depending on the goal of the learner and the instructor, an individual's response to a literary work falls along a continuum from an efferent to an aesthetic stance. Those assuming a more efferent stance [illegible] to uncover the "truths" voiced by some invisible or anonymous author.

> In nonaesthetic reading, the reader's attention is focused primarily on what will remain as the residue *after* the reading—the information to be acquired, the logical solution to a problem, the actions to be carried out. As the reader responds to the printed words or symbols, his attention is directed outward so to speak, toward concepts to be retained, ideas to be tested, actions to be performed after the reading. (Rosenblatt, 1978/1994, p. 23)

By contrast, readers holding to an aesthetic stance focus on the literary experience and allow themselves to discover the pleasure and beauty of the story.

> In aesthetic reading, in contrast, the reader's primary concern is with what happens *during* the actual reading event.... *In aesthetic reading, the reader's attention is centered directly on what he is living through during his relationship with that particular text* [author's emphasis]. (Rosenblatt, 1978/1994, pp. 24–25)

This contrast between the aesthetic and efferent stances Rosenblatt described had the effect of casting learning from text, central to the information-processing orientation, in an unfavorable light and countered the seemingly analytic, less-personal perspective of reading forwarded by cognitive researchers (Benton, 1983; Britton, 1982; Rosenblatt, 1938/1995). In effect, the goal was to lose oneself *in* the text and not specifically to learn *from* it. For those who espoused this goal, a "learning-from-text" perspective transformed a natural literary, aesthetic experience into an unnatural, overly analytic act.

The Era of Sociocultural Learning (1986–1995)

The Conditions for Change

Moving into the mid-1980s, there were indications that the reading community was positioned for further change. The explanatory adequacy of the computer metaphor that had guided the information-processing–based research of the previous decade was perceived as diminishing, even by those in the field of artificial intelligence who had fostered this metaphor (Anderson, Reder, & Simon, 1996). For instance, within cognitive psychology, the earlier information-processing approach was replaced by a constructivist theory that acknowledged learning as individualistic and rejected the mechanistic and computer-like aspects of learning implicit in this stance (Reynolds et al., 1996).

This shift in emphasis may have come to pass as the applications of the information-processing approach in such areas as expert systems development and classroom training programs were seen to have less than ideal outcomes. The expert systems that were designed to imitate human decision-making processes (e.g., Clancey, 1983) did not always live up to their claims (Chipman, 1993). In the realm of reading education, the application of information-processing theory in cognitive training programs also proved less promising than anticipated, which engendered doubt as to the feasibility of these training approaches (Harris, 1996). Many students failed to benefit from the explicit instruction in strategies or components of reading that was intended to improve their text-based learning. For some students, there were no improvements produced by this instruction, while for others, the benefits did not endure or transfer (Paris, Wasik, & Turner, 1991). Although the prior era of information-processing researchers had embraced general "laws" of text processing, these laws did not appear to account for the behaviors and results seen in specific applications, such as with particular populations, types of textual materials, and in variable classroom conditions (Paris, Wasik, & Turner, 1991).

A further force for change was the increased influence of alternative perspectives and research traditions speaking from outside the realm of cognitive psychology. Writings in social and cultural anthropology, such as the works of

Vygotsky (1934/1986), Lave (1988), and others (Heath, 1983; Rogoff, 1990), provided a new viewpoint for literacy researchers, as well as those in the larger educational research community. These writings sparked a growing acceptance in the literacy community of the ethnographic and qualitative modes of inquiry advocated in social and cultural anthropology. Along with these modes of inquiry came the practice of studying literacy with naturally occurring texts in natural settings, such as classrooms, homes, and workplaces (Anderson, Wilson, & Fielding, 1988). These new approaches brought the methodology of literacy research more in line with the holistic and aesthetic school of thought. Reflecting this shift in emphasis, the *Journal of Reading Behavior* became first the *Journal of Reading Behavior: Journal of Literacy* in 1991 and then the *Journal of Literacy Research* in 1996. This shows that the behavioral orientation toward reading of the 1950s and 1960s, reflected in the title of this journal of the National Reading Conference for many years thereafter, was fully abandoned in favor of a more integrated designation in the early 1990s.

An additional impetus to change was the development of a systematic attitude of distrust or devaluing of formal knowledge, and of the traditional mode of scientific inquiry. It might be said that the outcome of learning came to be less important than the learning process (Sfard, 1998). The goal of learning was no longer seen as the development of an individually held body of knowledge, but rather the creation of a mutual understanding arising in the social interaction of particular individuals in a particular context at a particular time. At the extremes of the research community, were those who portrayed the knowledge gained in school settings as an oppressive tool of political and cultural authorities seeking to maintain their dominance over the disempowered (McLaren, 1998). At another extreme were those who characterized schooled knowledge as the currently agreed-on interpretation of a reality that was essentially unknowable and unverifiable (von Glaserfeld, 1991). A common thread in these theoretical movements active during this time, such as critical theory, postmodernism, and radical constructivism, was the denial of privileged status to formal or schooled knowledge (Gee, 1989; Woods & Murphy, 2002). This multitude of divergent voices and interacting factors pushed research on learning toward a new stage in its development.

Guiding View

As a result of the aforementioned forces, group orientations came to replace the earlier focus on individualistic learning and instruction seen in the prior era (Alexander, Murphy, & Woods, 1996). Literacy research now sought to capture the shared understanding of the *many*, rather than the private knowledge of the *one*. From detection of the universal laws of learning, the goal became the description of the "ways of knowing" unique to particular social, cultural, and educational groups. The adoption of social and cultural perspectives on literacy learning inspired broader acceptance and exploration of the shared literacy

experiences advocated in the aesthetic stance of the prior era. The dominant perspective during this time became the view of learning as a sociocultural, collaborative experience (Alexander, 1996; Reynolds et al., 1996), and of the learner as a member of a learning community (Brown & Campione, 1990). The widespread popularity of such concepts as cognitive apprenticeship, shared cognition, and social constructivism during this time period are evidence of the power of this view.

Resulting Principles

In this era of literacy research, the ongoing movement was toward increased sophistication of the conception of knowledge. Reviews of the knowledge terms used by literacy researchers and in broader educational contexts (Alexander, Schallert, & Hare, 1991; de Jong & Ferguson-Hessler, 1996; Greene & Ackerman, 1995) revealed that literacy involved a multitude of "knowledges." Knowledge was not a singular construct, but existed in diverse forms and interactive dimensions (Paris, Lipson, & Wixson, 1983; Prawat, 1989). These various knowledges had to be coordinated or reconciled in the performance of any nontrivial literacy act.

A primary locus for this adaptive activity was in the reconciliation of schooled and unschooled knowledge (Gardner, 1991). Students arrive at school with an extensive prior body of conceptual knowledge guiding their understanding and use of language. This unschooled knowledge (also known as *informal knowledge* or *spontaneous concepts*) could differ markedly in character from more formally acquired school knowledge (i.e., *scientific concepts*) (Alexander, 1992; Vygotsky, 1934/1978). Research in the field of conceptual change and misconceptions showed that this unschooled knowledge could be a more salient factor in students' learning from texts than their formally acquired knowledge (Alexander, 1998c; Guzzetti & Hynd, 1998; Vosniadou, 1994). The relative dominance of informal knowledge over formal understandings could be because what is learned in a school setting appears of limited relevance and therefore limited value to students (Alexander & Dochy, 1995; Cognition and Technology Group at Vanderbilt, 1990; Whitehead, 1929/1957). Unschooled knowledge might also possess a concrete and personal referent lacking in much of school learning (Alexander, Murphy, & Woods, 1996).

Beyond the recognition of knowledge's multiple forms, there was a growing awareness that one's knowledge was not always a positive force in subsequent learning and development. One's existing knowledge could impede or interfere with future learning in the form of misconceptions or barriers to conceptual change (Chinn & Brewer, 1993; Perkins & Simmons, 1988; Roth, 1985). Research on persuasion also provided insight into the possible negative role of preexisting knowledge (Alexander, Murphy, Buehl, & Sperl, 1997; Chambliss, 1995; Garner & Hansis, 1994). Specifically, those who approached arguments

and evidence presented in text with little relevant knowledge or with a strong opinion proved more resistant to the authors' persuasive message.

Besides these investigations of the complexity of knowledge, research on knowledge and learning in this era also turned to investigation of the conditionality of knowledge. Conditionality of knowledge could arise from domain-specificity or task-specificity, as well as from social or contextual factors. The new awareness of the salience of social and contextual contributions to learning was evident in the proliferation of such terms as *learning communities* (Brown & Campione, 1990), *socially shared cognition* (Resnick, Levine, & Teasley, 1980), *distributed cognition* (Salomon, 1993), *shared expertise* (Brown & Palincsar, 1989), *guided participation* (Rogoff, 1990), *situated action* (Greeno & Moore, 1993), and *anchored instruction* (Cognition and Technology Group at Vanderbilt, 1990). Most members of the literacy research community agreed that schooling, at least, was a social and cultural phenomenon, along with its resultant knowledge (e.g., Cognition and Technology Group at Vanderbilt, 1996; Lave, 1988; Rogoff, 1990). Schools clearly functioned as social institutions centered around the interactions of students and teachers. Designed to serve socially contrived goals, schools operated as unique socially sanctioned contexts in which students were to build the requisite knowledge base for our postindustrialized societies (e.g., Perret-Claremont, Perre, & Bell, 1980).

Certain researchers made the sociocultural nature of schools and classrooms the focus of their efforts, developing instructional procedures that engendered optimal social interchanges in the classroom (e.g., Bereiter & Scardamalia, 1989; Collins, Brown, & Newman, 1989; Palincsar & Brown, 1984). In these approaches, teachers played the essential role of facilitator or guide (Rogoff & Gauvain, 1986; Vygotsky, 1934/1986), with the scaffolding provided by the teacher diminishing in proportion to the students' increasing knowledge, interest, and strategic abilities in a particular area (e.g., Alexander, 1997b; Brown & Palincsar, 1989), so that students could develop self-direction and autonomy (Deci & Ryan, 1991).

Conditionality came into play as well in investigations of possible domain-specificity of knowledge and learning. Domains made up the realm of academic learning and provided the settings against which choices of vocation and avocation were framed (Alexander, 1998b). The question of the possible relationship of these domains to some objective reality remained (Bereiter, 1994; Matthews, 1994). Nonetheless, these domains differed significantly from one another (Spiro, Feltovich, Jacobson, & Coulson, 1992; Spiro & Jehng, 1990), with these differences strongly affecting the inscription, perception, communication, and learning of the associated knowledge in such domains (Alexander, 1998b; Nolen, Johnson-Crowley, & Wineburg, 1994; Stahl, Hynd, Glynn, & Carr, 1996). One attempt to characterize this diversity was the use of the term *structuredness*, involving the grouping of problems typical of the domain in terms of their form and

content or in having an optimal algorithmic or heuristic solution strategy (Frederiksen, 1984).

Some of these domain differences would no doubt seem obvious from even a superficial comparison of such representative texts as a mathematics textbook or a historical account (Ball, 1993; Putnam, Heaton, Prawat, & Remillard, 1992; VanSledright, 1996). Other differences were more deeply imprinted in the beliefs of students and teachers about the domain itself, and also about their own competencies in that domain (Alexander & Dochy, 1995; Pajares, 1992). What it meant to *know* mathematics versus history or what doing well required in literature versus science was seen to differ (Matthews, 1994; Wineburg, 1996). These differences arose from beliefs about the epistemological characteristics of different domains, including the certainty of their central concepts or fundamental principles (Schommer, 1990, 1993).

Because domains vary in significant ways, it was logical for researchers to assume that students' knowledge, strategic thinking, and motivations would likewise vary along domain lines (Alexander, 1997b; Murphy & Woods, 1996). This meant that a global label such as "good" or "poor" student would be perceived as too general and in need of qualification. The critical question was "good at what or poor at what"? Such domain-specific or task-specific qualification of student ability added to the conditionality of learning.

Rival Views of Learner and Learning Process

In this era, what characterized rival theories of learning were not dichotomous viewpoints on the nature of literacy, such as the earlier split along the dimension of rational versus aesthetic. During this period, predominant and rival views were in agreement on the value of considering social and contextual forces in literacy. The distinction between the predominant and rival stance came in the relative importance attached to the context or to social interactions. Specifically, for certain segments of this community, the situated character or social nature of knowledge and knowing became the central focus (Sfard, 1998).

Research on situativity or situated action (e.g., Greeno & the Middle School Mathematics Through Applications Project Group, 1998; Greeno & Moore, 1993) was grounded in the perceptual investigations of Gibson (1966), and in the symbolic-processing theory developed by researchers in artificial intelligence and technology (Greeno & Moore, 1993). From this foundation, researchers evolved an emphasis on the learning affordances offered in the conditions of the immediate learning environment and saw knowledge as nontransferable between situations or contexts (Sfard, 1998). Within this perspective, learning could not be separated from the situation in which it occurred, so that knowledge came to reside in the context itself, rather than in the individual learners. From the standpoint of human interactions, as well, certain sociocultural researchers came to the position that knowledge was not merely shaped or colored

by social experiences and interactions, but actually existed in those interchanges rather than in individual minds (Sfard, 1998). For those holding to this view, knowledge would be present when students are socially engaged in discussion or collaborative-learning activities. With these varied sociocultural perspectives on literacy came a radical shift from the prior era's location of knowledge in the mind and emphasis on individuality of knowledge and the process of knowing.

The Era of Engaged Learning (1996–Present)

The Conditions for Change

As the 1990s wound down, there were forces at work that boded a change in the way learners and learning were perceived and studied within the literacy community. Those forces led to changing perceptions of text, readers, and the reading process. Prior to this period, texts were generally defined as printed materials (e.g., books or magazines) read in linear fashion (Wade & Moje, 2000). Further, readers targeted in the research were most often young children acquiring the ability to decode and comprehend written language or older students struggling with the demands of traditional text-based learning (Hiebert & Taylor, 2000; Pigott & Barr, 2000). Moreover, outside the concern for readers' efferent or aesthetic response to literature or the creation of a stimulating print-rich learning environment, there was little regard for motivation in the form of readers' goals, interests, and involvement in the learning experience (Oldfather & Wigfield, 1996). However, several conditions conspired to change these "typical" perceptions of text, reader, and reading, ushering in the current era of reading research.

First, with the growing presence of hypermedia and hypertext, the reading community began to consider the nature and form of these nonlinear and less traditional forms of text on students' learning (Alexander, Kulikowich, & Jetton, 1994; Bolter, 1991). The term *nonlinear text* refers to discourse accompanied by a database management system that guides or prompts readers to other informational sites and sources (Gillingham, Young, & Kulikowich, 1994). This influx of hypermedia and hypertext became coupled with an increased attention to classroom discourse and its role in students' academic development (Alvermann, Commeyras, Young, Randall, & Hinson, 1997). Researchers considered the form and content of that discourse and its relation to reading performance, as well as to subject-matter learning (Jetton & Alexander, 1998). Collectively, the interest in hypermedia and classroom discourse extended notions of text to both traditional and alternative forms (Alexander & Jetton, 2003).

Second, during this time, the rich and impressive body of literature on motivation that had formed over the past several decades found its way into the reading community (Guthrie & Wigfield, 2000). This infusion of motivation

research led to the consideration of such critical factors as learners' interest, goals, self-efficacy beliefs, as well as their self-regulation and active participation in reading and text-based learning (Almasi, McKeown, & Beck, 1996; Ames, 1992; Hidi, 1990; Schallert, Meyer, & Fowler, 1995; Schraw, Bruning, & Svoboda, 1995; Turner, 1995). One of the characteristics of this motivational research was its social cognitive perspective on student learning (Pintrich & Schunk, 2001). In other words, these motivational factors were not considered in isolation but were studied in relation to other factors such as students' knowledge, strategic abilities, sociocultural background, and features of the learning context. The result of this infusion of motivation theory and research into the reading literature was a reconceptualization of the student as engaged or motivated reader (Guthrie & Wigfield, 2000). This motivational focus was especially apparent in the research and publications of the National Reading Research Center funded by the Department of Education.

Finally, for many reasons, including a deepening understanding of human development, the increased longevity of the population, and the mounting demands of functioning within a postindustrial, information-technological age, the literacy community's view of reading shifted (Alexander, Murphy, & Woods, 1996; Reinking, McKenna, Labbo, & Kieffer 1998). Throughout the previous eras of reading research, activities, debates, and stances revolved primarily around the acquisition of reading processes and whether reading could best be understood as a discrete set of skills or as a more natural unfolding of competence fostered by meaningful, aesthetic engagement. What has become apparent, however, is that neither orientation toward reading effectively captures the complexity of reading or recognizes the changing nature of reading as individuals continue their academic development (Alexander, 2003). In other words, it has become increasingly more difficult to ignore that reading is a domain that relates not only to the young or struggling reader but also to readers of all abilities and ages. Further, reading extends beyond the initial phase of acquisition and across the lifespan as readers engage in a range of reading-related, goal-directed activities. Current initiatives directed toward adolescent and adult readers are evidence of the expanded view of reading (RAND Reading Study Group, 2002, see #27 and #53 this volume; National Institute of Child Health and Human Development [NICHD], 2000). Thus, earlier dichotomization of reading into "learning to read" and "reading to learn" stages (Chall, 1995) is shifting to a more integrated and developmental perspective.

Guiding View

Putting a label on an ongoing era is certainly a risky venture, given that hindsight is far more acute. However, as this latest decade of reading research draws to a close, we believe that it can be aptly described as the Era of Engaged Learning. The label "engaged" captures several of the aforementioned forces that are shaping

perceptions of reading and informing research in that domain. For one, it acknowledges that reading is not confined to traditional print materials but extends to the texts students encounter daily, including the nonlinear, interactive, dynamic, and visually complex materials conveyed via audiovisual media (Alexander & Jetton, 2003). It also entails the discussions that occur around both traditional and alternative texts (Alvermann et al., 1997; Wade, Thompson, & Watkins, 1994).

Of course, our present understanding of how students learn by means of alternative forms of text remains emergent (Alexander, Graham, & Harris, 1998; Wade & Moje, 2000). If our history in dealing with other forms of nonprint modes of communication (e.g., television) is any indication, we have a great deal to learn about the potentials of alternative, nonlinear media (Neuman, 1988). For example, as these alternative forms of text become more prevalent, literacy researchers and practitioners may need to reconsider fundamental concepts such as learning, memory, and strategic processing (Bolter, 1991; Garner & Gillingham, 1996; Goldman, 1996; Salomon, Perkins, & Globerson, 1991). Further, practitioners will need to examine how pedagogical techniques and learning environments can be adapted to assist not only readers who struggle with traditional text but also those who get lost in hyperspace (Alexander, Kulikowich, & Jetton, 1994; Reinking et al., 1998).

Engagement also pertains directly to students' meaningful and goal-directed participation in text-based learning. While the philosophical writings of Skinner, Chomsky, Kant, and Vygotsky were central to prior eras of reading research, the writings of John Dewey (e.g., 1910/1991, 1913) have been key to this era. Dewey's notions of experiential learning and interest are evident in the conceptions of engagement framed within the burgeoning motivation research and have resulted in a unification of once oppositional stances. In this most recent era of literacy research, the learner is conceptualized as a motivated knowledge seeker (Alexander, 1997a). This perception differs from the Kantian distinction (1787/1963) between the sensible and the intelligible world inherent in information-processing theory and the efferent/aesthetic distinction underlying the psycholinguistic perspective of reading (Goodman & Goodman, 1980; Rosenblatt, 1938/1995). Specifically, it is assumed that a search for understanding or the act of learning via text involves the integration of cognitive and motivational forces.

The research on reader engagement further establishes that learners are more than passive receptacles of information (Guthrie & Wigfield, 2000). They are active and willful participants in the construction of knowledge (Alexander, 1997a; Reed & Schallert, 1993; Reed, Schallert, & Goetz, 1993). However, the picture of engagement emerging during this decade deviates from prior sociocultural interpretation in terms of the focus on the individual learner within the educational environment (Alexander & Murphy, 1999). In particular, while the learner still resides and operates within a sociocultural context, attention again is turned to the individual working to create a personally meaningful and socially valuable body of knowledge. Thus, the portrait of the engaged reader framed

by the research has both individualistic and collective dimensions, a reconciliation of information-processing and sociocultural perspectives of past decades (Guthrie, McGough, Bennett, & Rice, 1996; Guthrie, Van Meter, et al., 1996).

A further consequence of this view of the learner as actively engaged in the process of learning has been a rekindled interest in strategic processing. In contrast to the habituated skills of earlier eras, the effective use of strategies is understood to require reflection, choice, and deliberate execution on the part of the learner (Alexander, Graham, & Harris, 1998). Strategy use by its nature calls for engaged learners who are willing to put forth effort, and who can knowledgeably respond to the demands of a particular situation. The body of literature on learning strategies, particularly reading comprehension, has grown in recent years in response to this new view of the engaged learner (Pressley, 2002).

Finally, the view of learners as actively engaged allows for a developmental perspective on reading. Developmentally, individuals are continually in the process of learning to read and have a direct role to play in their literacy. From this vantage point, students are not complete as readers when they can demonstrate basic linguistic skills or fluency in reading. Rather, they continue to grow as readers as their linguistic knowledge, subject-matter knowledge, strategic capabilities, and their motivations expand and mature (Alexander, 1997b). This developmental perspective on reading extends concern beyond the early elementary years into adolescence and adulthood.

We see this developmental orientation toward reading in recent reports and the activities of the Center for the Improvement of Early Reading Achievement (CIERA). For example, in its summary report titled *Partnership for Reading: Adolescent Literacy—Research Informing Practice: A Series of Workshops*, The Partnership for Reading (National Institute for Literacy, 2002) identified development as a superordinate principle for organizing the research agenda on adolescent literacy. Similarly, the RAND Reading Study Group (2002), in its publication *Reading for Understanding: Toward an R&D Program in Reading Comprehension*, describes learning to read well as "a long-term developmental process" (p. xiii) and recognizes the need for research that "will contribute to better theories of reading development" (p. 29).

Resulting Principles

Several principles appear to guide the current decade of reading research. One of those principles pertains to the complexity and multidimensional nature of reading. Specifically, notions that reading is cognitive, aesthetic, *or* sociocultural in nature are set aside. Instead, all these forces are actively and interactively involved in reading development (Alexander & Jetton, 2000). For example, there is a significant relationship between learners' knowledge and their interests (Alexander, Jetton, & Kulikowich, 1995; Csikszentmihalyi, 1990). Similarly,

encountering personally relevant texts promotes deeper student engagement in their learning (Guthrie & Wigfield, 2000).

Another guiding principle of this era is that students encounter a range of textual materials, both traditional and alternative, that should be reflected in the learning environment (Wade & Moje, 2000). Although their views on the merits of technology differ, educational researchers acknowledge that technology has transformed learning and teaching (Cuban, 1993; Postman, 1993; Scardamalia, Bereiter, McLean, Swallow, & Woodruff, 1989). Today's K–12 students in postindustrial societies have never experienced a world without computer-based technologies. They regularly surf the Web, send e-mail, and use instant messaging—acts that have changed the face of information processing and human communication (Alexander & Knight, 1993; Garner & Gillingham, 1996). This technological revolution has produced an unimaginable proliferation of information sources and text types. This proliferation further complicates perceptions of reading and places new demands on today's readers (Gillingham et al., 1994). For instance, effective readers must become capable of assessing credibility, identifying possible biases, analyzing persuasive or literary techniques, and locating and selecting optimal sources. However, these new technologies also may hold promise for reading in what Reinking et al. (1998) call a post-typographic world.

Because reading is multidimensional in character, with significant relations among readers' knowledge, strategic processing, and motivation, simple models or theories based on a "learning to read" and "reading to learn" distinction need to be supplanted with more complex, reciprocal models of reading development (Alexander, 2003). Specifically, investigation of the initial stages of reading acquisition should not be isolated from the issues emerging when comprehension of texts becomes the focus. This requires a genuinely developmental theory of reading, spanning preliteracy reading readiness to proficient adult reading. This developmental vision of reading was reflected in the report of the RAND Reading Study Group (2002, see #27 and #53 this volume):

> a vision of proficient readers who are capable of acquiring new knowledge and understanding new concepts, are capable of applying textual information appropriately, and are capable of being engaged in the reading process and reflecting on what is read. (p. xiii)

Rival Views of Learner and Learning Process

In this era, the views in the literacy research community of the learner as a motivated, engaged knowledge-seeker and of the learning process as developmental and anchored in a sociocultural context stand in sharp contrast to a trend that has been gaining momentum over the past several decades. We have chosen to label this rival perspective as learning as reconditioning. The choice of the term *reconditioning* signals several significant features of this rival undercurrent. First, as in the early conditioning period, this rival stance is invested in the identifica-

tion, teaching, and remediation of the subskills or components underlying reading acquisition (e.g., Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998). In addition, the emphasis in this rival orientation is on beginning or struggling readers who have yet to master these reading fundamentals.

Unlike the earlier Era of Conditioned Learning, the current concentration on reading subskills and components is less driven by theory than by other forces. One of the forces is the drive toward accountability, primarily in the form of high-stakes testing, and the drive for national standards (Paris & Urdan, 2000). From the stance of learning as engagement, assessments that foster knowledge-seeking around challenging, valuable, and meaningful problems and issues would be warranted (American Psychological Association Presidential Task Force on Psychology in Education, 1993). However, such problems are not readily measurable or as predictive of reading difficulties in the early years. Moreover, the effort to institute national standards that seemingly prescribe the content and skills learners should have acquired at given points in their school careers thus constrains the views of learners and learning (Paris & Urdan, 2000).

Another difference between the conditioning and reconditioning perspectives is the alliances each represents. Specifically, the present investment in basic skills and components of reading has gained support from researchers in special education and others who work with struggling readers (Foorman et al., 1998; Torgesen, 1998, 1999). These researchers have been joined by those engaged in neuroscience. In particular, advancements in neuroimaging techniques have allowed researchers to examine the neurological structures and processes of struggling readers or readers with special needs (Shaywitz et al., 2000). On the basis of such neuroimaging studies, still in a formative stage, researchers have attempted to pinpoint the specific neurobiological or physiological patterns related to specific reading outcomes or documented conditions (Pugh et al., 1997; Shaywitz, Fletcher, Holahan, & Shaywitz, 1992).

Emergent Premises: Lessons of the Past 50 Years

In this overview of the past 50 years of reading research, our discussion has been anchored by the conception of the learner and learning process underlying the approach to reading research in a given time period. Investigations of learning are, of necessity, situated in the context of a particular slant on the nature of the learner and on how learning occurs. Identifying that context allows the essential character of the research endeavors in different time periods and from different theoretical orientations to emerge from the myriad of studies and reported findings.

As we look across the eras of reading research on learners and learning and consider the characteristics and guiding principles unique to each, we cannot help but recognize that there are patterns evident in the fabric of that literature on

learners and learning that bind those eras together. Those patterns—what we refer to as the emergent premises—are among the most important lessons to be derived from this historical analysis.

• Membership within the reading community is flexible and alters the basic identity of that community and its orientation toward research and practice. Characterizing the prototypic reading researcher would be a difficult task. That is because the membership of the reading community has remained in flux. Over the past 50 years, those considered to be among the leading reading researchers have ranged from reading specialists to psycholinguists, from literature researchers to cognitive scientists, and from special educators to generative grammarians. Because of the interdisciplinary and fluid nature of the reading community, the issues and perspectives on research and practice forwarded by its members have similarly been interdisciplinary and fluid in nature. If one were interested in predicting the future of reading research, it would be wise to look carefully at community demographics. Who is being drawn to the reading field and what special orientations, interests, and methodologies do they bring into this community of practice?

• Prevailing trends within the research literature reflect the influence of sociopolitical forces *outside* the reading community. While forces within the reading community, such as its membership, have been influential in shaping the eras of reading research, forces outside the community also have served as change agents. Consider the transformational effect of baby boomers and Sputnik on reading research and practice in the 1950s and 1960s, for example, or the impact that significant governmental funding for cognitive research had on the reading research agenda in the 1970s and 1980s. Further, as with the broader educational community, the reading community has not been immune to the effects of technology or the accountability movement, nor has its members been oblivious to the needs of the linguistically and culturally diverse students populating U.S. classrooms in increasing numbers. Such sociopolitical influences combine with forces within the reading community to transform the reading landscape and give each era of research its distinctive character (Valencia & Wixson, 2001, see #3 this volume). What is not clear in this historical analysis is the degree to which the reading community is proactive or reactive in relation to such powerful external forces.

• There is a recurrence of issues and approaches to reading research and practice across the decades. The ebb and flow of reform movements have been well documented in the educational literature (Alexander, Murphy, & Woods, 1996). This iterative reform pattern also is evident in the reading research literature in terms of perspectives on learners and learning. Perhaps the most obvious recurrence is the shifting emphasis on whole-word or phonetic instructional approaches. Despite periodic calls for balanced or integrated programs of research and practice in the literature (Stahl & Miller, 1989), the debate over the "right" or

"most effective" approach continues unabated (Goodman, 1996). Other such recurring themes in the extant literature include more individualistic or more social emphases, variable interest in the use of controlled vocabulary readers or "authentic" literature (Rosenblatt, 1978/1994), and the valuing or devaluing of knowledge (Alexander, 1998a).

It would seem that knowledge of reading's history might serve to temper some of the unabashed support for particular new reform efforts that are, in actuality, iterations or reincarnations of past reading approaches with qualified or questionable records of success. At the very least, such a historical perspective would remind us that many current initiatives have legacies that deserve consideration.

• The history of reading research reveals a shifting emphasis on the physiological, psychological, and the sociological. While reading always involves physiological, psychological, and sociological dimensions, each era weighs these dimensions differently. When we look across the eras of reading research described in this article, it becomes apparent that each is distinguished by the relative weight placed on body, mind, or society when understanding the nature of learners and learning. In effect, while reading invariably entails human physiology, psychological processing, and social engagement, it is these factors' relative importance that becomes a defining feature for each era. For example, physiology, which focuses on the biological, chemical, and neurological dimensions of human performance, was clearly present in the behavioral orientations of Skinner and others, where reading was a conditioned response. The physiological perspective was evident again in the Chomskian views of language as a "hardwired" capacity, and more recently in the growing interest in neurological structures and reading performance.

Psychological orientations, which deal with the mental processes of the mind, were most apparent in the Era of Information Processing. This orientation continues in the studies of expertise, motivation, and learner development. Here, the focus is squarely on process and functioning—the mental software—rather than on the physical or neurochemical structures—the mental hardware—from which these processes and functions may arise.

Finally, throughout reading history there have been periods in which the concern has not been centered on the individual student or his or her mental structures or processes. Rather, the focus has been on the student in relation to others (human-to-human interactions) or the learning of groups who share history (e.g., gender or ethnic groups) or geography (e.g., classroom communities). We see this sociological framework clearly in the rising interest in sociocultural perspectives and in research on cooperative or collaborative learning.

To understand the history of reading research, we need to appreciate the impact of these varied perspectives on learner and learning that become mirrored in the research questions posed, the methodologies applied, and the interpretations made. Indeed, the tensions felt within and across each of the eras

described in this article arise, in part, because of the contrasting perspectives held by segments of the reading community.

Yet, as we stated, reading is invariably physiological, psychological, *and* sociological, suggesting the need for an integrated orientation. Reading invariably involves the physical, from the appropriation of visual stimuli through the neurological processing of those stimuli. Moreover, reading embraces the psychological in terms of the interpretation, storage, and retrieval of text; the formulation of goals and expression of interests; and much more. Finally, reading is sociological in that it involves intra- and interindividual communication through linguistic media that are themselves socioculturally influenced. Therefore, a meaningful integration of these orientations will require a broad, yet fine-grained view of reading that can incorporate information about brain structures and mental activities into an account of individual and social behavior.

• The cycle of changes observed in the history of reading research involves developmental maturation of the field. The movement from era to era in the past 50 years has represented an overall positive trend. Comparing the respective views of the learner and learning process of each era, we see that they have become progressively more sophisticated and also more inclusive. Each succeeding generation of researchers has investigated a wider range of phenomena, and often at a greater level of complexity. Similarly, the recurrence of themes has functioned iteratively, not merely reiteratively, in that the terms of the debate have been redefined and expanded as dictated by the prevailing perspective on learners and learning. Evidence that the field is not merely changing but maturing can be found in the broadening membership in the reading research community and the wide acceptance of multidisciplinary techniques and forms of inquiry.

• Without an overarching, developmental theory of reading, differential perspectives on research and practice may be judged as conflicting rather than complementary. Despite the promising activities of the last era, reading researchers still have not produced a well-accepted developmental theory that looks broadly at the nature of reading across the lifespan. The barriers to such a "grand" theory have been many, including the continuing focus on early reading, especially phonics and phonological awareness; difficulties in assessing deep and complex processes; the requirement of interdisciplinary cooperation; and more (Alexander, 2003; Ruddell, 2002).

In the absence of such a grand theory, it is highly likely that overly simplistic models or rival "camps" will continue to characterize the decades of reading. For example, across these eras, it has been commonplace to conceptualize the stages of reading under the banners of "learning to read" and "reading to learn" (Chall, 1995). However, more recent research makes it evident that these two hypothesized "stages" are, in fact, inextricably intertwined throughout reading development (Alexander, 2003). Even as readers begin to unravel the mys-

teries of language, they are constructing their knowledge base. Simultaneously, as readers pursue knowledge in academic domains, they are building a richer understanding of language.

A unifying theory of reading development would supersede such overly simplistic stage theories, just as it would potentially illustrate how the seemingly conflicting or rival views of reading we have described herein are complementary parts of a complex whole. Thus, it is not whether whole-word or phonics is "right" or "effective," but when, for whom, and for what the value of a whole-word or phonics-based approach can be substantiated. Perhaps, if current trends continue, the reading research community will achieve the developmental orientation that has eluded it for so long.

Concluding Thoughts

Our purpose in this historical analysis of the past 50 years of reading research is to provide readers a lens through which to view current theory and practice. Such a retrospective comes with no assurances. Historical analysis, after all, is an interpretative science. However, a glance backward at where reading research has been may serve to remind us that today's research and practice are a legacy with roots that reach into the past. Moreover, by paying our respects to that past, we may better understand the activities of the present and envision the paths for reading research that lie ahead.

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