NEW LITERACIES, NEW CONTEXTS? A THEORETICAL DEFINITION OF READING CONTEXT

By

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Dedicated to my wife, Liz,

unfailing in her patience, understanding, and belief in my success.

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CHAPTER I

A THEORY OF CONTEXT: RATIONALE AND PURPOSE

In this dissertation, I present research that leads to a new conceptualization of context as it applies to reading. The research presented is intended to construct a basic theoretical category of context that can be used by reading theorists and researchers to define a construct that has until now gone undertheorized in the literature. The question that evokes this reconceptualization is whether the general concepts of context that inform reading theory, research, and pedagogy are adequate for understanding the numerous linguistic, social, cultural, and material factors that are increasingly accepted as relevant to the meaning of text. In particular, the question I seek to answer is whether current concepts of context are useful for understanding the many types of reading that are part of contemporary lived literacies, and whether the predominant understandings of context effectively describe the complexity of reading in the technologically mediated, multimodal computer age. I contend that the current understanding of reading context is rooted in cognitive processing theories that ask questions and seek answers that were relevant to cognitive psychology during the period that predated current technologically mediated literacies. The purpose of my dissertation is to develop a new theoretical category and conceptualization of reading context under the current conditions, a new theoretical definition that is useful for understanding both print-based alphabetic reading and the rapidly changing "new" multimodal reading practices that are developing in the current technological landscape.

To this end I follow a formal method of analyzing reading context in order to develop a clear "conceptual category" of context that is useful for research and pedagogical practice. Such a conceptual (or theoretical) category is best understood as a descriptive explanation of the ways that the construct "reading context" has been defined and understood in the past and can currently be understood given the changes in technology and literate social practices. My argument is that these changes have led to a demonstrable change in how we conceive context under current historical conditions. Through analysis of

the affordances, insufficiencies, unanswered questions, and contradictions within the concept of context used in cognitively and socially oriented reading theories it becomes possible to construct anew theoretical category that defines context according to current conditions. Just as important, the method I use to construct a historical, relational, and mediated understanding of reading context lays the conceptual and methodological groundwork for an ongoing process of theory building. A further contribution of this research is to model a historically situated and dynamic approach to developing reading theory as an alternative to traditional static and universal theoretical concepts. Using historical–empirical research methodology (Engeström, 1987), I develop the theoretical category of reading context.

My dissertation begins with the premise that reading is situated in and inseparable from the cultural, material, and technological conditions within which it develops (see Leu, Kinzer, Coiro, & Cammack, 2004). This is particularly salient in the twenty-first century with the multiple types of reading that occur in the digital world of communication networks that span varying cultures and institutions. Reading involves a constellation of practices, beliefs, and technologies that derive their meaning and use from social participation. Changes in a culture's technologies and the social relations involved in their use lead to changes in social practices. The practice I have in view is reading. To this I add the premise that the various reading theories, and their conceptualizations of context, that arise over time can be understood as historical artifacts, descriptions of the reading beliefs, values, and practices that characterize particular periods and places in human history.[1]

The academic significance and social importance of my dissertation are, in fact, based on this concept. I conduct a historical–empirical analysis of concepts of reading context used in literacy theory and research in order to conceptualize and describe reading context in the current moment in history, as it now is. A historical understanding of reading theory (explained below) suggests that some of the theories that continue to exert influence in fact describe reading context as it once was and as it once was

[1] While the statement holds for theory in general, as I use the idea that reading theories represent particular moments in history, I want to be clear that the reading theories I will discuss in this dissertation are specific to western capitalist cultures. The question of whether there is single or universal "reading" during any historical period remains open to analysis.

conceptualized. Further, I propose that contemporary theories based on the controlled conditions of experimental design are too limited in scope to account for the intricacies of the complex phenomena of reading and reading context that real people practice in their daily lives. Finally, recent attempts to broaden the scope of factors that we consider relevant to reading context remain fragmented.

Therefore, one significance of this dissertation is that it fills a void by providing a conceptualization of reading context in its current state, a conceptualization that researchers and practitioners can test and build upon. It is important because it contributes to the work of theorizing reading as a contextual phenomenon embedded within people's lives and society at large.

A second significance of this work is its potential for informing teaching and learning. When it comes to context, current teaching practice is still focused on teaching people how to use surrounding letters, syntax (grammatical structure), and semantics (the meaning of the sentence or passage) to identify words and comprehend the text. The practice of using these "context cues" is informed by psycholinguistic theories of text, context, and meaning (Rumelhart, 1994). It is my contention that teaching approaches (and the reading practices they are intended to foster) informed by a broader range of disciplines and developed out of the current state of practice and theory can enable readers to take more control over the meaning-making process. This theory provides a new understanding of context that can allow readers to develop an active awareness of the many factors that play a part in contextualizing contemporary texts. It is an important contribution to a new theory of reading that empowers readers to take a conscious, informed stance toward the possible meanings they can make out of contemporary texts. If we believe that a complex matrix of factors comprise reading context in online communities communicating through multimodal texts (sound, pictures, symbols, traditional print, etc.), then a more complex understanding of context makes readers aware of the potential meanings a text has and enables readers to take more control over the meanings they produce.

My conceptualization of context connects reading to the reader's social and cultural history as well as the reader's immediate situation. It contributes to understanding the ways that reading is conceptualized and put to use in schools, work, politics, and economics, in macro social life and in micro

interpersonal relationships. I clarify the changes in context as it functions in online networked communications. Finally, it provides a theoretical understanding of context that can be used in both research and practice to design approaches to literacy education that empower people of the twenty-first century to be consciously aware of the potentials and problems of interacting with one another and the world through alphabetic and other semiotic representations.

A Brief Definition of Terms

In this dissertation, when referring to reading tools I mean two types of tools that human beings have developed to get things done (Vygotsky, 1978; Wartofsky, 1979). The first type of tool is the actual material objects or instruments that are used to read. Examples are the paper, the page and text, video screens, light pixels, etc., that are read. The second type of tool that mediates reading is the broad category "representations," which includes all forms of visual signs and symbols including written alphabetic text. By the term reading technologies, I refer to the material tools that are used along with the techniques for their use that have developed historically within a culture and are taught to succeeding generations of users. A contemporary example of reading technology is a computer, keyboard, mouse, and screen and the learned techniques for using them to read, but ink on paper equally qualifies as reading technology. These tools and technologies mediate reading. The two types of material and technological mediation I focus on are printed pages and multimodal, multimedia screens. Beyond the premise that reading is mediated by material tools and technologies, the question of how reading technology, media, and modalities affect reading context is the ultimate focus of my research.

The goal-directed use of reading technology is an activity (Leont'ev, 1978). As defined in cultural historical activity theory (CHAT), activities are goal-directed human actions that are mediated by tools and the procedures for their use that have been developed within a culture over time (Cole & Wertsch, 1996). These socially and culturally meaningful activities are often referred to as social practices or specifically, literacy practices in literacy theory and research (see Lewis, 2001; Street, 2003). People's

lived literacies are thus the daily practice of literacy that occurs in both formal institutions such as schools, religious organizations, and work, and in one's personal life, under varying conditions for various purposes, that fulfills multiple goals and purposes. I define formal analyses that attempt to conceptualize, describe, or model the complexity of the reading side of lived literacies as reading theories. In the paragraph above I introduced my premises that literacy and reading theories are particular to a culture during a period in its history, and that theoretical understandings change over time. I will now ground these complementary premises in theory.

Literacy as Dialectical and Historically Situated

In the tradition of historical materialism, and the cultural historical[2] schools of thought that developed out of the tradition, I present literacy and reading context as dialectical objects. In this line of theory, dialectical is a term that describes the inherent contradictions within all things (both tangible and conceptual "objects," including context) as well as the relationship between things. This line of theory describes all social practices and beliefs, including literacy and reading context, as objects[3] that are constituted and constantly changed through the dialectical process (Cole & Wertsch, 1996; Marx, 1846/1978). The dialectical constitution and reconstitution of literacy unfolds as the technologies and social relations in a culture change. The dialectical development of a culture's lived literacies can be described by a specific application of Marx's (1846/1978, 1859/1978) concept of the means and social relations of production to the production and use of written materials.

During each period of modern history, there are particular technologies for producing and reading written materials. The combination of the tools of production, say a printing press and the printing factory

[2] A resolution of the "terminological issue" regarding the use of sociocultural, cultural–historical, etc., is outside of the scope of this dissertation. I am using cultural historical as the term for the school of thought rooted in Vygotsky's views on culturally mediated psychological functioning and development. For an exploration of the topic see Wertsch, Del Rio, and Alvarez (1995).

[3] My use of the word "object" throughout this dissertation should be understood as referring to whatever phenomena, material "thing," or concept is in focus in the discussion.

required to run the press, and the materials used for production, such as paper and ink, is the society's means of production of literature (literature in its broadest sense). With the advent of each means of producing literature there arise norms and social relationships for the production, distribution, and use of literature that are particular to that means of production. At the same time, the means of production shape particular kinds of readers. Access to literacy and literature is neither universal nor uniform. Being a particular kind of reader is privileged in all historical periods. (Consider the medieval scholar who was expected to read and memorize long passages of text [Engeström, 1987].) If we understand reading as a social and physical activity, we begin to see that both the social and physical enactments of literacy are governed by norms characteristic of the time. Particular ways of enacting literacy are always privileged, along with particular types of readers. Those that prevail during one period are eventually unseated in favor of those of the new technological order.

In the course of human invention and activity, contradiction arises between the technological means of production and the social relationships involved in production. Eventually the contradictions become large enough that the tension reaches a "crisis of change." The old system of literary production is abolished by the establishment of a new configuration of technological and social forces of production (Marx, 1846/1978, 1859/1978). With a change in these foundational forces for the production of reading materials, the practices and ideologies that correspond to the old form of literary production are also transformed.

The advent of digital, networked production and interpretation of multimodal communication is a clear example of this dialectical transformation. The dialectical development of literacy is occurring through the society-wide addition of digital technologies to the preexisting set of literacy technologies. The age of networked communications technologies introduced a historically new means of production: both the new medium of the keyboard, mouse, screen, and transfer networks, and new relationships of production, distribution, and consumption through digital networks. For instance, it became possible for anyone with this generally available technology to produce and distribute written news and editorials. This stands in direct contradiction to the technologies and relations of production that prevailed prior to

digital technology. Previously, news and editorials were produced through the means and relations of production embodied in newspaper and televised news corporations. Alongside the traditional unidirectional relationship between author and reader, there is now a relational network within which dialogue, coproduction, links, and associations are increasingly prevalent. Email, wikis, Twitter, Facebook, multiplayer virtual environments, and a number of other platforms are interactive and relational. Networked computers and hand-held devises provide a historically new means of production and distribution accompanied by new relationships of distribution and consumption particular to the digital medium.

Simultaneous with the development of digital production and distribution and their attendant social relations, new literacy practices formed. This "internal relationship" is also dialectical, meaning that the digital and networked medium shapes the practices involving its use, while at the same time participants and practices shape the digital medium (Fairclough, 2001). A dialectical understanding of the current state of literacy tells us that the transformation of literary production is adding new products, practices, values, beliefs, etc., to the preexisting literacy repertoire. The entire process is increasing the contradictions and possibilities within the object "literacy."

This understanding is the rationale for my dissertation; reading context has transformed along with the changes in literary production and use. The line of theory from historical materialism to contemporary CHAT provides a theoretical understanding of the dialectical composition and recomposition of reading context as well as the dialectical relationship between reading context and the technological and social developments of many contemporary cultures. "Dialectical" describes the current state of the object "reading context," and it explains how and why reading context changes over time.

Reading Theory as Mediated and Situated

A theoretical grounding for my second premise, that reading theories are cultural artifacts situated within particular periods in cultural history, is found in the "theorization of theory" by critical sociologists

such as Max Horkheimer and Theodore Adorno. These critical theorists expand on the historical materialist understanding of knowledge, and here I specifically have in view theoretical understandings, as mediated by the dialectical relationship between the subject (the theorist) and the object of study (Marx, 1846/1978a). Horkheimer (1937/1972) explains, "the theoretical activity of men, like the practical, is not independent knowledge of a fixed object, but a product of ever-changing reality" (p. 28). As Adorno (1973) explains the dialectical and historical character of knowledge about an object,

> becoming aware of the constellation in which a thing stands is tantamount to deciphering the constellation which… it bears within it…. The history locked in the object can only be delivered by a knowledge mindful of the historic positional value of the object in its relation to other objects….Cognition of the object in its constellation is cognition of the process stored in the object. As a constellation, theoretical thought circles the concept it would like to unseal. (p. 163)

The general concepts that "encircle" a specific object reside within a culture's thought, language, texts, tools, and practices. They are produced over time as people work together to accomplish goals. These concepts stand in relation to both the object and each other. They also are positioned in relationship to other objects. Meaning is sought in this network of conceptual relationships that, metaphorically, surrounds an object (see Bakhtin, 1981).

While Adorno rejects knowledge that purports to grasp the characteristics that compose the unified essence of an object (the essential characteristics and nature of an object apart from any human knowledge), in the above quote he finds the unifying moment in the conceptualization of a dialectical object in 1) the convergence of conceptual relations and 2) an understanding of the historical character of those relationships. The historical materialist school of thought provides an understanding of reading theories as knowledge formations produced in the dialectical relationship between the theorist and the object "reading" in its actual manifestation in practice. Likewise, I present reading context and theories of reading context as situated, historical, and dynamic, and everchanging as literacy technologies and literacy practices change. To know objects such as reading and reading context is to know them as historically and dialectically composed social artifacts.

But, as Adorno suggests, the form that knowledge of reading context takes is not isolated to the dialectical relationship between the individual theorist and the object under study. It is a socially and historically situated formation as well, requiring use of the conceptual history and relationships contained in language. Using the dialogical theory of written and spoken communication associated with Mikhail Bakhtin and Valentin Voloshinov (or more generally, the Bakhtin Circle), I present reading theories as mediated by the socially generated sign system available to theorists in language and literacy. The dialogical theory of language understands all instances of language use to be inextricably connected to both the past use of the words and concepts as well as the future response and reconceptualization by the reader. Thus, all utterances in the now are part of and in dialogue with both past and future utterances; that is, a continuous dialogue.

Theories are constructed using the concepts available to the theorist in the dialogical language of the time. Voloshinov (1929/1973) explains that, "Every stage in the development of a society has its own special and restricted circle of items which alone have access to that society's attention which are endowed with evaluative accentuation by that attention. Only items within that circle will achieve sign formation and become objects in semiotic communication" (Chapter 2, para. 26). Therefore, the theorist must formulate and communicate a theory through purposeful usage of the words, rhetoric, and discourses that are recognized within a culture as signifying particular concepts and relationships. In brief, the potential to express meaning through reading theories resides in the social history of dialogue about reading as a historical object (Bakhtin, 1981; Voloshinov, 1929/1973). According to a dialogical understanding of theory, a theorist's knowledge construction and communication is inseparable from the practical, conceptual, and linguistic history of the culture(s) of which she or he is a member.

A closer look at Bakhtin's (1981) description of the art of writing adds depth to this understanding of the construction of a theory as a dialectical, dialogical, and historically contingent phenomenon. When an author formulates even a single word to give form to an object,

> along with the internal contradictions inside the object itself, the prose writer witnesses as well the unfolding social heteroglossia *surrounding* the object, the Tower-of-Babel mixing of

> languages that goes on around any object; the dialectics of the object are interwoven with the social dialogue surrounding it. (p. 278)

There is a dialectical object I am examining called reading context, and there is the history of dialogue about reading context, context theory and context effects theory. That social dialogue is described as "a dialogically agitated and tension filled environment of alien words, value judgments, and accents" (p. 276) that have already been spoken about the object. Bakhtin terms the many voices filling the conceptual environment around objects, "heteroglossia." Bakhtin's "dialogically oriented" language is the cultural tool with which a theorist must communicate a theoretical understanding of reading context.

Both Bakhtin and Voloshinov are clear that the dynamism and agency of communication lie in the speaker/author's nuanced evocation of particular meaning potentials that lie within the heteroglossia (Bakhtin, 1981) or multiple "accents" (Voloshinov, 1929/1973) of which each word is composed. The dialogical development of reading context theory occurs as theorists respond to the changes in literacy practices using new significations and ideas available in both the general social dialogue and in the specialized discourse used among theorists and practitioners. New theoretical conceptualizations of reading context are thus a part of a network of changing cultural practices, cultural ways of knowing, and cultural ways of expressing.

It is important to keep one further point in mind as we examine the historical development of reading context theory and its current conditions. The dialogical orientation of language is not neutral. The culturally and historically situated character of sign formation and meaning production leads to differences in language and knowledge between cultures, and between the social groups within a culture (races, genders, sexual orientations, religions, etc). In Marxist, class-oriented language, Voloshinov (1929/1973) explains,

> Class does not coincide with the sign community, i.e., with only the community which is the totality of users of the same set of signs for ideological communication. Thus various different classes will use one and the same language. As a result, differently oriented accents intersect in every ideological sign. Sign becomes an arena of class struggle. (Chapter 2, para. 39)

The many accents that accompany a sign span the spectrum from closely related to blatantly contradictory. It is the author's work to establish his or her intended image of the sign by evoking the

accents oriented toward that interpretation. In a society where the power to authorize is unevenly distributed among groups, this struggle over the recognition and validation of the multiple semiotic possibilities in the signs of which written language is composed makes literacy theory inherently political. As I will demonstrate in this paper, reading theories display this struggle to authorize a particular take on the meaning and import of context in reading.

So the form that theoretical knowledge of reading context takes is constituted by both the dialectical relationship between the theorist and the object under study (reading context in this discussion) and by the theorist's use of inherently political, social, and dialogical language. Figure1.1 below is a preliminary model of this understanding of reading context theory.

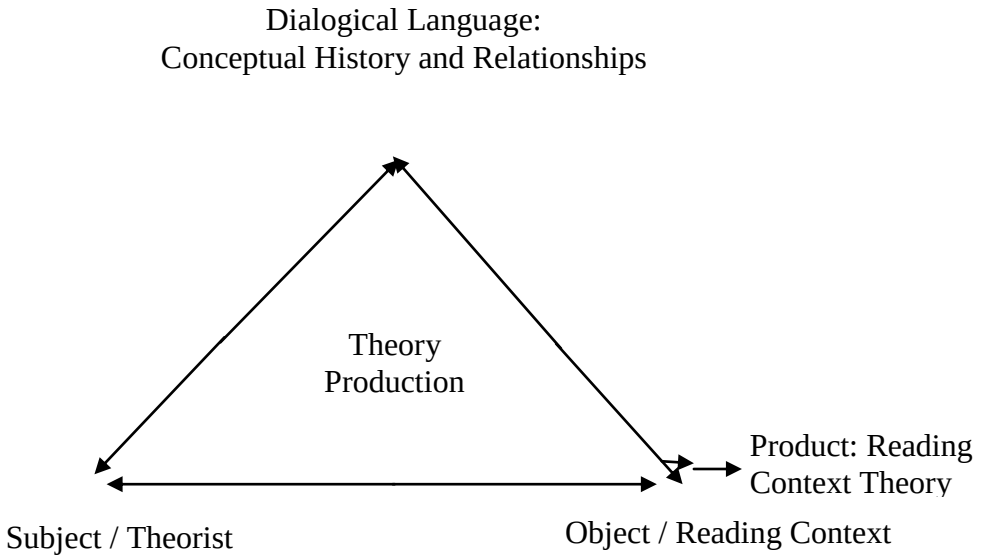

Figure 1.1. The production of reading context theory

This model is a discipline-specific refinement of the top triangle in the model of human activity developed by Engeström (1987). That model is provided in Figure 1.2.

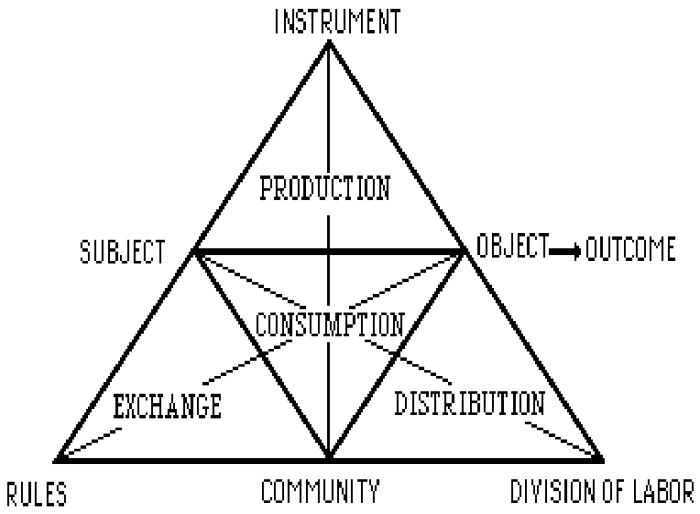

Figure 1.2. Engeström's model of human activity

Beginning with Vygotsky (1930/1978, 1981), cultural–historical theory has recognized human thought and actions as mediated by culturally formed tools (Engeström's instruments above). Vygotsky (1981) termed the sign systems that mediate thought, "psychological tools." Language and written sign systems, the primary psychological tools, have been refined in my model by the addition of the dialogical orientation of discourse (Bakhtin, 1981) to the dialectics of discourse (Fairclough, 2001). The language in view here is a specialized and situated tool that is particular to the activity of reading context theory production. I agree with Minnick, Stone, and Forman (1993) that "it is not 'language' understood in the generalized or abstract semiotic system that mediates activity, interaction, and thought, but language as a multitude of distinct speech genres and semiotic devices that are tightly linked with particular social institutions and with particular social practices" (p. 6). The statement enhances the idea that the language that mediates the production of theory is charged through with imagery and concepts active within the historical and current dialogue.

Referring to Engeström's model of activity, the instruments, or psychological tools, used in the production of theory are dialogically oriented text and language that have developed within the activities of reading research and theory, along with the discourses of related academic fields. The subject in this model is the theorist and the object is reading context. The outcome of the activity is reading context

theory. Each corner of the triangle is dialectically composed, and each of the corners is dialectically related to the others. The subject, object, and tools are an irreducible unit in the production of theory. The entire activity structure, including communication, distribution, and consumption of theory could be modeled in this way, but I am maintaining a narrow focus to emphasize the mediated production of theory.

I also want to emphasize that there are ancillary activities that contribute to the ultimate goal of producing a theory. The production of data for analysis involves a subject or subjects (researchers) working together on the object literacy using technological tools.

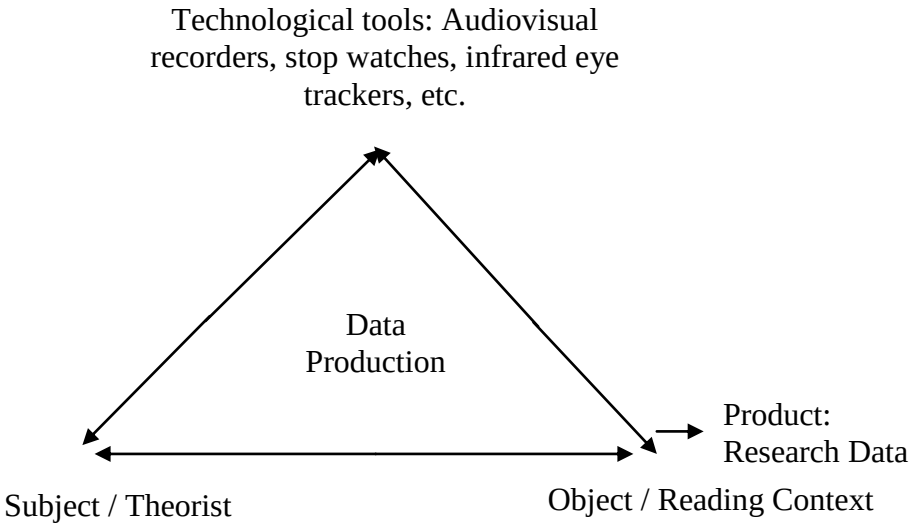

Figure 1.3. The production of research data

In this representation, technological tools and the methodologies for their use in research mediate the production of data (Vygotsky, 1981c). Of particular note is the understanding that data are mediated knowledge constructs rather than essential characteristics of the object that have been "discovered" and captured by the researcher (Smagorinsky, 1995).

After this brief theoretical grounding, I am now able to complete my introduction to the cultural and historical understanding of reading context and reading context theory that I pursue in this dissertation. I can now expand on earlier statements to say, as culture and cultural practices such as

reading change over time, new ways to conceive of reading and its constituents develop. This dissertation focuses on new ways to conceive of reading context, a vital constituent of reading in the vast majority of reading theories. My argument is that new conceptual understandings of context are entering the social dialogue as reading technologies change, and are changed by, reading practice. These concepts increase the possibilities, create new constraints, and increase the contradictions within our current conceptualizations of reading context. The dialectical process continues as contradictions accumulate within the practices, relationships, and conceptualizations of reading context. These contradictions build to a point of heightened tension that forces reconfiguration of both practice and concepts. This is the situation we see in current reading theories, and the rationale behind this theoretical dissertation. The new technologies and practices of reading are accompanied by reconceptualizations of reading and the many sub-categories of which it is comprised. We are in the midst of a transformation that, according to historical materialist theory, will eventually resolve into a historically new formation, a period of relatively stable beliefs, relationships, and practices.

My characterization of reading and reading context as sets of practices, concepts, and beliefs that prevail within specific social and cultural groups during particular periods in their development, reconceptualizes the objects "reading" and "context." In conducting this theoretical research I am participating in the transition from understanding reading context as knowledge and cognitive processes that reside within the mind of an individual, knowledge and processes that are believed to remain more or less constant across cultures that use alphabetic text, to an understanding of reading context as a historically developing and changing theoretical category. A situated and mediated view of reading context is an alternative to many current "scientific" views of reading that conceptualize reading as comprised of fixed objects with essential characteristics that are not dependent on specific times, spaces, tools, and societies. As Prior (1998) explains,

> Shifting from views that privilege disembodied knowledge fixed in abstract centralized systems to views that privilege embodied action dispersed across places, times, and persons, sociohistoric theory challenges a number of deeply entrenched categories, particularly the dichotomy of the individual and society. (pp. 21–22)

My goal here is to reconceptualize only one of the agreed upon constituents of reading, context. I want to be clear, however, that the question is not "which theory of reading context is correct" in the sense of defining and capturing the universal essence of context. The idea I am pursuing, as I stated in a slightly different way above, is "what concepts of reading context circulating within the current social dialogue and practice contribute to our understanding of reading as it is practiced at this historical period, and which conceptualizations do the work we need for literacy research and praxis in the twenty-first century?" I will expand on the advantages of this cultural-historical understanding of reading context under A Formal Method of Theory Development in Chapter 2 below.

In drawing my introduction to a close, however, I want to be quite specific that my answer to that question is that what reading and reading context have been, along with the cognitive conceptualizations and theories used to describe it, is changing. The practical transformation of reading over the past three decades is accompanied by new social, historical, and political conceptualizations of literacy and the role of context in reading. This process can be understood as the dialectical development of literacy and literacy theory arising from the contradictions within the old literacy technologies, social relations, practices, and beliefs and their accompanying cognitive reading theories. I argue that 1) the increasing diversity of literacy technologies, mediums, and practices and 2) the increasing momentum of socially oriented explanations of current literacy practice demonstrate that contradictions within both theory and practice are reaching a level great enough to allow us to conceptualize literacy in new ways. My goal is to begin that process by developing a new theoretical definition of one significant category that is central to our understandings and practice of reading: reading context.

Hypothesis

The hypothesis I pursue throughout this research is that there is in fact a practical transformation of reading well underway, and that a reconceptualization of our definition of reading is both possible and necessary in the current phase of development. The goal of this dissertation is to theorize, or

conceptualize, one theoretical category that those in the field of literacy use to understand, examine, and teach this new reading, the category "reading context." To that end I conduct a historical–empirical analysis (Engeström, 1987) of several theories describing context and reading context. The goal of this dissertation is to develop the theoretical category "reading context" as a concept that is adequate for understanding the new forms of reading emerging out of the old, to define reading context as it manifests under contemporary cultural and technological conditions. My theory of reading context both incorporates and transcends current cognitive and social reading theories and fulfills the need for a cohesive and comprehensive conceptualization of context as it relates to reading. My analysis results in a conceptualization of reading context as a network of material and conceptual objects or constituents that form a semantic whole, a whole that exceeds the sum of its constituent parts and gives meaning to each of its constituents. I present this theoretical conceptualization of reading context as a category upon which theorists, researchers, and teachers can build specific theories and pedagogical praxis.

CHAPTER II

FORMAL METHOD OF THEORY DEVELOPMENT

Through my review of numerous social, linguistic, writing, and reading theories I have become convinced that the formulation of a theory requires a clear and defensible method of theory construction. The aspect of that defensibility that I will discuss first is that the method must be based upon clearly explicated philosophical and theoretical assumptions. That is, the theorist is responsible for demonstrating the relationship between her or his epistemological presuppositions and the methodology for data collection and analyses that is employed.

In theoretical research there are two immediately relevant reasons for this requirement. First, all methodology is based on an epistemology, or philosophical assumptions regarding the nature and production of knowledge. Second, to a large extent the method and its presuppositions determine the types of results attained and the theoretical conclusions that are drawn. Thus, a theorist can avoid presenting his or her results as essential, universal truths by situating them within a particular epistemological paradigm.

For example, those branches of the social sciences that are based on the epistemology of logical positivism present careful use of particular research designs as the means of arriving at objective truth. There is an emphasis on demonstrating that an operational definition accurately captures some measurable characteristics of the theoretical construct being studied. Measurements of valid operationalizations are believed to lead to legitimate conclusions regarding the theoretical construct. The research is then considered to have contributed to the objective "scientific" description of the measurable and observable manifestation of a fixed object. Since such a relationship between methodology and results is founded upon a positivist epistemology, it would be illogical to use the method described above if the epistemological position of the research was dialectical, and the objects under study were understood as socially mediated and dialectically composed and inherently contradictory constructs.

Therefore, the construction of the theoretical category of reading context that I pursue in this dissertation requires a clear explication of my basic epistemological position and a methodology that corresponds to that epistemology. As described in the following section, I will use an established, historically and sociologically oriented method of theory development that presupposes knowledge and theory as dialectical, dialogical, and culturally mediated phenomena.

The third reason for explicating the method–theory relationship grows out of the first two. It is in keeping with the view of theory presented in my introduction for the author to present the theory as a contribution to the ongoing dialectical and dialogical construction of knowledge. If readers accept the epistemological premise that theory is the mediated formation of knowledge, the theoretical categories that I present lay the conceptual and methodological groundwork for an ongoing process of theory building. The greater the transparency of the epistemology–methodology–results relationship, the more open the resulting theory is to criticism, dialogue, modification, and change. My analysis of categories becomes a praxis by exemplifying its own philosophical and theoretical principles and presenting theoretical categories that are open to refinement, modification, and change as the possibilities within practice and theoretical discourse change. It is my hope that the transparency of my epistemology, methodology, and results is an invitation to dialogue and negotiation. As Engeström (1987) asserts, it is this invitation to engage with a theory, from its philosophical underpinnings to its insufficiencies, contradictions, and unanswered questions that makes the work useful to the development of thinking in its field.

For these reasons I chose to use the method for theory construction detailed by Yrjö Engeström (1987) in *Learning by Expanding: An Activity–Theoretical Approach to Developmental Research*. Engeström based his method of theoretical research on critical psychologist Klaus Holzkamp's historical materialist analysis of theory and theory development. Holzkamp's 'historical-empirical' methodology derives from classical Marxist theory and its application to human thought and activity in cultural historical theory. Holzkamp is recognized as having drawn particularly from Leont'ev's historical method of analysis (Held, 2006; Van IJzendoorn & Van der Veer, 1983). Working within this theoretical

perspective, Holzkamp's methodology has the advantage of grounding the development of theoretical concepts in material and social history. It is based on the epistemological premise that the basic categories, or concepts, within the social sciences are materially and culturally mediated. This makes them historical. Holzkamp's methodology presents theory as a product of dialectical and historical development that incorporates past theoretical conceptualizations into qualitatively different formations (Teo, 2005).

In *Foundation of Psychology*, Holzkamp (as cited in Engeström, 1987) describes two types of theoretical research: 1) research intended to construct the basic categories with which a school of thought defines its object, and 2) research intended to formulate a specific theory. Holzkamp presents historical–empirical analysis as a methodology for constructing the former: conceptual categories and definitions that are scientifically and rationally defensible.

> Whereas the construction of categories as basic theoretical concepts may be regarded from a bourgeois point of view mainly as a question of arbitrary definitions and conceptual fixations, the *'historical' category analysis* we are proposing is a procedure based on *empirical* material…. The methodological difference between research on the level of specific theories and research on the level of analysis of categories is thus not that the former is 'empirical' but the latter 'speculative', merely 'deductive', or the like. To the contrary, *both research types are empirical*, but the material collected and used is in the first case of an *'actual*-empirical' and in the second case of an *'historical*-empirical' nature. (as cited in Engeström, 1987, Chapter 1,Theoretical Research as Empirical Research section, para. 4)

Engeström describes two types of historical–empirical data used in theoretical research that is intended to construct basic theoretical categories: theory-historical data and object-historical data. Theory-historical data include the history of theoretical conceptualizations and specific theories regarding the object of analysis. Object-historical data consist of research findings that describe the historic development of the object itself. Engeström provides an easily accessible explanation of these data types as the "propositions and findings of previous analyses, or more generally, of previous representations of the object" (Chapter 1, Theoretical Research as Empirical Research section, para. 5). The purpose of including object-historical data is to be able to analyze the development of the concept of reading context in Western society over time, and to demonstrate its relationship to the simultaneous development of theoretical categories. Together theory-historical and object-historical materials provide the data for the formation of

new theoretical categories through historical-empirical analysis. The majority of my work is an examination of theories of context and reading context intended to develop my main theoretical category. I conduct my own object-historical analysis as part of my category development by chronicling the theory and research that has led to contemporary understandings of the object reading context. This dissertation is theoretical research on the level of category analysis and development. The goal of my analysis is to construct a theoretical category (a conceptual definition) of reading context as it manifests under contemporary cultural and technological conditions. The production of a broad conceptual definition undertaken in this dissertation is referred to as category development.

The third type of data mentioned by Holzkamp in the quote above is actual-empirical data. Actual-empirical data comes into play in two ways in this dissertation. First, the theory-historical data (i.e. theories) presented are themselves often based on empirical evidence. In order to contextualize various theoretical developments I refer to the empirical basis for the claims made. At other points, however, the empirical evidence underlying theoretical concepts, models, and relationships must remain implicit within the theorist's work, since a thorough grounding of all theory in its original empirical data is beyond the scope of this dissertation. Second, while Holzkamp and Engeström place the gathering and analysis of actual-empirical data within research aimed at developing specific theories, I use an empirical study, "Listening to Erica Read: Perceptions and Analyses from Six Perspectives" (Goodman & Anders, 1999) as data that both exemplifies and tests the category being developed. Finally, in terms of the implications of this dissertation and providing conclusions and direction for "what needs to be done next?", actual-historical data will play a central role in developing and modifying the theoretical category reading context as it is tested and applied in actual empirical research that necessarily comes after this category development.

Data Selection

Both Holzkamp and Engeström explain that the historical-empirical method maintains scientific and theoretical credibility by relying on a systematic and justified data selection process that avoids either arbitrary speculation or the selective use of that data which illustrates the theorist's preconceived conclusions. As in other types of research, it is necessary that I articulate the degree to which this method leads to representative and comprehensive data selection. This credible selection of data is the second aspect of demonstrating a clear and theoretically defensible method that I began under A Formal Method of Theory Development above.

Following my introduction and methods chapters, Chapters 3, 4, and 5 each proceed through similar steps of concept development. In each chapter I provide the criteria for selecting the theory-historical data that is brought into the analysis. In Chapter 3 I introduce three theories that represent the scope of current understanding of reading context according to the dominant paradigm in reading theory. I identify the dominant paradigm within literacy studies as cognitive theories of reading and reading context. In Chapter 4 I select classical theories of human activity and context that allow me to both problematize the cognitive understandings of reading context and to develop an argument for an alternative theoretical conceptualization of context as it relates to human activities like reading. In Chapter 5 I conclude with an analysis of the contribution to current thinking on reading context by the social, cultural, and political theories of literacy that comprise New Literacy Studies (NLS; Gee, 2000b; Street, 2003). A representative and manageable set of works within New Literacy Studies is used to develop the sub-categories of reading context that correspond to the alternate conceptualization of context developed in Chapter 4. This school of thought is selected because its theorization of reading and context correspond to the understanding of contextual activity developed in Chapter 4.

Before proceeding to a detailed explanation of my data selection process, I provide an introduction to the rationale and criteria I use to select the general theoretical schools of thought, and particular theories within those schools.

1) In Chapter 3 I identify cognitive, print-based theories of reading as the dominant paradigm in reading theory. Starting an analysis of categories with the currently dominant paradigm comes directly from Holzkamp's (and critical psychology's) methodology of beginning an analysis of categories with the pre-existing concepts that prevail within a field (Tolman, 1989).
    a) The cognitive reading theories presented by Rumelhart (1994) and Stanovich (1980, 1984) are chosen because they present clear and well-recognized conceptualizations of reading and reading context. I justify my identification of cognitive reading theories as the prevailing, or dominant, paradigm below.
    b) Louise Rosenblatt's (1988, 1994a, 1994b) *Transactional Theory of Reading and Writing* is brought into the discussion because Rosenblatt's theory stems from the cognitive tradition but presents an alternative perspective within the general school of thought. The comparisons and contrasts between Rosenblatt's transactional theory and Rumelhart's and Stanovich's interactive theories serve to delineate the boundaries of the general cognitive understanding of reading context.
2) In Chapter 4, classical theories are selected because they address the problems identified in the previous round of analysis. CHAT is drawn in the discussion because it addresses the problems within the dominant cognitive perspective that are identified at the end of Chapter 3: a) the problematic unit of analysis used in cognitive interaction theories to explain context, and b) the problematic understanding of how meaning is formed from text within the reader–text relationship (the epistemological problem). Contextualism (the line of pragmatism developed and defined by John Dewey, Arthur Bentley, and Stephen Pepper) is then drawn into the discussion because it provides a methodology and terminology for understanding the micro-level activity-context of reading event that CHAT is ill-equipped to describe. In both lineages I used works that are recognized and frequently referenced in literacy theory and research in order to expose the living dialogic threads (Bakhtin, 1981) that contribute to the meaning of reading context.

3) In Chapter 5, the contemporary field of New Literacy Studies is drawn into my category construction because this school of thought understands reading as a contextual phenomenon (a criterion established in Chapter 4) and provides the detailed analysis of the sub-categories of reading context that the classic theories lack. I draw from theorists and researchers whose work describes the major concepts in a particularly clear fashion and in terms that epitomize the current discussion and discourse.

All together these theories move my analysis toward the goal of constructing a theoretical definition of reading context as it manifests under contemporary cultural and technological conditions. I now proceed to a detailed description of my data selection process.

Cognitive Theories of Literacy as the Dominant Paradigm

In order to begin the process of category construction I open

> with an identification and characterization of the most advanced state of theorizing within the *currently dominant paradigm*. With 'the most advanced', I refer to theorizing which either crystallizes the dominant conception in a very clear fashion *or*, in its aspiration to go further, tendentially exceeds the conceptual and methodological boundaries of the dominant paradigm and thus makes those boundaries or limits visible. (Engeström, 1987, Chapter 1, How to Select the Data section, para. 11)

I identify the "currently dominant paradigm" as the range of reading theories founded upon the premises and methods of cognitive psychology. I identify cognitive theories of reading printed text as the dominant paradigm for three reasons. First, though there are many dissenting voices, reading theories and research with a cognitive psychological orientation consistently received primary attention in theoretical overviews throughout the years between 1970 and 2000. A prime example is the serial editions of *Theoretical Models and Processes of Reading*. It was not until the fifth edition (Ruddell & Unrau, 2004) that articles that theorized reading from a social and cultural orientation emerged as a significant proportion of the review. Also, contemporary theoretical works continue to debate the adequacy of cognitive literacy theory and its compatibility with social practice perspectives on literacy (see Purcell-Gates, Jacobson, & Degener, 2004)

Second, cognitive reading theories represent a long standing and well recognized epistemological and research paradigm. Whether it is called the "Cartesian conception of mind" and epistemology (Bakhurst, 2005), the "'pre-Capernican' perspective" (Goodman, 1994), or "Descartes' dualistic view of the self as distinct from nature" (Rosenblatt, 1994b), cognitive literacy theory works from a dualistic, immediate (or non-mediated) epistemological perspective and its accompanying methodologies. Cognitive literacy theory represents the latest iteration of the epistemological and methodological paradigm that defined the concepts with which the field of reading theory continues to describe many of its areas of interest and research.

My third reason for identifying cognitive theories of reading as the currently dominant paradigm stems from the epistemological perspective above, but has practical significance that exceeds research agendas. A compelling reason for identifying cognitive print reading theories as dominant is the political hegemony of cognitive understandings of literacy over what counts as knowledge, research, and practice. This continued dominance can be seen in the series of events that created national legislation out of a reading instruction report commissioned by Congress: the National Reading Panel (2000) "Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and its Implications for Reading Instruction." The report's authors sought to synthesize reading research into a knowledge base identifying the key components of reading and instructional approaches that have been "scientifically" proven effective. Though there was an extensive and diverse body of literature available to the Panel, they made an a priori decision to "undertake comprehensive, formal, evidence–based analyses of the **experimental and quasi-experimental research literature**" (p. 1, emphasis added). This decision defined evidence-based scientifically reliable research that should guide instruction as research conducted using the premises and methodologies of cognitive science, or in the words of the report, "those normally used in research studies of the efficacy of interventions in psychological and medical research" (p. 5). Given the methodology of the data selection it was not surprising when the conclusions of the Panel report fell strongly in line with the skills-oriented developmental reading models that cognitively oriented researchers define under laboratory conditions. The results are tied to the methods.

The PanelrReport was incorporated into the Reading First Initiative and became national policy with the No Child Left Behind Act of 2002. The cognitive psychological model of reading and learning to read is indisputably dominant when we consider the paradigm's power to affect teaching policy and practice. It is officially authorized by current federal education policy and funding.

A postscript to the argument above is needed to explain my use of the term "print-based" in reference to cognitive reading theory. The cognitive theories of literacy I analyze are theories of how people read alphabetic print. Though there are those who use reading as a verb for interpreting many different sign systems up to and including the entire world around us (see Freire, 1993), cognitive reading theories describe the process of reading alphabetic print exclusively.

Selecting Cognitive Literacy Theory for Use as Data

Having identified cognitive print-based reading theories as the dominant paradigm from which I need to draw my first set of theory-historical data, it was necessary to choose works that represent "the most advanced state of theorizing" within that paradigm. I began by conducting a cross referencing of works that summarize, compare, or juxtapose themselves to recognized reading theories. First, the five editions of *Theoretical Models and Processes of Reading* published between 1970 and 2004 provide one level of screening. Those theories that are retained or appear in updated form from one edition to another are taken as representative of particular theoretical orientations. Second, in introducing a new theory, authors often reference pre-existing theories that have held sway, influential theories that the author seeks to supersede with a new theoretical description of reading, writing, or both. For example, during the construction of his own information processing model in *Toward an Interactive Model of Reading,* Rumelhart (1994/1976) reviews the information processing theories of Gough (1972) and LaBerge and Samuels (1974). These information processing reading models are also featured repeatedly in *Theoretical Models and Processes*. Gough's and LaBerge and Samuels' theories were therefore candidates for inclusion if further screening showed that they continue to represent the advanced thinking in their branch of cognitive reading theory. Third, cross referencing theoretical papers aimed at synthesizing and

extending literacy theory, works such as McCormick's (1988) "Theories of Reading in Dialogue: An Interdisciplinary Study" and Purcell-Gates, Jacobson, and Degener's (2004), "Print Literacy Development: Uniting Cognitive and Social Practice Theories" provide a useful list of reading theories that are consistently seen as representative of the paradigms under consideration. The theories referenced in this third group were compared to those in the first and second groups. Using this approach I determined a finite and manageable set of theories that represent cognitive literacy. As I will explain, the three theories I use to define the boundaries of the cognitive paradigm are representative rather than exhaustive of the entire scope of cognitive reading theory.

Having determined the recognized and representative works within the dominant paradigm, I still must provide a method and justification for my choices of cognitive reading theories that meet Engeström's qualification of "the most advanced state of theorizing" on my category. My analysis of cognitive print reading theories is neither a general historical overview nor a complete review of every recognized perspective on print-based reading. The theories I examine were chosen on the basis of their clear exemplification of the "most advanced" cognitive understanding of the definition and role of context in the reading process.

Here again I relied on cross-referencing the types of sources identified above, (compilations, specific theories, and comparisons/syntheses) with three additional qualifications. First, I eliminated theories that are repeatedly included in *Theoretical Models and Processes of Reading* but are generally regarded as flawed and superseded. For example Hoover and Gough (1990) cite the evidence put forth by Rumelhart (1994/1977) and Stanovich (1980) that early linear processing models that represented "reading [as] a serial process, with decoding preceding comprehension" (p. 130) were inadequate representations of the reading process and reading context. Hoover and Gough (1990) confirm that "the so-called 'bottom-up' model of the reading process [is] a hypothesis that has been shown to be inadequate… word recognition can be dramatically influenced by linguistic context" (p. 130). The same conclusion is drawn by McCormick (1988) in his review of these early models. The early linear

information processing models by Gough et al. (1996) and LaBerge and Samuels were therefore eliminated.

Second, I looked for current theories that represent the most detailed and relevant contributions to established lines of thinking on reading context. These theories have stood the test of time and remained in the discussion over the span of the cognitive paradigm's dominance. Both Rumelhart's (1994/1977) and Stanovich's (1980) models of reading are examples of definitive theorizations of the effects of context in the reading process from the cognitive interactive perspective. Rosenblatt's (1988, 1994) transactional theory of writing and reading has also remained in the discussion as a definitive example of transactional reading models.

Finally, I identified Rosenblatt's (1988, 1994) transactional theory of reading as a theoretical perspective that derives from but "exceeds the conceptual and methodological boundaries of the dominant paradigm" (Engeström, 1987, How to Select the Data, para. 7). Rosenblatt's transactional theory exceeds basic cognitive reading theories by taking into account the social and cultural effects on the reader's construction of understanding from text. She also uses a transactional epistemology that avoids some of the problems of text meaning in interactive theories. Together, these two interactive theories and one transactional reading theory allow me to represent the basic conceptual boundaries within cognitive understandings reading context.

Selecting Classical Theories for Use as Data

The second step of theory-historical data selection outlined by Engeström is to "counter and problematize the propositions of [cognitive literacy theorists by]… examin[ing] and employ[ing] certain classical theories which put the problem of the chapter in question into a more penetrating light" (para. 12). Engeström explains, "the task of these sources is to enforce a deepening of the analysis so as to identify the long lineages or historical 'red threads' of category formation" (para. 12). This is also in keeping with the Bakhtin's theory of the historical and dialogical relationship between words and their objects and the dialogical orientation of discourse. To select the classical theoretical sources that I draw

into the discussion I turn to those theoretical schools that understand context and contextual activities in ways that: 1) delineate and problematize the borders and limitations of cognitive concepts of reading context and 2) put forth alternative concepts that avoid the problems with the cognitive perspective that are identified at the end of Chapter 3.

The first classical lineage I bring into the dialogue is the school of cultural historical psychology associated with Lev Vygotsky and Aleksei N. Leont'ev. This line of theory extends to cultural historical activity theory, a contextual theory of activities (like reading) most clearly articulated by Yrjö Engeström. This school of thought allows me to examine the limitations of definitions of literacy within cognitive theory by introducing the concept of literacy as tool-mediated repertoires of socially, culturally, materially, and historically situated acts and activities. The paradigm also provides perspective on literacies in the plural, differing between communities of practice according to their technology and the social structures governing production, exchange, and consumption. This round of category development ends by highlighting the problem that CHAT is able to describe the macro-context of an activity but inadequate for examining the specific objects that comprise the micro-context of a specific instance of reading.

The second classical line of theory I bring to bear on the questions arising from my analysis of CHAT is the line of pragmatic philosophy that takes form in the transactional epistemology of John Dewey and Arthur Bentley and is formalized in Stephen Pepper's (1942) description of contextualism. Dewey and Bentley (1973/1949) provide an understanding of the transactional nature of an event and its context that allows me to identify both macro and micro event–context relationships in ways that CHAT does not. Contextualism provides a detailed theorization of Dewey and Bentley's contextually whole event. Pepper (1942) provides a vocabulary of concepts that allows me to explain the transactional relationships of which context is comprised.

Selecting Contemporary Theories for Use as Data

The third set of theory-historical data I introduce into in my analysis of categories (after cognitive and classical theories) consists of contemporary socially and culturally oriented theories of literacy. This data set is used to develop the sub-categories, or what I will call the constituents, of reading context. Chapter 4 ends with a definitional understanding of reading as a mediated contextual event where designations of text and context are a matter of functional relationship within a contextually whole reading event. To continue my definition of the specific constituents of reading context within the reading event I turn to reading theories that fulfill certain criteria developed in Chapter 4. Specifically, the reading social and cultural theories considered in Chapter 5 must: 1) understand reading and context as an irreducibly whole contextual event, 2) understand reading events as mediated by language and material artifacts, 3) take a relational view of the transaction of meaning, text, and context. The theory of reading developed within the theoretical trend of New Literacy Studies fulfills those criteria.

Because the social and cultural theories of reading that comprise the school of New Literacy Studies start from the premise that literacy can only be understood by considering reading practice in context, they are uniquely suited for use in defining the contextual character of reading and reading events. I begin by exploring foundational conceptualizations of the social, cultural, and contextual character of reading presented by Scribner and Cole (1981) and Street (1994, 2003). I expand using several other theorists and researchers who build on their concepts. I selected Lewis's (2001) analysis of reading in a classroom for use in developing the constituents of context because her analysis is explicitly grounded in the NLS understanding of reading. Lewis's research provides an extensive analysis of actual empirical data using the social and cultural reading theories of the New Literacy Studies. It is within that analysis that the constituents of the contextual reading event take shape. Specification of the constituent categories of context must take place at the level of a specific literacy event.

After an analysis of actual-empirical data, I turn my attention to explaining the effects of new communication technologies on reading and reading context. Throughout the remainder of the chapter I draw on contemporary theories of reading that understand reading as social practice-in-context that is

mediated by networked communication technologies. I am able to eliminate a number of theoretical perspectives that examine computer-mediated context because they fail to fulfill those essential criteria. I am left with work in the area of New Literacies Studies, a line of theory and research that draws upon but is distinct from New Literacy Studies (Coiro, Knobel, Lankshear, & Leu, 2008). I justify the qualifications of these works as I bring them into the discussion. They are the final set of theory-historical works that I select.

As a final note on my selection of theory-historical data, I stress that theory-historical data are presented dialogically. That is, I do not select particular theories in order to establish a right/wrong dichotomy regarding which theory of context and reading context is true and which false. Each theorist's contributions are drawn into discussion to provide an understanding of the dimensions of the historical dialogue and the variety of conceptual possibilities. From this it follows that I do not consider the classical and contemporary alternatives to the dominant cognitive theories to be problem free or a fully formed "solution" to the problems and contradictions of the cognitive paradigm. I use them to further my analyses and arguments, but in my analysis toward the end of each section I clearly acknowledge points at which I believe they too are incomplete, problematic, or contradictory. They contain building blocks for my own theoretical concepts. I use numerous, sometimes lengthy, direct quotations to situate ideas in the ongoing dialogue and allow the reader to assess my appropriation of the concepts. I also employ this approach in order to invite the reader to participate in and extend the theoretical dialogue. This is facilitated by providing my reader with key passages in the authors' own words.

Also, as I hope I have made clear above, the theory-historical data used to problematize the cognitive perspective and to construct my own categories are in no way comprehensive. I do not attempt to represent every voice and theoretical position in the field of literacy. The classical and contemporary theories I employ are selected based on their epistemological and sociological orientation. Each is chosen according to its development of key concepts under consideration: the scope of necessary considerations (the problem of the unit of analysis), the production of meaning of/from text (the epistemological problem), or the necessity for describing the full scope of constituents that comprise the contextually

whole reading event. The voices introduced represent dialogical threads that further develop these concepts and provide an alternative conceptualization that is useful in developing my own categories.

Selection of Actual Empirical Data

The final type of data that I present is actual-empirical studies. Having developed my categories I selected a specific literacy study that analyzes reading from both cognitive and NLS social and cultural perspectives. I analyze each of the reading perspectives presented in the paper using my developing category of reading context. Specifically, in Chapter 5 I apply my category to the paper by Goodman and Anders (1999), "Listening to Erica read: Perceptions and analyses from six perspectives." In the paper, six researchers with different theoretical orientations analyzed data on the same reading event. Using the category of reading context that I have developed, I analyze the concepts of context that underlie the various perspectives represented in the paper. My intention is to clarify my category by bringing it to bear on specific data that is already part of an analytical dialogue. As Engeström points out, the results of my analysis of this actual-empirical study also allows me to further clarify and develop my main and sub-categories.

Data Analysis: Formation of Categories

General outline

In order to construct the theoretical category of reading context as it can be understood within the current historical configuration, I engage in four rounds of analysis. Each round follows the same process of category development. I begin with an examination of the concept of context according to a particular school of thought. As I proceed I identify problems with the construct in view. My analysis of that conceptualization of context ends in a set of unanswered questions that result from the limitations and contradictions of the view under consideration. For the next round of analysis I examine how those questions and problems have been answered and avoided within another theoretical tradition. Within this

analysis I develop concepts that are incorporated into my developing category. Of course, the new round of analysis leads to a new set of unanswered questions and conceptual problems, and the process repeats. I say that the conceptual problems are a matter of course because the dialectical and immanent concept of theoretical categories I am using recognizes the inherently contradictory character of theoretical thought (Adorno, 1973). Through this repetitive process I first derive a working category and definition of context. This is followed by sub-categorical definitions of the constituents of reading context and finally the full category of reading context that includes the new conditions resulting from today's networked communication environments. Along the way I examine actual empirical data in order to test, clarify, and extend my definitions using concrete examples.

Specific Plan for Category Construction

In Chapter 3 I analyze the scope and limitations of the understanding of reading context used in reading theories rooted in cognitive psychology. I focus in on the problems of 1) the unit of analysis and 2) the epistemological problem in the interactive reading theories of Rumelhart and Stanovich. Following the analytical procedure above, I identify the central problem in cognitive theory's conceptualizations and models of literacy as "the problem of the unit of analysis." The cognitive perspective focuses on reading as an individual ability composed of perceptive and cognitive skills and prior knowledge; that is, learned processes that occur in the individual mind. I examine how this mental processes unit of analysis focuses theorists inward on the interaction of printed text and knowledge in the reader's mind and fails to provide a description or analysis of broader contextual factors that are central to reading as an actual human event. Instead they portray an abstract, uniform, and decontextualized conception of reading wherein the specific situation and event of reading are insufficiently theorized, and reading is isolated from the fullness of people's being and action in society. I clarify and elaborate on this problem using Rosenblatt's (1988, 1994b) transactional theory of reading. I conclude that such individual mental processes models marginalize the inseparable relationship between the cultural–historical context and the understandings that readers construct. I move on to the question of whether linguistic context is, as Rumelhart and

Stanovich suggest, best understood as information contained within text to which readers apply knowledge of language in order to derive meaning. This is the epistemological question. Here too I use Rosenblatt's theorization of the relationship between the reader, the meaning, and the text to bring the problem into focus and extend my category construction. My analysis leads to a set of questions about reading context derived from the limitations and contradictions of the cognitive perspective.

In Chapter 4 I seek to develop the sub-category of context (apart from a formal definition of reading context) that provides an adequate unit of analysis and avoids the epistemological problem. I elaborate on and begin to move beyond the dilemma of the cognitive position using theory-historical data from the classical lineage of cultural–historical psychology associated with Lev Vygotsky, Alexei Leont'ev, and Yrjö Engeström. Their understanding of human activities (reading being an example) as contextual phenomena allows me to juxtapose the individualistic concepts of reading and context in Chapter 3 with an understanding of reading as a social and cultural activity inextricable from the technological, cultural, and social conditions prevalent within a society. They resolve the problem of the unit of analysis by conceptualizing reading as irreducible to anything less than a tool-mediated, contextual activity structure. I end with the implication that this conceptualization of reading leads to the conclusion that how one engages in reading, and the ways in which one arrives at meanings, consists of a number of complex relationships between the various phenomena identified in Engeström's contextual activity structure. Activity structure, however, provides only the macro-phenomena and relationships. It proves inadequate for describing the objects and relationships at the micro level of activity needed to develop a full category of reading context.

The transactional epistemology of John Dewey and Arthur Bentley is introduced in the second half of Chapter 4 as the solution to both the epistemological problem remaining from Chapter 3 and the lack in CHAT of a specification of the objects and relationships at the level of the actual operations that comprise a specific instance of activity. I must define the scope of constituents that comprise a reading event. The situation is introduced as a contextual unit of analysis that is analogous to activity, but that is able, through the concept of the transactional relationship between the knower and the known, to explain

the distinction between text and context as a matter of function and focus. While the transactional concept of the situation provides a relational understanding of objects and the contextual whole, it is shown to be too general and abstract to describe the concrete objects and relationships at the micro level of a specific instance of reading. I draw Stephen Pepper's (1942) detailed theorization of the distinction between objects of focus and the objects that constitute contexts (at any level of observation) to resolve that problem. A vocabulary for describing the sub-categories of a working definition of context is defined. The chapter concludes with a working definition of context as well as a consideration of unanswered questions that the working definition is inadequate to answer. Specifically, my working definition lacks the sub-categories that comprise reading context. That specification began with the cognitive reading theories examined in Chapter 3 and is completed using reading theories that are compatible with my working definition; that is, theories that understand reading as a contextual phenomenon irreducible to anything less than the whole event.

In Chapter 5 I turn to developing those subcategories. I use contemporary social and cultural theories of reading presented by Street (1994, 2003), Scribner and Cole (1981), and the school of New Literacy Studies that developed from their seminal works. The constructs of this school of thought are used to form a number of sub-categories that comprise the full category reading context. I then test and refine the category using an actual-empirical study designed by Goodman and Anders (1999) to highlight the "assumptions, biases, and beliefs" (p. 178) within the language and concepts that reading researchers and theorists use to describe reading phenomena. Goodman and Anders' (1999) paper is specifically intended to emphasize the different understandings of reading that are under consideration in that section of my own work. With a working definition of reading context I am able, in the second half of Chapter 5, to complete my category formation by analyzing the effects of networked communication technologies on reading context. In this final section I describe the alterations to the sub-categories of context that are caused by contemporary technology. I arrive at the goal of my analysis, the theoretical category reading context as it manifests under contemporary cultural and technological conditions.

Why a New Theory?

This dissertation formulates a theory of context built from the theoretical research I have conducted over several years. The concept of context used in contemporary literacy theory leads to conceptual problems and significant questions about the nature and function of context that remain unanswered and unanswerable within the cognitive paradigm. The limitations and contradictions of cognitive psychology's category of reading context can be resolved in a new theoretical category derived from alternative theoretical perspectives on the concepts of context and reading.

The necessity for a new conceptualization of context, as stated above, is that historical-empirical analysis of current literacy practice and theory indicates that the current historical moment contains the practical and conceptual components for hypothesizing a new conceptual category that includes but extends beyond the understanding of context used in cognitive print reading theories. In summary, this dissertation is theoretical research project into a new conceptual category of reading context that exceeds the analytical capabilities of current cognitive and social reading theories. My theoretical category incorporates and transcends cognitive, social, cultural, and material understandings of reading context.

My project is one small step in the overall process of reconceptualizing the construct "reading" to meet the necessities and conditions of the twenty-first century. The conclusion that a new conceptualization of reading is needed is supported by the increasing recognition of historically "new" forms of literacy and increasing calls for a new theory to describe them. "A Pedagogy of Multiliteracies" (New London Group, 1996) provides an example of this recognition of the need for literacy praxis that incorporates new literacy pedagogies in response to the new, multiple forms of literacy that are emerging in our cross-cultural and digital age. The authors describe the purpose of their work as

> [an] attempt to broaden this understanding of literacy and literacy teaching and learning to include negotiating a multiplicity of discourses. We seek to highlight two principal aspects of this multiplicity. First, we want to extend the idea and scope of literacy pedagogy to account for the context of our culturally and linguistically diverse and increasingly globalized societies, for the multifarious cultures that interrelate and the plurality of texts that circulate. Second, we argue that literacy pedagogy now must

> account for the burgeoning variety of text forms associated with information and multimedia technologies. (p. 61)

Similarly, the ultimate goal of this dissertation is praxis: the development of one of the theoretical categories that comprise contemporary reading. While a complete theorization of literacy is beyond the practical scope of this dissertation, it is possible to begin the process by constructing a historically new category for reading context. The category I construct is one step in the process of developing new understandings of literacy that can be used to conduct research and build literacy pedagogies that prepare students for 1) empowered use of new forms, modes, and purposes of literacy, and 2) meeting the need for effective and transformative participation in a diverse, heteroglossic and globalizing society**.** The goal is to develop understandings of literacy upon which we can base literacy pedagogies that prepares students of the twenty-first century to engage in reading that enables them to "recognize, value, and use" (Kostogriz, 2002), "engage and bridge" (Luke, 2003), "juxtapose, network, and transcend" (Gee, 1997), "work across" (Fairclough, 1999), and "negotiate" (Fairclough, 1999; Gutiérrez, Baquedano-Lopez, & Turner, 1997; New London Group, 1996), social, cultural, political, and linguistic differences. The emergence of this new form of literacy is often expressed as a social and moral imperative (Endres, 2001; New London Group, 1996). Conceptualizations of literacy that acknowledge the importance and legitimacy of the increasing variety of social and cultural literacies are considered to be a reconciliation of the contradictions and injustice of influential reading theories and pedagogies that present reading as universal, acultural, individual, cognitive, and print-text based. In brief, there is a recognized need for a literacy praxis whereby people learn to negotiate the contradictions, tensions, and power relations inherent to multimodal communication in a linguistically, culturally, and ideologically diverse world.

Audience: Dialogue and Praxis

I present a theory of reading context in order to invite both dialogue and empirical examination of the central concepts in the category. It is intended to inform the work of theorists, researchers, and practitioners. It provides a theoretical category that can be tested in the field through empirical research. I

also present the paper to practitioners; classroom teachers, literacy specialists, etc., as both a lens for examining and understanding the literacy teaching and learning occurring in their classrooms, and as a tool used in their own praxis. My final intended audience is found in the broader fields of education, linguistics, technology, and social theory wherein researchers and theorists are grappling with many of the same problems and considerations I address in this work.

I present the theoretical analysis to all readers as a moment in theoretical dialogue. While positing and describing specific concepts tied to advanced thinking about context and reading, I endeavour to present them as dialectical and dialogical in order to avoid the hazard of reifying my concepts by presenting them as definitive, or positioning the category as capturing and identifying reading context in its essential and ahistorical state. As a dialogical object it is open to extension, re-evaluation, critique, refutation, and engagement.

Chapter III

THE UNDERSTANDING OF CONTEXT IN COGNITIVE, PRINT-BASED READING THEORIES

In this chapter I examine the understandings of context in cognitive theories of reading. Specifically, I examine the ways that reading theorists David Rumelhart and Keith Stanovich describe context and its role in the reading process in their interactive reading theories, and I expand on this cognitive conceptualization of reading context using Louise Rosenblatt's transactive theory of reading. I identify their predominant emphasis as linguistic context as it is processed in the individual mind of the reader. To say that cognitive reading theorists approach reading as "in-the-head" processes and skills (both perceptive and linguistic) is to join the chorus of contemporary voices that criticize the position as focusing so narrowly on cognitive processing that it misses the relevance of the social and cultural contexts within which reading takes place (see Barton & Hamilton, 2000; Purcell-Gates, Jacobson, & Degener, 2004; Street 1984, 2003). Nevertheless, cognitive theorists have something to say about reading context, and their work on orthographic, syntactic, semantic context, along with Rosenblatt's (1988, 1994) considerations of the social and cultural contexts in which a reader's personal linguistic knowledge develops, provides a starting place for my category development.

The questions I seek to answer are: 1) whether current concepts of reading context are useful for understanding the many types of reading that are part of contemporary literacy, and 2) whether the predominant understandings of reading context effectively describe the complexity of reading in the technologically mediated, multimodal computer age. At the end of this first round of analysis I detail three pressing questions that cognitive theories fail to satisfactorily answer, questions that need to be addressed going forward. First, what is the relationship between the reader (with her individual history of experience), reading as an activity, and the social, material, and historical conditions in which reading occurs? I call this the problem of the unit of analysis. Second, how is meaning produced in the reader–text–context relationships? This is the problem of epistemology. Third, how is the relationship between

the reader, reading, and context affected by technological mediation? This final question is, of course, the thrust of my entire work, and while I work through questions one and two in Chapter 4, this third question gets thorough attention in Chapter 5.

Orthographic, Semantic, and Syntactic Contexts in Cognitive Reading Theories

Though the role of context has been a significant feature in reading theories over the last four decades, it has remained largely underdeveloped as a theoretical construct. Cognitive interactive theories and models of reading go into considerable detail in describing the ways that linguistic context shapes the reader's word identification and meaning interpretation. David Rumelhart (1977/1994) and Keith Stanovich (1980/2000) present orthographic, syntactic, and semantic context as information carried within the structure and meaning of text. Their interactive reading theories describe the effect of context on the reading process.

Working from an alternative transactional understanding of reading, Rosenblatt (1988, 1994) presents the reader and text as a dynamic unit. Together they constitute a reading transaction or "event." The meanings arrived at during reading transactions are presented as specific to the reader, the immediate situation, and the broader social and cultural contexts in which language is learned. The similarities and differences between these two perspectives outline the borders of the conceptualization of context in print literacy theories.

Table 3.1

The Concept of Context in Cognitive Print Literacy Reading Theories

	Interactive Theory		**Transactive Theory**
	Rumelhart	**Stanovich**	**Rosenblatt**
Concepts	Context as the orthographic (letter string), syntactic, semantic, and pragmatic textual environment	Context as the orthographic, syntactic, and semantic structure of written language	Context as the linguistic, personal, social, and cultural environments in which language is learned and reading occurs
Rationale	Empirical evidence indicates that reading is the product of simultaneous and interactive processing of contextual and linguistic information.	Empirical evidence indicates that skilled readers recognize words automatically without relying on contextual information. Context facilitation in proficient reading is due to automatic semantic activation.	"Multiple meanings indicated for the same word reflect the fact that the same sign takes on different meanings at different times and in different linguistic or different personal, cultural, or social contexts" (Rosenblatt, 1994, p. 1060).
Empirical Support	• Time and accuracy of letter recognition for: 1. Orthographically regular letter strings 2. Words with letters omitted 3. Whole words • Oral reading errors • Reaction times for semantically related and unrelated word sets	• Orthographic context effects: 1. Knowledge of orthographic structure, 2. Letter and word search tasks • Semantic and syntactic context effects: 1. Eye fixations 2. Oral reading errors 3. Processing altered text 4. Differences in reading speed for words in isolation and in sentences	**Theoretical Support**: • Dewey & Bentley's transactional theory of the human–environment relationship • Peirce's 'triadic' linguistic theory of sign, object, and interpretant

Context in Rumelhart's Interactive Model of Reading

David Rumelhart developed an interactive model of reading that is representative of the cognitive information processing perspective on context and its role in the reading process (Stanovich, 1980).

Rumelhart identifies four types of context: orthographic, syntactic, semantic, and pragmatic. In his discussion of the role of context in reading, Rumelhart (1994) first discusses the effects of these four contexts on the reader's perception of letters, words, syntax, and meaning. Throughout the rest of his discussion, the four linguistic contexts are combined with knowledge of the language (linguistic knowledge of orthography, words, syntax, semantics, and pragmatics). The reader processes marks on a page (sensory input) using these "knowledge sources." The ambiguity of the relationship between context and knowledge makes it difficult to differentiate context from knowledge at some points in the discussion. It is possible, however, to discern what Rumelhart conceives context to be from his opening discussion of context effects.

Rumelhart (1977/1994) based his paper "Toward an Interactive Model of Reading" on conclusions drawn from the reading research of the 1970s. The period was characterized by experimental design laboratory research on letter and word recognition and reading comprehension and was based on cognitive psychological perspectives. Rumelhart and many of his contemporaries recognized this research as demonstrating that, along with decoding, semantic and syntactic context were relevant and active at the level of word recognition. As Rumelhart stated at the time, each of the studies he reviews indicates, "that the apprehension of information at one level of analysis is partially determined by higher levels of analysis" (p. 868).

The empirical results indicating that context affects initial letter and word recognition was not accounted for by the linear information processing models that been proposed earlier in the decade by Gough (1972/1994) and LaBerge and Samuels (1974/1994). Linear processing theories modeled reading as a step-by-step analysis of print that progressed from visual, to phonological, and then semantic and syntactic level processing. The "higher" levels of processing were independent and not believed to be involved in the previous steps. Rumelhart (1994) proposed that the disagreement between the empirical research and earlier conceptions of reading as sequential information processing were resolvable by "presuming that all these knowledge sources apply simultaneously and that our perceptions are the product of the simultaneous interactions among them all" (p. 877). The simultaneous processing of

context information and knowledge sources is the basis of his interactive reading theory. Rumelhart (1994) modeled this simultaneous processing after two "systems of communication that have been proposed…in the context of language processing by computers" (p. 879). His interactive model portrays reading as a computational (and quantifiable) cognitive process that relies on linguistic knowledge and context information in the text to calculate the most likely interpretation of the marks on a page.

He begins with orthographic context, or, the idea that "the perceptions of letters often depend on the surrounding letters" (p. 869). He draws this conclusion from a number of studies that tested recognition time and accuracy. For instance, he refers to a study by Huey that concluded,

> more letters can be apprehended per unit time when a word is presented than when a string of unrelated letters is presented. A letter string formed either by deleting a letter of a word or replacing one or two of the letters of the word is often clearly perceived as the original word. (pp. 869–870)

He also emphasizes a conclusions reached by McClelland and Johnson. Their study tested readers' recognition of letters within the context of "regular" orthographic patterns rather than full words and came to the same conclusion; "letters embedded in orthographically regular strings are more accurately perceived than those embedded among orthographically irregular strings" (p. 870).

After reviewing these studies of the effect of context on letter perception Rumelhart concludes

> all these results appear to argue strongly that letter perceptions are facilitated by being in words. Word-level perceptions affect letter-level perceptions….merely being a part of an orthographically well-formed string aids perception virtually as much. This suggests that orthographic knowledge plays a role nearly as strong as lexical knowledge in the perception of strings of letters (p. 870).

Rumelhart then moves on to examining the effect of syntactic context on word recognition. He provides an overview of the research literature that leads him to the conclusion that "our perception of words depends on the syntactic environment in which we encounter the words" (p. 872). This conclusion is based partially on research that showed the "errors" that readers make while reading out loud were typically grammatically accurate. That is, if a misread word was a verb, the word that the reader substituted for the verb in the text was most often another verb.

> Perhaps the best evidence for syntactic effects on the level of word perception comes from an analysis of oral-reading errors…there is a strong tendency for a reading error to

> be of the same part of speech as the word for which it was substituted. Thus, for example, Kolers (1970) reported that nearly 70 percent of the substitution errors made by adult readers on geometrically transformed text were of the same part of speech as the correct word" (p. 872).

He goes on to cite two studies by that demonstrate that a high percentage of oral reading errors are syntactically acceptable. Rumelhart draws the conclusion that the grammatical patterns (or "rules") of language create a context that affects the likelihood that words fitting a particular part of speech will occur next in a sentence. After his review of these studies Rumelhart concludes, "Once again, it appears that we have a case of grammatical knowledge helping to determine the word read" (p. 873). The grammar, or syntax, of a sentence is part of the linguistic context active at the level of letter and word perception.

The third context "level" Rumelhart discusses is semantic context. In this section he describes the evidence for the conclusion that "our perception of words depends on the semantic environment in which we encounter the words" (p. 873). In support of this claim Rumelhart reviews several studies that he believes demonstrate "processing at the semantic level modify[s] our processing at the word level" (p. 873). The studies generally involve word sets that are or are not semantically related. For example, Rumelhart summarizes a number of studies that provide

> convincing evidence of semantic effects on word recognition. The basic procedure in these experiments involved measuring the reaction times to come to a lexical decision about a pair of words. The basic result is that the decision can be made much faster when the pair of words are semantically related (such as BREAD-BUTTER and DOCTOR-NURSE) then when unrelated (BREAD-DOCTOR and NURSE-BUTTER). The most plausible account of these results would seem to be that the process of perceiving the first word somehow allows us to process the second word more quickly just in case it is a semantically related word. Thus, we again have the processing at the semantic level modifying our processing at the word level. (p. 873)

From the results of these semantic effects studies, Rumelhart concludes that words that are related to the meaning of the words around them are recognized more quickly because they match what we expect. "Our expectations are based on meaning as well as visual form" (p. 875). The meaning of words and word strings; that is, semantics, is also part of the linguistic context active at the level of word perception.

Rumelhart proceeds to a discussion of the ways in which "our perception of syntax depends on the semantic context in which the string appears" (p. 875). As evidence for this further semantic context effect, he offers examples of sentences that are syntactically ambiguous and must be clarified from the general meaning of the passage. Rumelhart (1994) provides the following example from Shank:

> a. I saw the Grand Canyon flying to New York.
> b. I saw the Grand Canyon *while I was* flying to New York.
> c. I saw the Grand Canyon *which was* flying to New York.
>
> Most readers immediately interpret sentence [a] as meaning the same as [b] rather than sentence [c] simply on the grounds that it is semantically anomalous to imagine the Grand Canyon actually flying. (Rumelhart, 1994, p. 875–876)

He provides a similar example of his own in order to make the case that, in many sentences, the reader's interpretation of syntax depends on the wider meaning or semantic context in which the phrase occurs. Rumelhart concludes that the examples he provides demonstrate that

> semantics plays the determining role as to which surface feature we apprehend. Thus, just as orthographic structure affects our ability to perceive letters and syntax and semantics affects our perception of words, so too does semantics affect our apprehension of syntax (p. 876).

In the examples he uses the term "semantic context" to indicate the situation that the reader understands the text to be describing.

Finally, Rumelhart provides two examples of passages of text that support the idea that "our interpretation of the meaning of what we read depends on the general context in which we encounter the text" (p. 876). Here too, his discussion makes it clear that by "general context" he means the situation being discussed in the passage, rather than the context where reading is occurring (e.g. a classroom).

I find support for this conclusion in the example that Rumelhart uses to demonstrate the dependence of an entire passage on the context (in particular the place) in which the event described is taking place. When the title *Watching a Peace March from the 40th Floor* was attached to a certain passage, there was a sentence in the passage that did not reconcile semantically with the context/situation described in the title. As a result, "when subjects were given the passage and later asked to recall it, very few subjects remembered the anomalous sentence" (p. 877). When the title was changed to *A Space Trip*

to an Inhabited Planet, the sentence in question fit the situation of visiting an inhabited planet and the subjects "recalled the critical sentence three times as often" (p. 877).

He also provides an example and discussion of a dependent clause that has different meanings depending on the semantic context established by the rest of the sentence. The interpretation of the dependent clause example and the overall coherence of the title example above depend on the context or situation described within the passage. His examples depend on the reader recognizing what meaning is appropriate given the particular place, participants, and events described. Rumelhart concludes, "not only is the interpretation of individual words dependent on the sentential context in which they are found, but the meaning of entire sentences is dependent on the general context in which they appear" (p. 877).

Rumelhart lists pragmatic information along with sensory, syntactic, and semantic information in his opening description of the contextual information used in the process of reading (p. 864). Yet, there is no overt pragmatic analysis in his discussion of context effects or in his model of reading (Figure 3.1). The explanation for this is found in his discussion of the overall process of reading below. By 'pragmatic context', Rumelhart more than likely means the meaningful situation described within the text (see Tyler, 1989, p. 465). Thus, the discussion above of "general context" is Rumelhart's discussion of pragmatic context. This view of pragmatics restricts pragmatic context to the situation presented within the text. It completes Rumelhart's presentation of context as totally contained within the language and meaning of the text.

This concept that meaning is bound to the situation presented in the passage will remain active throughout my category development. I will also explore the role of the immediate situation in which reading occurs. As I stated, it is significant that this consideration is completely lacking in Rumelhart's interactive reading theory.

From his discussion of context effects Rumelhart moves to an "information-processing representation of the theoretical ideas suggested in the [context effects] section" (p. 877).

Rumelhart's theoretical model describes the entire reading process as interactive, a process of simultaneous sensory (graphic), lexical, syntactic, semantic, and pragmatic information processing. Rumelhart (1994) explains the reading model in Figure 3.1 in this way:

> graphemic information enters the system and is registered in a visual information store (VIS). A feature extraction device is then assumed to operate on this information, extracting the critical features from the VIS. These features serve as the sensory input to a pattern synthesizer. In addition to this sensory information, the pattern synthesizer has available nonsensory information abut the orthographic structure of language (including information about the probability of various strings of characters), information about lexical items in the language, information about the syntactic possibilities (and probabilities), information about the semantics of the language, and information about the current contextual situation (pragmatic information) (p. 878).

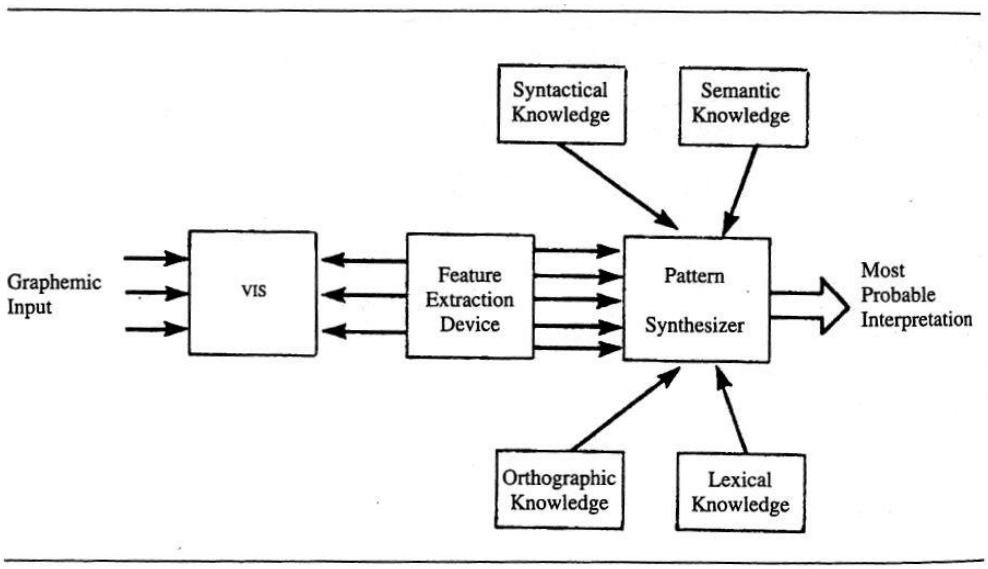

Figure 3.1. Rumelhart's (1994, p. 878) interactive model of reading

In the above discussion of Figure 3.1, we see how Rumelhart combines context information and the reader's knowledge of print, language, and meaning. Rumelhart's "knowledge source" seem to be a combination of orthographic, syntactic, and semantic context information and the reader's knowledge of orthography, words, syntax, and semantics. These knowledge sources are all simultaneously applied to

interpreting the (graphemic) marks on the page. Analyses at all levels of knowledge interact to interpret the words, syntax, and meaning of a text.

To summarize Rumelhart's description of context, we can say that his interactive conceptualization of context includes the orthographic, syntactic, semantic, and pragmatic linguistic features of text. These four contexts simultaneously affect the reader's perception of letters, words, syntax, and meaning. During the reading process, the reader uses context and linguistic knowledge to form a hypothesis about what will come next on the page, and then to reject or confirm the hypothesis for each letter and word as it is processed.

Context in Stanovich's Interactive-compensatory Model

Keith Stanovich discusses context in terms of the orthographic, syntactic, and semantic structure of written language. In both his research and theoretical work he examines the effects of context on word recognition. He calls letter-level orthographic context (the letters that make a word or word part) "within-word" context. He calls sentence-level syntactic and semantic context "between-word" context. Throughout his extensive body of work, Stanovich repeatedly examines the degree to which within-word, orthographic context affects letter recognition and the degree to which between-word syntax and semantics affect word recognition.

Overall, Stanovich's discussions of context refer to the structural patterns of alphabetic writing (orthography) and language. Because Stanovich has discussed context effects in reading across a number of papers, and because his perspective on the primacy of word recognition in the reading process currently enjoys favor in the realms of policy and educational funding, I include a summary of the role of context in his reading theory in order to further clarify conceptualizations of context in interactive reading theories. In so doing I am able to represent other similar word-recognition theories such as the *Simple View of Reading* (Gough, Hoover, & Peterson, 1996; Hoover & Gough, 1990)

I note at the outset that, despite a career-long emphasis on context effects, Stanovich (2000, pp. 8–9, 394–395) nowhere provides a specific definition or theory of context. As with Rumelhart, I need to

rely on inference and deduction from his use of the word "context" and related terms in order to characterize his working definition. I will support my conclusions with the specific statements that he does make regarding context. I begin with an initial clarification of terms and conceptual relations that I hope will prove useful to the reader.

In the early 1980s Stanovich (1980, 1984) published two papers detailing his "interactive-compensatory" model of reading. As noted above, there are two levels of context in his theory: within-word and between-word context. Within-word context is the letter sequence that makes up a word. In any phonetic written language there are certain letter sequences that regularly occur and some that do not occur. Thus letter sequences and positions are subject to constraints that make the next letter or letters in the sequence more predictable (Stanovich, 1980). The other term Stanovich frequently uses for this limited pattern of letter sequences is intraword redundancy. Stanovich (1980) explains, “intraword redundancy arises because of the sequential and position-specific constraints on the letters within words. Thus, written language is orthographically structured” (p. 37). The effect of intraword/within-word redundancy (the relevant quality of the orthographic context) is seen in the phenomenon of visually similar "mistakes" in oral reading (p. 42). Within-word context affects are thought to be observed when an oral reader substitutes a word that contains letter sequences that are visually similar to those in the word on the page. An example is substituting "simple" for "signal" during oral reading.

The first evidence for his description of the effects of within-word context that Stanovich (1980) provides is a discussion of the results of a number of studies that examined readers’ knowledge of orthographic structure. He concludes this section with a description of five studies that measured and compared the performance of various groups on letter search tasks. All of the studies came to the conclusion that letters are more quickly identified when they are within words. For example, “Krueger, Keen, and Rublevich (1974) found that both fourth-graders and adults searched for a letter faster through word than through nonword displays” (p. 39). Note that in these orthographic context studies, as well as those examining the effects of sentence-level context, Stanovich mainly draws on studies that compare the use of context by experienced and less experienced (or proficient and less proficient) readers. His

purpose is to examine the evidence for context effects and to determine whether an increasing reliance on context is characteristic of increasing proficiency and fluency.

Though Stanovich questions the ecological validity of these letter search studies and acknowledging that they bear little relation to actual reading, he transitions to a discussion of similarly conceived reaction time studies, "where the subject was forced to process a higher-level unit, such as a word" (p. 40). Though these word-search tasks also use words in lists rather than sentences (leading to problems with ecological validity), he explains that such research helps establish the generalizability of the letter identification research and is in keeping with certain premises within cognitive psychology. He refers to his own work with colleagues that "measured the time for …subjects to search for target words through lists of nonwords, pseudowords, and words" (p. 40). They found that, "The search time for all subjects [third-grade, sixth-grade and adult] increased as the lists become more wordlike (i.e. confusable with the target words), and the relative increases in time scores did not differ across age groups" (p. 40). In a previous study, Stanovich and West found "a similar pattern of results" among above and below average third-grade readers. "The word search times of poor readers were equally affected by orthographic structure when relative time-scores were considered and more affected when absolute time scores were employed" (p. 40). After reviewing several more studies that compared the time it took more and less proficient readers to identify and/or name words, Stanovich (1980) concludes:

> once beyond the very initial stages of reading acquisition, the poor reader not only uses orthographic redundancy to facilitate word recognition, but there is evidence indicating that in some situations the poor reader may even rely more on this stored knowledge source than the good reader. (p. 41)

The conclusion that reliance on orthographic context for word recognition is characteristic of "poor" readers is retained throughout Stanovich's body of work.

Between-word context can be understood as the syntactic and semantic relationship between the word currently being processed and the words that came prior to that point in the passage. (The term "passage" remains undefined.) Language consists of syntactic rules and patterns. It also should make sense; it must be semantically acceptable. Stanovich calls this between-word syntactic and semantic

structure "interword redundancy." Interword redundancy is the characteristic of language that limits the possibilities for the next word in the sequence. For Stanovich the key issue is whether proficient readers rely more on context to form a hypothesis regarding upcoming words, and thereby enhance word identification. Stanovich reviews numerous studies that examine readers' of varying abilities use of syntactic and semantic structure to identify words (one eye fixation study; five studies of oral reading errors; five studies of the processing of altered text, three studies measuring reading speed for words in isolation versus in sentences; and four studies using other methodologies). Stanovich (1980) sums up his conclusions regarding this context effects research with a quote from Allington and Strange, "virtually all readers, regardless of achievement, employ semantic and syntactic cues and…other factors must account for achievement differences" (as cited in Stanovich, 1980, p. 52). He stresses that an increased use of context to facilitate word recognition is not characteristic of reading proficiency.

Stanovich goes on to provide a theoretical explanation of the effects of prior context that corresponds with these empirical findings. Stanovich's (1980) theory describes the degree to which proficient readers actually do rely on context information to recognize words. His theoretical writing is partially intended to answer the question of "whether good readers have a greater tendency to use contextual redundancy to facilitate ongoing word recognition…whether they are actually more prone to rely on such [predictive] abilities to speed word recognition" (p. 45). Note that the emphasis is on whether readers actually do consciously use context information to enhance word identification rather than whether they are able to do so like in a cloze or "fill-in-the-missing-word" task. He repeatedly argues that the answer is no.

> In short, the good reader identifies words automatically and rapidly, whether by direct visual recognition or phonological recoding. The existence of the rapid context-free recognition ability means that the word recognition of good readers is less reliant on conscious expectancies generated from prior context. (p. 64)

Yet Stanovich (1980) considers the facilitation of word identification by prior context to be "a reasonably well-established empirical fact" (p. 57).

To explain these two seemingly opposing conclusions Stanovich (2000) applies the "two-process theory of expectancy developed by Posner and Snyder" (p. 33) to the role of context in the reading

process. Following their model he distinguishes between two ways that readers process prior context: the "automatic-activation process" and the "conscious-attention expectancy mechanism" (p. 35). The "automatic spreading activation process operat[es] in semantic memory. This mechanism is fast acting, uses little cognitive capacity, and causes facilitory but not inhibitory context effects." (p. 50). Readers can also consciously form an expectation for the next word in the passage (form a hypothesis) from prior context using the conscious-attention expectancy mechanism. While this conscious attention to prior words does facilitate recognition, it slows the reading process and uses attention that could be used for the processes involved in comprehension and knowledge construction (p. 36). Stanovich is emphatic that the research demonstrates that conscious dependence on context is characteristic of less proficient readers. He asserts that the bulk of the research demonstrates that "it was less skilled readers who were more dependent on context for word recognition [citations omitted]….the word recognition processes of the skilled reader were so rapid and automatic that they did not need to rely on contextual information" (p. 394). Stanovich's reading theory emphasizes the desirability of automatic activation of context effects and considers automaticity to be vital to proficient and fluent reading. Stanovich (2000) concludes,

> In short, there is no substitute for automatic, efficient data-driven processing at the word level. Capacity must be freed for the all-important comprehension and text integration process. The only contextual mechanisms that are ultimately advantageous are those that facilitate word recognition automatically, without depleting the amount of cognitive resources that can be allocated to text-level processing. (p. 50)

Stanovich's model is termed interactive-compensatory because conscious use of context is seen as compensating when automatic interactive processing of graphemic and contextual information fails to identify a word.

Finally, along with his distinction between the levels of context (within- and between-word), Stanovich makes a distinction between two domains of context effects, context effects on ongoing word identification and context effects on comprehension. The difference, according to Stanovich, is that "good readers employ contextual information more fluently in the comprehension process, [but] they are not more reliant on contextual information for word recognition" (p. 395). His reading theory does not

include a substantive discussion of how context affects the comprehension process. Stanovich (1980) describes the contextual information that contributes to comprehension as semantic context (p. 42). He explains that the failure to distinguish between the word and comprehension domains of processing has lead to confusion over "word calling" and other problems in reading theory (Stanovich, 2000, pp. 97, 395).

In summary, Stanovich presents context as the letters and words on the printed page. Letter identification takes place in an orthographic context. Letters are more quickly identified when they are in a 'regular' string of letters or in a word. Word identification is facilitated when the word is semantically related to the words that lead up to it. When context automatically activates meaning associations, semantic context contributes to proficient word identification.

Context is also discussed, or conceptualized, according to its relevant characteristic, redundancy, and its effect, expectancy. Contextual redundancy is the characteristic of written text and language that limits possible letter sequences (within-word redundancy) and word sequences (between-word redundancy). Contextual redundancy allows for expectancy, or the formation of a prediction of what the reader will see next in the series of letters and words. The reading process is centered on automatic word recognition, and both prior letter and prior word context can facilitate word recognition. Conscious use of context can occur when automatic recognition fails. Automatic processing of context information is characteristic of proficient reading.

Analysis of the Interactive View of Reading Context

One question that Stanovich's theory provokes is whether the conscious or unconscious use of context is as central to a theoretical description of the role context in reading as Stanovich makes it. The explanation for this emphasis involves Stanovich's own history as a theorist. His initial perspective on reading was derived from Frank Smith's "top-down" meaning-centered theory of the reading process (Stanovich, 2000, p. 5). Stanovich believes that the results of experimental research falsified the meaning-

based, hypothesis-testing theory proposed by Smith. Stanovich concluded that reading was not characterized by sampling the least visual-graphic input necessary to confirm hypotheses regarding the words that come next in a passage. Throughout his career, Stanovich has contrasted his theoretical work with meaning-centered reading theories and the coherence (constructivist) epistemology upon which he believes they are based (see Stanovich, 2000, pp. 361–417). In effect, Stanovich positions his work as proof that the interactive information processing understanding of reading is the winning side in the "reading wars" (see Stanovich 2000, pp. 361–374).

By centering much of his discussion on answering questions over the degree of conscious processing of context that occurs in reading, Stanovich puts the cart before the horse. I am proceeding under the premise that it is necessary to begin from a theoretically grounded understanding of reading context in order to describe its role. Stanovich's theory assigns particular characteristics and functions to context but does not provide a theoretical justification or even an explanation for his limitation of context to within-word orthography, between word syntax and semantics, and comprehension level semantic contexts.

The same can be said of Rumelhart's interactive theory. Context in reading is entirely linguistic. The understanding of context used in these interactive reading theories comes out of a cognitive and computer science take on psycholinguistics (Rumelhart, 1994, p. 874; Stanovich, 2000, p. 5). Specifically, it is taken for granted that context is the orthographic, syntactic, and semantic structure of written language. Underneath of the superficial differences in their description of context, both theorists share the perspective that rule-bound orthographic, syntactic, and meaning structures are a form of information within the written code. Context information is processed from the written marks by the mind of the reader. It is clear that these theorists believe that theories of reading can and should describe that cognitive processing. In Rumelhart's theory in particular, the process is quantifiable and comes down to a mathematical formula for hypothesis testing.

Problems within the Interactive Concept of Reading Context

One of the problems that remains open in this chapter, then, is how far context extends. Is the entire spectrum of context covered by the linguistic structures and patterns of words, syntax, and semantics? Before this tacit assumption can be accepted, a theory of reading that overtly includes consideration of the role of language is needed in order to describe the components and extent of the linguistic context. As I progress through this paper, it is necessary that I examine reading theories that include a theory of language and context. There are print literacy theories of reading that base conclusions regarding context on an explicit theory of language. I will examine Louise Rosenblatt's transactional theory of reading as a way of beginning to address the question of how far context extends.

The second problem with the concept of context thus far described is that the role of context in reading is presented as common to all readers and texts. The information processing understanding of cognition that is here applied to reading results in explanations of the one uniform cognitive process of reading. Hence, deviations from the model of proficient reading are described as errors. These interactive theories are descriptions of the way that every reader of alphabetic text processes graphemic input, context information, and linguistic knowledge. In both theories the individual reader is lost. So too is the generally recognized social variability of language. In both theories, the reader and the encoded language are standardized, as are the types of context (e.g. words and syntax). What I mean is, even at the level of word identification, it is assumed that there is one standard set of rules and structures that affects letter sequence, appropriate word usage, syntax, and expectation/hypothesis formation. There is no distinction between types of text or the social and cultural differences between readers' (and authors') knowledge and use of language. Text and reader are abstract; they are generalized out of any concrete social, cultural, or historical situation.

Yet, actual readers have experience and knowledge of linguistic rules that differ according to their experience of language use and the dialects they speak. Variation in words, syntax, semantics, and practical use are what define linguistic differences and dialects. The rules of written language that apply to traditional European fairy tales are not the same as the rules of academic journals, Appalachian

working class dialect, or instant messaging over the internet. The expectancy of readers from varying linguistic and cultural backgrounds will not always match the "standard" conventions of word, syntactic, and semantic redundancy. It is reasonable to assume that Rumelhart and Stanovich know that there are variations in vocabulary, syntax, and semantics across dialects and genres, and hence variations in expectations. Yet, even Stanovich, whose express purpose was to account for individual differences in fluency and proficiency, does not discuss the variation in rules and structures, and hence various readers' use of context to form expectancy. Further, though Rumelhart mentions pragmatic context, the interactive theories examined do not account for pragmatics, or the reader's knowledge of how communication works, and is carried out in specific social situations and within particular social and cultural groups. The solution to this problem is developed in Chapter 5 wherein I examine contemporary socially and culturally oriented theories of reading.

This second problem comes down to whether there is a single group of factors that constitute context. Is context and the way it is used in reading the same for all readers, texts, and readings? Or do variations in readers' experiences and understandings of language, variations in text (including new digital, networked media and genres), and variations in the reader's pragmatic knowledge and expectations change the roles that context plays in reading?

This train of thought leads to a third question. Should the actual situation and context in which reading takes place be considered as context that is relevant and active in reading? For example, should the setting and social dynamics of a public classroom be included as context that affects a classroom oral reading? Though the interactive reading theories I have examined thus far do not consider these dynamics, this question is of significance to addressing the hypothesis of this dissertation. If digital virtual spaces and the social norms and relationships that evolve within those spaces are considered to be context, how does the computer-mediated context affect reading, and is there anything unique about it? While describing the entire reading process is beyond the scope of this dissertation, in Chapter 5 I will specifically answer the question of whether reading context remains constant in every instance of reading, or whether context changes and is changed by the technologies that mediate it .

My fourth question is whether linguistic context is best understood as information contained within, or a feature of, text as Rumelhart and Stanovich suggest. Does the mind of the reader simply process context that already exists in the text? This raises a question regarding the epistemological foundation of interactive theories of reading and their treatment of context. How is linguistic context related to knowledge and thought? Another way to state the question would be" Is linguistic context information that exists apart from the knowledge of the four linguistic contexts recognized by cognitive theorists? This is the basic question of epistemology: What is the relationship between the knower and the known? Stanovich (2000) acknowledges that his theory is based on the epistemological position that "an independent reality exists separate from my thoughts and perceptions" and that knowledge is true as it corresponds to "an independently existing reality" (p. 371). This has immediate significance as a question regarding the role of the reader in the production of meaning from text and context.

Rumelhart's and Stanovich's answer to this question is that context is information encoded into texts that interacts with (or is processed using) knowledge of context. But what is knowledge of context? Are we to understand the reader's knowledge of context as nothing but knowledge of how to process information into meaning, knowledge that is itself free from meaning? Is the reader contributing anything to production of meaning besides the cognitive processing? This question goes unanswered in these theories, but the distinction between semantic context and semantic-level knowledge disproves this possibility. Semantic knowledge seems to necessitate the reader's contribution of some meaning to the processing. The alternative is to reduce semantic processing into something along the lines of algorithmic logic propositions (and this is, in fact, what we find in theories of thought in the cognitive science tradition). The readers' role in reading is reduced to a computer-like processing of various categories of information input. If we don't find this satisfying and capable of answering the questions we have about reading, then we must seek an expanded understanding of context. We will see that a transactional understanding of the knower and the known, the reader and the meaning of text, provides a more flexible and potentially more useful alternative to the epistemology of interactive reading theories.

Conclusion: Context in Interactive Reading Theories

My analysis of context in interactive theories leads to a series of related questions:

1) Is the entire spectrum of what "counts" as context covered by the linguistic structures and patterns of orthography, syntax, and semantics within the text?
2) Does reading and reading context remain the same in every instance of reading, or are their different reading processes and different contexts?
3) Should the situation and context in which specific instances of reading occur be in considered as context that is relevant and active in reading?
4) Is linguistic context information that exists apart from the knowledge of the four linguistic contexts recognized by cognitive theorists? What is the relationship between the reader, context, and meaning? More generally, what is the relationship between the knower and the known?

The first three questions comprise what I am calling the problem of the unit of analysis. The fourth question is what I am referring to as the epistemological question. These four questions will remain prominent in the discussion as I continue to determine the conceptual borders of context in print literacy reading theories. To begin to answer these questions I now turn my analysis to the reading theory of Louise Rosenblatt.

Context in the Rosenblatt's Transactional Theory of Reading

In Louise Rosenblatt's (1988, 1994a, 1994b) transactional theory of reading and writing, context includes the linguistic context of interactive theories as well as the personal, cultural, and social conditions under which words and language are learned and used. Linguistic context includes the same letter strings, syntax, and semantics that are considered context in the interactive theories above. By adopting a transactional understanding of people's relationships to the world around them (including the

reader's relationship to text) Rosenblatt draws the reader's personal, social, and cultural experiences and knowledge into the discussion of context.

Rosenblatt's transactional theory of reading is examined here for two reasons. First, she directly addresses the questions I raised regarding interactive reading theories. Second, the transactional view expands the boundaries of the cognitive print literacy paradigm's conceptualization of context. Where Stanovich and Rumelhart provide my category construction with a clear representation of the dominant concepts of reading context, Rosenblatt's theory of reading "exceeds the conceptual and methodological boundaries of the dominant paradigm and thus makes those boundaries or limits visible" (Engeström, 1987, Chapter 1,How to Select the Data, para. 4). Rosenblatt provides concepts of reading context that both continue my category development and bring the problems of the unit of analysis and epistemology into sharper focus.

Rosenblatt's (1994b) reading and writing theory is based on the concept that

> instead of mainly treating reading as a compendium of separate skills or as isolated autonomous activity, research on any aspect should center on the human being speaking, writing, reading, and continuously transacting with a specific environment in its broadening circles of context. (p. 1085)

Though Rosenblatt does not present a formal theory of reading context per se, she does ground her reading theory in a theory of language and a broader theory of knowledge (epistemology). Thus Rosenblatt's transactional theory provides my category development with the overt theorization of the role of language in reading that was lacking in Rumelhart's and Stanovich's interactive theories. She also directly addresses what I identified as the epistemological question at the end of that section. As we can see in the quote above, the transactional epistemology she applies leads to a "contextualized" understanding of the reader and reading. Because Rosenblatt bases her understanding of reading and context on a specific theory of how a reader forms an understanding or knowledge of a text, I will preface my examination of her understanding of context with a brief explanation of her transactional epistemology.

Transactional Epistemology

Rosenblatt adopted a transactional view of the relationship between the reader and the text as early as 1949 (Rosenblatt, 1999). She continued to develop her transactional theory over the course of a number of publications until 1988 when she published a formal report entitled "Writing and Reading: The Transactional Theory." This publication became the basic statement of her transactional understanding of literacy that is used in subsequent publications of the theory in *Theoretical Models and Processes of Reading*. In the introduction to her 1988 paper, and in the subsequent editions and updates, Rosenblatt explains that her theory is based on John Dewey's post- Einsteinian understanding of the relationship between the knower and the known. In the introductory paragraphs of these papers, Rosenblatt (1994b) addresses the epistemological question that I raised regarding interactive theories:

> For 300 years, Descartes' dualistic view of the self as distinct from nature sufficed, for example, for the Newtonian paradigm in physics. The self, or "subject", was separate from the "object" perceived. "Objective" facts, completely free of subjectivity, were sought, and a direct, immediate perception of "reality" was deemed possible. (p. 1058)

She applies this critique to interactive theories of reading that apply a positivistic epistemology to reading research and theory. Positivism is the epistemological position upon which Stanovich based his theory and research.

As discussed above, interactive theories separate reading context from both the reader and the reader's knowledge, and then set about describing the essential, independent characteristics of each. Describing the inherent qualities of the reader's thought (cognition), the text, and context represents a dualistic understanding of the nature of knowledge wherein mind and matter are conceived of as separate, immediate (unmediated) entities. Knowledge is true to the extent that it corresponds to the inherent properties of the object being described, the process being theorized, etc. As we have seen, this is the claim that Stanovich (2000) makes for his reading theory and research (p. 371).

Rosenblatt (1980) explains that her transactive theory of reading and writing is based on an epistemology that avoids the dualism seen in interactive reading theories (see also Rosenblatt [1985], for

an expanded discussion of the conceptual differences between interactive and transactional reading theories):

> My use of the terms “transaction” and “transactional” is consonant with the contemporary twentieth-century shift in thinking about the relationship of human beings to the natural world. In *Knowing and the Known*, John Dewey and Arthur F. Bentley pointed out that the term "interaction" had become too closely tied to Cartesian or Newtonian philosophical dualism, the paradigm that treats human beings and nature as separate entities. The newer paradigm, reflecting especially Einsteinian… developments in physics, emphasizes their reciprocal relationship…Instead of separate, already defined entities acting on one another (an “interaction”), Dewey and Bentley (1949, p. 69) suggested that the term ‘transaction’ be used to designate relationships in which each element conditions and is conditioned by the other in a mutually-constituted situation. (pp. 1–2)

The initial purpose of these quotes is to distinguish transactional reading theory as an alternative to interactive theories, a theory with an epistemological foundation that accentuates the boundaries for concepts of context in cognitive reading theories. The lengthy quote is also intended to provide the beginnings of an explanation of why theories that conceptualize context as an independent element of the reading process run into trouble in their explanation of the relationship between self-existent context information, context knowledge, and knowledge sources. I will leave this epistemological question here for the time being. I now want to turn my discussion to a description of the conceptualization of context from a transactional reading perspective.

Transactional Theory of Reading and Context

The key to understanding Rosenblatt’s presentation of context is to keep in mind that context is not separable from the entire reading "transaction." Each instance of reading is a single transactional unit of analysis she terms an "event." It is only within the transactional relationships formed during reading that the reader, text, and context take their form and meaning. “Every reading act is an event, or a transaction involving a particular reader and a particular pattern of signs, a text, and occurring at a particular time in a particular context. Instead of two fixed entities acting on one another, the reader and the text are two aspects of a total dynamic situation” (Rosenblatt, 1994b, p. 1063). Rosenblatt (1988) identifies the “basic concept” in her theory as the transactional understanding that “human activity is

always in transaction, in a reciprocal relationship, with an environment, a context, a total situation" (p. 1081). Context cannot be described apart from its relationship to the reader and text because the reader, text, and context are mutually constitutive and have their existence in their relationships to each other. For Rosenblatt, reading is an activity[4] that is not equal to or understood as the sum of its separate parts. Therefore, a discussion of Rosenblatt's conceptualization of context will inevitably include all of the mutually dependent constituents that comprise the entire transactional reading event.

Meaning and context are interdependent. Originally, word and language meanings are learned in context through active engagement with the world. Rosenblatt (1994b) refers to Vygotsky's concept of internalization as support for the understanding that "language is always internalized by a human being transacting with a particular environment" (p. 1060). When language is re-encountered in the reading process the meaning again depends on context. Rosenblatt (1988) explains that, in reading, words are part of the larger transactional unit that includes context. "Although we speak of individual signs or words, we know that words do not function in isolation, but always in particular verbal, personal, and social contexts" (p. 3). "Multiple meanings indicated for the same word reflect the fact that the same sign takes on different meanings at different times and in different linguistic or different personal, cultural, or social contexts" (Rosenblatt, 1994b, p. 1060). The meaning of the sign is produced in context, and context is linguistic, personal, cultural and social.

Rosenblatt's four "contexts" form the basis for my analysis of her contribution to the concept of context in print literacy theory: linguistic, personal, cultural, and social contexts. She does not provide a specific description or definition of these contexts, so once again I will infer them from the text and support my conclusions with the specific statements that she makes about context. As with the interactive theories, because there is not a formal theory of context provided, this formalization is my own.

[4] In this section I am using "activity" in the general sense of engagement in a process, pursuit, etc. I do not mean the theoretical definition of activity that will be discussed below.

The transaction of verbal/linguistic contexts.

Rosenblatt's discussion of linguistic context includes the same linguistic terminology used by interactive theorists: orthography, syntax, and semantics. In her transactional theory, however, linguistic context is constructed during the reading transaction. Rosenblatt treats orthography, syntax, and semantics as potential characteristics of the signs on a page rather than an essential property of a written text. She presents these linguistic contexts as types of understanding developed in the overall process of meaning construction. The two "participants" in the construction (or transaction) of a linguistic context for a text are the marks on the page and the reader's "linguistic-experiential reservoir." Rosenblatt (1994b) defines the "linguistic-experiential reservoir" as:

> the residue of the individual's past transactions in particular natural and social contexts….Embodying funded assumptions, attitudes, and expectations about language and about the world, this inner capital is all that each of us has to draw on in speaking, listening, writing, or reading. We "make sense" of a new situation or transaction and make new meanings by applying, reorganizing, revising, or extending public and private elements selected from our personal linguistic-experiential reservoir. (p. 1061)

Each person's linguistic reservoir is their unique internalization of the "socially generated public system of communication" (Rosenblatt, 1988, p. 5). Included in the idea of the linguistic experiential reservoir is the concept that the association of meanings, objects, and contexts is fluid rather than fixed. Linguistic context is transacted according to the specific signs on the page and the reader's knowledge of language structures that are expected in various contexts. That knowledge has both individual and social aspects.

Rosenblatt (1988) explains the transaction of linguistic context in this way:

> As the eyes encounter the unfolding text one seeks cues on which, in the light of past syntactic and semantic experience, to base expectations about what is forthcoming. The text as a linguistic pattern is part of what is being constructed. Possibilities open up concerning diction, syntax, linguistic and literary conventions, idea, themes, the general kind of 'meaning' that may be developed. (p. 4)

In this view, linguistic context must be constructed during reading because it is a form of meaning, and all meaning is the result of transaction. Context is formed along with the formation of the text.

It follows that Rosenblatt (1994b) defines two types of texts, "the physical text, defined as a pattern of signs, and what is usually called 'the text', a syntactically patterned set of verbal symbols. This

actually comes into being during the transaction with the signs on the page" (p. 1064). The key here is that for Rosenblatt the normal definition of text that includes syntax and meaning is a result of the reader–print transaction. The text takes form in the process of reading as a person applies knowledge and experience of language structure to the interpretation of marks on a page. It will prove helpful in the rest of my discussion of Rosenblatt's theory to distinguish between text (lowercase) as the physical text composed of signs printed on a surface, and TEXT (capitals) as the meaningful "syntactically patterned set of verbal symbols" that is constructed during reading. This distinction of terms maintains Rosenblatt's assertion that linguistic context is not a characteristic of the physical text. It is a part of the larger transaction of a meaningful TEXT. We should recall that the relationship between the physical text and context is conceptualized in a very different way in the interactive theories.

As support of this idea, Rosenblatt (1994b) offers an explanation of the syntax–semantic relationship in a sentence used as an example by the linguistic philosopher Noam Chomsky:

> Flying planes can be dangerous.
>
> Actually, only after we have selected a meaning can we infer a syntax from it. Usually, factors entering into the total transaction, such as context and reader's purpose, will determine the reader's choice of meaning. Even if the reader recognizes the alternative syntactic possibilities, these factors still prevail…The transactional situation suggests that meaning implies syntax and that a reciprocal process is going on in which even broader aspects guiding choices are actively involved. (p. 1063)

Rosenblatt's example is quite similar to Rumelhart's description of semantic effects on syntactic decisions. The difference, as we have seen, lies in the transactive concept of reciprocity; syntax both establishes and is established by semantics. Simply put, syntax and semantics are not separate, independently existing linguistic characteristics that interact. They form together in a transactional relationship.

In Rosenblatt's transactional theory, the effects of linguistic context are discussed along the same lines as the context effects of interactive reading theories. We can understand linguistic context as orthographic, syntactic, and semantic patterns that lead to predictability. As Rosenblatt (1994b) describes it, "pursuing the unfolding text in the light of past syntactic and semantic experience, the reader seeks

cues on which to base expectations about what is forthcoming" (p. 1064). The distinction comes in the differing understandings both of the nature of syntax and semantics and where they are "located" in each theory. Rosenblatt understands them as mutually constituted between the marks on a page and the reader's linguistic-experiential reservoir during the reading transaction. Linguistic context comes into being and exists only during reading. The interactive theories see them as characteristics of the encoded text, information that exists in the text and is discerned through cognitive processing and applying knowledge to the information code.

The transaction of personal contexts.

Rosenblatt provides a detailed description of the individual's accumulation of language(s) and experiences that establish a unique "personal" context. The basic distinction is between public and private meaning and associations.

> In short, public refers to usages that some groups of people have developed and that the individual shares…. The individual's private associations with a word may or may not agree with its connotations for the group, although these connotations must also be individually acquired. Words necessarily involve for each person a mix of both public and private elements (Rosenblatt, 1994b, p. 1060).

Rosenblatt supports the private/public distinction with references to Vygotsky's concept of individual internalization of the public, social language. Rosenblatt (1994b) concludes her explanation of the character of personal context with a quote from Miller & Johnson-Laird, "Lexical concepts must be shared by speakers of a common language…yet there is room for considerable individual difference in the details of any concept" (as cited in Rosenblatt, 1994b, p. 1061).

It is unclear what the source of individual connotations of a concept (meaning) could be if not the myriad associations produced in the social history of the concept's use (see Bakhtin, 1981). We can imagine a scenario in which an individual's concept of an object, say a can of Spam, was strongly linked to an experience of struggling with a woodland creature over the possession of the Spam would be considered a personal association and could even take the form of a connotation adding to the concept of Spam. The problem lies in the origin of meanings that comprise private connotations that differ from

group connotations. The individual mix of associations can be unique, but we are not provided with an explanation of how the associations themselves can have meaning that is unique from the possibilities afforded by socially constructed concepts. My point here is that, ultimately, the meanings associated with words and larger language units must be drawn from the constructs available in the language. The individual's personal interpretation of the incident with the spam must rely on constructs available in the social sphere of language use. Of course, the feelings involved need no meaning to be involved in the personal understanding of spam.

It seems then that the differences do lie in the unique mix of affective and cognitive associations developed through an individual's personal experience with language. Thus, Rosenblatt's personal context is the mix of contextualized affective and cognitive associations that are unique to an individual. They are personal because of the particular set of meanings (connotations) associated with concepts by the unique experiences of each person under unique contexts. This is in fact how Rosenblatt (1994b) describes the linguistic-experiential reservoir. "For the individual then, the language is that part, or set of features of the public system that has been internalized through that person's experiences with words in situations" (p. 1060).

Linguistic transaction within social and cultural contexts.

Rosenblatt (1994b) states more than once that social and cultural "factors" are involved in the meaning derived in reading transactions. She stresses the centrality of social and cultural context to understanding reading: "the linguistic transaction should be studied above all as a dynamic phenomenon happening in particular context, as part of the ongoing life of the individual in a particular educational, social, and cultural environment" (Rosenblatt, 1988, p. 14). In one of her more explicit discussions of the influence of social and cultural group membership on reading Rosenblatt (1994b) says that,

> Socioeconomic and ethnic factors, for example, influence patterns of behavior, ways of carrying out tasks, even understanding of such concepts as 'story' (Heath, 1983). Such elements also affect the individual's attitude toward self, toward the reading or writing activity, and toward the purpose for which it is being carried on. (p. 1082)

In the footnote to this passage Rosenblatt (1994b) adds:

> The transactional model of reading presented here covers the whole range of similarities and differences among readers and between author and reader. Always in the transaction between reader and text, activation of the reader's linguistic-experiential reservoir must be the basis for the construction of new meanings and new experiences. Hence the applicability to bilingual instruction and the reading of texts produced in other cultures. (note pp. 1089–1090)

The sense throughout is that a reader's experiences within social and cultural groups shape the reader's understanding of self and the world. This extends beyond reading to encompass dispositions, ways of acting, etc., that are mentioned in the first quote above. The accumulated experiences within the social and cultural groups in which the reader participates form ways of understanding that afford and constrain the meanings that each person will construct during reading. Experience with language in specific social and cultural contexts establishes possible meanings and associations that are brought to the transaction of meaning in present reading events. Rosenblatt accounts for the variations in expectancy that are omitted in interactive theories.

Though she emphasizes the personal character of language, Rosenblatt fully acknowledges the social and cultural origins of language. This is one dimension of the social and cultural context of reading. Language is not only experienced in social settings; it is itself social and cultural. It is just that her emphasis is on how social and cultural experiences of language in actual use provide the origin and development of a reader's personal linguistic-experiential reservoir. Rosenblatt describes this phenomenon historically, explaining that "the linguistic-experiential reservoir reflects the reader's cultural, social, and personal history" (Rosenblatt, 1994b, p. 1064). The combination of social language with personal experience leads to the significant conclusion that context is personal, social, and cultural.

In this discussion on the role of social and cultural experience in meaning making we see the beginnings of a theoretical accounting for how readers from very different linguistic, cultural, and social backgrounds transact with texts that were written from a vast array of perspectives. The possibility of transacting a meaning for a text that was produced by an author using a social and cultural knowledge of language that is quite different from the reader's lies in the reader's transaction of understandings from

publicly agreed upon meaning. This is often discussed in language and literacy literature as the continuity or discontinuity between various participants' use of language and meaning construction. Rosenblatt (1994b) fills in the details of this aspect of reading in her section "Communication between the Author and Readers":

> The closer their [the reader's and writer's] linguistic-experiential equipment, the more likely the reader's interpretation will fulfill the writer's intention. Sharing at least versions of the same language is so basic that it often is assumed. Other positive factors affecting communication are contemporary membership in the same social and cultural group, the same educational level, and membership in the same discourse community….Yet, since each individual's experience is unique, differences due to social, ethnic, educational, and personal factors exist, even with contemporaries. (p. 1077)

The description here regards the continuity or similarity between people's individualized understanding of the social rules and meanings of textual communication. Rosenblatt recognizes the individuality of every person's knowledge and use of language and text. She then provides a theoretical accounting for the ability of two individuals from different personal backgrounds to communicate through written text. She also explains how it is possible for different readers to come to an agreement about the meaning of a specific text. In sections of her theory that I will not cover, she also explains how varying degrees of similarity between the author's intended meaning and the meaning constructed during reading transactions can be achieved.

Media and the Mediation of Text and Context

One more important contextual concept that Rosenblatt develops rather fully is a refined discussion of the concept of text in the speaker–listener and reader–author relationship. Both spoken and written language involve the mediation of a physical text. In speaking, the physicality of text includes sound waves, but there are also other media included in text. There is also a considerable range of environmental, or contextual, conditions that the listener can use to transact a meaning for the exchange.

> A conversation is a temporal activity, a back-and-forth process. Each has come to the transaction with an individual history, manifested in what has been termed a linguistic-experiential reservoir. The verbal signs are the vibrations in the air caused by a speaker. Both speaker and addressee contribute throughout to the spoken text (even if the listener remains silent) and to the interpretations that it calls forth as it progresses…The specific

> situation, which may be social and personal, and the setting and occasion for the conversation in themselves provide clues or limitations as to the general subject or framework and hence to the references and implications of the verbal signs. The speaker and addressee both produce further delimiting cues through facial expressions, tones of voice, and gestures. (Rosenblatt, 1994b, p. 1061)

So, in talk, several media of communication contribute to the text: sound waves, facial expressions, and gestures compose the physical text. The text also includes timing and simultaneity between its production and the listener's interpretation (or meaning making). In her description of the context of a conversation Rosenblatt includes nonverbal dimensions such as time and the "setting and occasion." The physical setting and the social occasion affect the talk and its interpretation. I understand her use of setting to include the space and physical objects in the area around the talk. This is distinguished from the occasion, which is the social significance and purpose(s) of the talk.

> In reading the text and context are significantly different.
>
> Many of the elements that contribute to spoken transactions are missing-physical presence, timing, actual setting, nonverbal behaviors, tones of voice, and so on [.] The signs on the page are all that the writer and reader have to make up for the absence of these other elements. The reader focuses attention on and transacts with an element in the environment, namely the signs on the page, the text. (Rosenblatt, 1994b, p. 1061)

Rosenblatt does not believe that marks on a page (lowercase "text") have an intrinsic meaning. She makes it clear that the material text itself is "a set of signs **capable** of being interpreted as verbal symbols" (p. 1063, emphasis added). So text, as marks on a page, has no meaning apart from a reading transaction. Rosenblatt (1994b) explains,

> Far from already possessing a meaning that can be imposed on all readers, the text actually remains simply marks on paper, an object in the environment, until some reader transacts with it. The term "reader" implies a transaction with a text; the term "text" implies a transaction with a reader. Meaning is what happens during transactions. Hence the fallacy of thinking of them as separate and distinct entities instead of factors in a total situation. (p. 1063)

The material signs on a page mediate rather than transmit the communication of meaning between an author and reader.

The text is a fixed object in the environment that awaits a transaction with a reader to take on meaning as a transacted TEXT. "The reader", says Rosenblatt (1988), "…transacts with the text, not directly with the author" (p. 7). The text she is discussing here is the lowercase, physical text. The written text that is characteristic of print literacy lacks the nonverbal text (e.g., facial expressions and gestures), the verbal tone and inflection that modify the spoken text, and shared time, place, and situation that are in play in spoken texts. The only physical mediation of meaning between the author and the reader is the alphabetic text. Rosenblatt's description of the context of a reading transaction lacks the spatial and temporal setting and flow found in speaking. The one similarity between reading and listening lies in the fact that in both transactions the reader/listener brings her or his unique linguistic-experiential reservoir to the construction of meaning with the text. They do not share a common context. To summarize, in Rosenblatt's theory, written text alone mediates between the writer and reader.

Analysis of Rosenblatt's Contribution to a Theory of Context

Rosenblatt suggests that a theory of reading (and writing) must understand context as a part of a single unit composed of reader, text, and context. Neither can be spoken of without reference to its relationship to the others. According to this theory, therefore, in order to analyze context we need to examine it as part of the transaction involved in the process of meaning making. We need to understand context as integral to and inseparable from understanding written material.

Rosenblatt also introduces the concept that the text has no meaning in and of itself. Likewise, in contrast to interactive theory, context is not described as information or meaning that resides in text. Context and meaning are transacted or constructed in reading. They are co-constituted in the transaction between the marks on a page and the reader's history of using language in many different contexts, the reader's linguistic-experiential reservoir. Using Rosenblatt's theory as an indication of the boundaries of alphabetic print reading theories, at the very least I can say that context directly contributes to the meaning of the text. It does not just affect meaning; context plays a part in establishing it. Finally, Rosenblatt (1988) emphasizes the importance of recognizing "that language is not a self-contained system

or static code" (p. 16). The linguistic coherence of a verbal or written text is transacted during communicative events. Linguistic structure (the equivalent of linguistic context) is not an inherent property of text.

Together, these two points resolve the epistemological problem in interactive theories. Again, while interactive theories take an epistemological stance that sees context as separate from the knowledge of context, the theorists examined run into a problem in their practical description of how context can exist independent from the reader's knowledge of context and apart from the reading process (or, how information can exist independent of knowledge of that information). Rosenblatt addresses the epistemological issue and avoids this problem. Context is transacted during reading between the reader, the text, and the environment.

In her discussion of context, Rosenblatt discusses verbal, personal, social, and cultural contexts. Verbal context consists of all of the linguistic contexts discussed in the interactive reading theories above. Rosenblatt, however, provides a transactional understanding of the establishment of linguistic contexts.

Personal, social, and cultural contexts are new to the discussion. They resolve the second problem I raised regarding interactive theories. In particular, in my analysis of interactive theories I noted that the Stanovich described a process in which the reader and text were abstract generalizations. The differences between readers were differences in their individual knowledge and ability to process information. The differences between a reader's knowledge and a text's linguistic and semantic structure (context) went unaccounted for. In contrast, Rosenblatt's description of the public and private language and each person's linguistic-experiential reservoir provides a model for understanding how individuals are able to construct a meaning for a variety of texts. In brief, it is because the meaning is constructed or transacted using public and generally recognized meanings contained in the reader's experience with language in many different contexts. Reading is deemed successful when an individual is able to arrive at a meaning that satisfies her or him, or when several people agree upon an interpretation of the text. The main issue is not always whether the author's intended meaning and the reader's meaning are a close match, though that phenomenon is described as well.

Finally Rosenblatt's makes a significant distinction between the texts of speaking-listening and the texts of reading and writing. She describes two mediums that comprise the text in spoken language: aural and visual. Sounds, facial expressions, and body language and gestures combine into the signs of spoken language. Bodily gestures and facial expressions cause the same string of sounds/words to take on a variety of meanings. Since the speaker and listener are involved in an ongoing temporal activity, the speaker can adjust the multimedia text being produced. It in fact will change if context, participants, and interpretations change during the

"back-and-forth process." The speaker, text, and listener are involved in an immediate transaction. There is no practical time delay between the construction of text by the speaker and the listener's transaction with the text. In face-to-face talk participants inhabit the same physical space. They share a setting and situation. My main point here is that in Rosenblatt's description of verbal communication there is a materiality to text and a shared temporality and spatiality to context. Communication between participants is mediated by the text in a shared environment. That shared environment affects the meanings that are transacted. Text and context shift with the progression of the textual transaction over time.

In written language the text is set or stable. That is, the text is printed material that will not change. Under the generic conditions of alphabetic print described by Rosenblatt, the reader and writer are separated by time and space. They interact only through the mediation of the alphabetic text. There is a very different temporality in written text. There is a time delay between the writing and reading. Under everyday conditions (those that prevail outside of schools, laboratories, and testing), the reader determines the rate at which the text is perceived and interpreted. The possibilities for inflection, intonation, face and body language, etc. are extremely limited and often confined to narrative genres wherein it is conventional to describe them. My point here is that the printed texts of alphabetic of reading are physically fixed and temporally dispersed between the writing and reading. Finally, in Rosenblatt's theory written text is a single medium (marks on a page) perceived through one perceptual mode, sight. I highlight these differences between spoken and written texts because I will argue that advances in

communication technologies have largely done away with this distinction and thereby changed the transactions between the reader, text, and context.

Problems within Rosenblatt's theory.

A basic problem in Rosenblatt's theory lies in the disconnect between her transactional activity-context unit of analysis and her practical analysis of reading. The context of the actual situation in which reading activity occurs goes largely undeveloped. Rosenblatt presents her transactional reading theory as founded on the idea that "human activity is always in transaction, in a reciprocal relationship, with an environment, a context, a total situation (Rosenblatt, 1988, p. 15). She explains reciprocal relationship as "relationships in which each element conditions and is conditioned by the other in a mutually-constituted situation" (Rosenblatt, 1988, p. 2). Rosenblatt does describe the mutual constitution of face-to-face talk. While her emphasis is on the relationship between the speaker and listener, she adds some consideration of the effect of the conditions surrounding the communication. Yet there is no discussion in her theory of the reciprocal constitution of a reading activity and the context of the immediate reading event. That is, there is no clear picture of the constitution of context (as the mutually constituted situation) in which the actual reading takes place.

Rosenblatt's description of the reading transaction only includes two transactions between context and reading. I have examined her description of the co-construction of linguistic context during the actual reading event. Linguistic context, however, is a mental-conceptual context transacted between the alphabetic print and the reader's linguistic-experiential reservoir. Rosenblatt also describes the reciprocal relationship between the personal, social, and cultural context(s) in which language is learned and the network of associations and connotations for words that make up the linguistic experiential reservoir. These are two important theoretical contributions to the concept of context in reading. What is missing, however, is a description of the transaction, the mutual construction, between the reading activity and the immediate "environment, context, and total situation."

Rosenblatt comes the closest to describing the role of the present context when she states that, "residual linkages of sign, signifier, and organic states…become actual symbolizations as selective attention functions under the shaping influence of particular times and circumstances" (Rosenblatt, 1994b, p. 1062). She goes on to explain that selective attention, based on the reader's "stance" toward the text leads to different types of reading. The reader's purpose in reading will result in very different readings. This is Rosenblatt's answer to question number two above: there are different types of reading and reading processes. The purpose that the reader brings to the text differs according to the situation ("time and circumstances") and affects the transaction of meaning.

Regarding context however, a "shaping influence" on the reader's attention is not a description of a co-constructive and transactional relationship between the reader and context and "total situation." A clear theorization of the reciprocal co-construction between reading and context is not provided. If we accept Rosenblatt's view of reading as a human activity that constructs and is constructed by context (reading as activity in context), we still need a theory of activity and context that fully describes such a relationship.

The quote above also allows me to identify a second and related problem in this transactional theory. Rosenblatt (1994b) uses the linguistic theory of Charles S. Peirce to explain her "triadic" or transactional understanding of the relationship between a sign (such as letters on a page) and the object it signifies.

> The "sign is related to its object only in consequence of a mental association, and depends on habit"…. The triad constitutes a symbol. Peirce repeatedly refers to the human context of meaning. Since he evidently doesn't want to reinforce the notion of "mind" as an entity, he typically phrased the "conjoint" linkage as among sign, object, and "interpretant," which should be understood as a mental operation rather than an entity (6:347). Peirce's triadic model firmly grounds language in the transactions of the individual human being with their world. (p. 1059)

The feature that Rosenblatt emphasizes is the most problematic. The associations and operations that establish a triadic symbol are mental and individual. Her use of Peirce provides an individualistic view of the formation of symbols by a mental process of association. Peirce's idea that objects are associated with signs by thought is echoed in Rosenblatt's idea that an individual's past experience with language is the

only basis for interpreting signs. I will need to examine the linguistic problem of whether signs are best understood as the "consequence of mental association" as Rosenblatt's quotation of Peirce states.

This individualism is then supported with references to Vygotsky and Elizabeth Bates, theorists from two very different schools of thought. As I will discuss in Chapter 4, Rosenblatt's use of Vygotsky to pursue an individualistic understanding of signs and meaning is a misguided. I will argue that Vygotsky's concept of the formation and internalization of signs is presented as a social rather than individual phenomenon.

The individualistic perspective on meaning evident throughout this passage is representative of the emphasis on the personal dimension of reading throughout Rosenblatt's theory. Language is understood as "that part, or set of features, of the public system that has been internalized through that person's experiences with words in life situations" (Rosenblatt, 1994b, p. 1060). The result is a view of reading context as mental and individual, the contextualized knowledge of objects that an individual has associated with words (signs).

Finally, Rosenblatt's differentiation between spoken and written texts does not take into account the technological mediation of telephones, radios, and the like that existed during the time she was developing her theory. The verbal texts constructed via voice-only communication technologies lack the nonverbal text, spatial proximity, and shared situation and context she ascribes to verbal text in conversation. Similar examples can be found in reading and written text. One would be the possibility of give-and-take, mutual construction of texts through the print of telegraphs. While acknowledging that the transactional theory is focused specifically on generic print (we can infer book reading). When we take these types of technologically mediated communications into account we begin to blur Rosenblatt's distinctions between written and spoken text and their contexts. Since the hypothesis of this paper is that the mediation of digital, multimedia, networked technology has significantly altered written communications and reading contexts, the effects of technological mediation will receive close attention as I proceed in Chapter 4.

Problems that remain.

The first problem in Rosenblatt's theory is that there is no discussion of the reciprocal constitution of activity and the context of the immediate reading event. A clear theorization of the reciprocal co-construction between reading and the immediate social and material situation never emerges. I still need a theory of activity and context that answers the question, what is the relationship between the activity of reading and the immediate context of the reading event?.

The second problem that remains is that Rosenblatt presents an individualistic view of the formation of symbols by a mental process of association. Peirce's idea that objects are associated with signs by thought is echoed in Rosenblatt's idea that most word/language meaning is personal and derived from an individual's past experience with language. I need to examine Vygotsky's theory of sign mediation to determine whether Rosenblatt's emphasis on individual meaning is consistent with Vygotsky's general model, and with contemporary advances in language theory. That analysis will also answer the question of whether signs are best understood as the consequence of mental association. Finally, I am left needing a theory explaining how context is affected by technological mediation.

Cognitive Print Literacy: Conclusions

The theories I have used to discern the boundaries of the concept of context have led to a list of "contexts" that comprise the concept of "context" in the print literacy paradigm: linguistic (orthographic, syntactic, semantic), personal, social, and cultural. They are represented in Table 3.2.

Table 3.2

Context According to Cognitive Reading Theories

Context:	Linguistic			Personal	Social	Cultural	Material	Location
	Ortho-graphic	Semantic	Syntax					
Rumelhart	√	√	√				Print on a surface	Text & knowledge interaction
Stanovich	√	√	√				Print on a surface	Text
Rosenblatt	√	√	√	√	√	√	Print on a surface	Text & knowledge transaction

I have established several key concepts of context as it is understood in print reading theories. As constructs for category development, they remain to be either confirmed and elaborated, or set aside as inapplicable to my developing category. Linguistic context (orthographic, semantic, and syntactic) is generally recognized as affecting the reading process and the derivation of meaning from text. Rumelhart describes context effects as resulting from both linguistic information in text and the linguistic knowledge that the reader brings to the text. Rosenblatt states that context directly contributes to the meaning of the text. Context does not just affect meaning; it plays a role in establishing it. Rosenblatt's theory understands both meaning and context as mediated by the material text. The reader transacts with the text to produce context. This perspective is not wholly incompatible with Rumelhart's interactive understanding of context.

In my examination of these three theorists, I have raised five questions regarding the concept of context in theories of print literacy:

1. Is the entire spectrum of what "counts" as context covered by the structures and patterns of orthography, syntax, and semantics within the text?

2. Does reading and reading context remain the same in every instance of reading, or are there different reading processes and different contexts?
3. Is context information that exists apart from the knowledge of context? What is the relationship between the reader, context, and meaning? More generally, what is the relationship between the knower and the known?
4. What is the relationship between reading as an activity (i.e. the act of reading) and the social and material conditions under which reading occurs?
5. Is Rosenblatt's emphasis on the formation and predominance of a person's unique, individual meaning of written language consistent with Vygotsky's theory of sign formation, and is it adequate theory of meaning for a theory of reading context?
6. How is context affected by technological mediation?

In my discussion of interactive perspectives on context I stated that a theory of language is needed in order to answer question one. I then examined Rosenblatt's transactive reading theory, a theory that is based on a specific theory of language. My examination of Rosenblatt's theory provided an expanded list of contexts (see Table 3.2 above). Rosenblatt used Charles S. Peirce's triadic linguistic theory of sign, object, and interpretant to expand on the role of context in the reading transaction. My criticism of Rosenblatt's use of Peirce is that her theory ended up presenting an individualistic view of the formation of sign meanings by a mental process of personal association. That problem must still be resolved through further analysis of Vygotsky's thinking. I have answered 'no' to the first question regarding the adequacy of linguistic/textual context as the only contexts involved in reading. I still need to pursue a full description of the scope of contexts, or what I will call the constituents of context, that are involved in reading.

Rosenblatt partially addresses question two. She describes the effect that the reader's purpose for reading has on her/his stance towards the text. A reader's stance results in very different reading processes. The reader's focus, attention, and meaning transactions are affected by her/his purpose and stance. While Rosenblatt answers 'yes' to the question of whether there are different reading processes,

she does not directly discuss the constancy of context. In Chapter 5 I fully answer this question by examining the theorization of reading and context in the theoretical school of New Literacy Studies (NLS). NLS is expressly premised on the principle that the answer to this question is no. Reading is dependent on context, and there are different readings in different contexts.

Rosenblatt partially answered question 3 regarding the reader–context relationship. She described linguistic context as constructed during reading, and grounded her explanation in Dewey's transactional epistemology. The reader and text transact the context. I qualify her description as partial because it does not address the relationship between the reader and the context of the actual reading. Her discussion is restricted to linguistic context and the past social and cultural contexts of language learning. That limitation is the source of question four.

Questions four, five, and six arise from my latest round of analysis and thus remain to be answered in the next round of analysis. They are the general problems that will frame Chapter 4. First, what is the relationship between the reader (with her individual history of experience), reading as an activity, and the social, material, and historical conditions in which reading occurs? This is the problem of the unit of analysis. Second, how is meaning produced in the reader–text–context relationships? This is the problem of epistemology. Third, how is the relationship between the reader, reading, and context affected by technological mediation?

At this point I will take as established from Rosenblatt's contributions that the conceptual definition of "reading context" itself must be historical. It must account for the involvement of both past and present contexts that are active in the current reading event. It must also see reading and context as irreducible. Context is constituted with reading as a single, irreducible unit of analysis.

My final observation before moving on to my next round of analysis is that the alphabetic print reading theories I have examined so far lack any specific theory of context and its place in the reading process. Further, they apply only to the medium of alphabetic print. This situation provides one cornerstone for establishing the significance of this paper. Context plays a significant role in the reading

theories I have examined. Since in my extensive study of this subject I have not found an adequate theory of context in reading in another line of theory, my analysis of the category "context" is greatly needed.

In the next chapter, I will turn to classical theories that conceptualize human action, the physical world, and context as a single unit. These sources are employed to form a theoretical understanding of the relationship between reading activity and context. In effect I will begin where Rosenblatt began, but with the express purpose of conceptualizing context and reading activity as an indivisible unit of analysis. The discussion will move between context and activity in general and context and reading in particular.

CHAPTER IV

HISTORICAL THEORIES THAT ADDRESS THE PROBLEMS AND CONTRADICTIONS IN COGNITIVE UNDERSTANDINGS OF READING CONTEXT

In this chapter, I will construct a basic theoretical category of context (i.e. the concepts that we can use to define context in reading theory, practice, and research). The pressing need at this point in my process is to develop an understanding of context that addresses the problems of the unit of analysis, epistemology, and technological mediation.

In order to proceed in accordance with the methods I outlined in Chapter 2 I will, in the words of Engeström (1987), analyze the "*propositions and findings of previous analyses* or more generally, of previous representations of the object of research" (Theoretical Research as Empirical Research, para. 5, emphasis his) as my historical-empirical data. The previous analyses and representations of context that I bring into the discussion in this chapter come from two long-standing theoretical traditions: cultural historical activity theory and contextualism (the line of pragmatism described by Dewey, Bentley, and Pepper). They are recognized as complementary schools of thought that have contributed to an understanding of the relationships between language, human actions and activity, and context (see Garrison, 2001; Cole, 1998).

These theoretical traditions are chosen because of their known characteristics. They provide a useful theorization of the relationships between the person engaged in an activity like reading, the act itself, and the context of the event. In conjunction they provide satisfactory resolutions to both the problem of the unit of analysis and the epistemological question from Chapter 3. They also contribute to my category development by providing an understanding of the ways that the tools of language and technology mediate human activities.

The First Theoretical Lineage: Cultural-Historical Activity from Vygotsky to Engeström

The first theoretical lineage I will bring into the conversation is the school of cultural–historical activity theory as developed by Vygotsky, Leont'ev, and Engeström. This school of thought understands all human activities as contextual phenomena. The structure of human activity with its systems of production, consumption, exchange, and distribution as well as the rules, communities, and division of labor that govern those relationships is conceptualized as an irreducible context. Activity is a single contextual unit of analysis in that its parts (or constituents) can only be understood in terms of their place in and relations to the entire phenomenon. The "structure of human activity" is understood as the context for understanding human actions such as reading (Engeström, 1987).

This theoretical lineage allows me to develop an understanding of reading as a tool-mediated, contextual activity. Using CHAT I establish the indivisible unity of the reader, the act of reading, the materials that mediate reading, and the cultural–historical relationships that contextualize the act of reading. Tool-mediated activity is a lens through which I can examine the effects that new technologies have on reading. In Chapter 5 I will particularly emphasize the effects of new forms of networked computer–mediation on contexts of reading.

Tool-Mediated Cultural-Historical Activity as a Contextual Unit of Analysis

Lev Vygotsky and A. N. Leont'ev founded both cultural historical psychology and the theory of human activity that derives from it. While Vygotsky (1978, 1981a, 1981c) introduced many of the central ideas of activity and psychological mediation in his work on human development and psychology, Leont'ev expanded on and in some cases improved Vygotsky's concepts (Engeström, 1987). Leont'ev is also credited with drawing the early research and theorization into a cohesive theory of human activity (Wertsch, 1981).

Leont'ev presents activity as inseparable from social and cultural history and the physical world in which it occurs. Leont'ev (1981) explains, "the specific form in which [activity] exists is determined by

the forms and means of material and mental social interaction" (p. 47) which themselves are a product of sociocultural history. We might say that Leont'ev understands activity as situated in sociohistoric or sociocultural context, but it is better to recognize that this line of activity theory does not typically speak in terms of context. I find it best to use Engestrom's (1987) formulation and say that within cultural-historical activity theory, activity is analyzed as "a contextual or ecological phenomenon... [that] concentrate[s] on systemic relations between the individual and the outside world" (Chapter 2, The Triangles of Activity section, para. 10). Activity in context is replaced by activity as context.

Leont'ev sees activity as directed by goals and mediated by tools. He proposed goal-directed, tool-mediated activity as the basic unit of psychological analysis. This is my first main contribution that CHAT can make toward a theory of reading context. My category development requires a unit of analysis that satisfactorily explains how the relationships between the reader, text, and the social, material, and historical conditions in which reading occurs result in meaning. It is this theorization of "the smallest unit that still preserves the essential unity and quality behind any complex activity" (Engeström, Chapter 2, The Triangles of Activity section, para. 8) that CHAT contributes to developing a theory of reading context. Leont'ev's unit of activity is modeled in Figure 4.1.

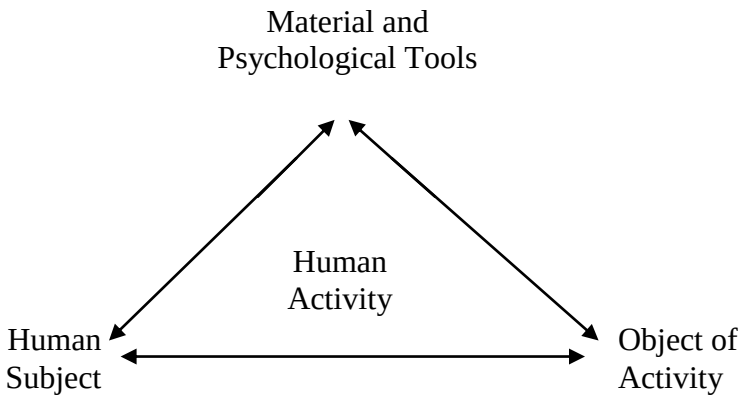

Figure 4.1. Leont'ev's activity unit

The subject is oriented toward an objective, as in an object to be produced or attained, though the object need not be a material (or physical) object. The material and psychological tools at the top of the triangle mediate the subject's attainment or production of the object. Each of these concepts, the object-orientation of activity and the mediation of activity by tools are relevant to a theory of reading context.

The Object-Orientation of Activity

Leont'ev (1981) explains activity as an irreducible unit of analysis that begins with a need for an object and ends with attainment of an object.

> The main feature that distinguishes one activity from another is its object. After all, it is precisely an activity's object that gives it specific direction. In accordance with the terminology I have proposed, an activity's object is its real motive. Of course, the motive can be either material or ideal. The main point is that some need always stands behind it.
>
> Thus, the concept of activity is necessarily connected with the concept of a motive. There can be no activity without a motive. (p. 59)

Activity is, by definition, object-motivated. This is the source of the irreducibility of activity as a unit of analysis.[5] The individual components of an activity cannot be understood separately because it is the goal that motivates and gives them meaning. As I will explain below, there are subsidiary actions and operations that compose the "movement toward the object," but their purpose, form, and meaning depend on the object of the overall activity.

This leads to a conclusion regarding the unit of analysis in reading context. First, because the goal unites the entire activity, a unit of analysis used to understand reading context cannot be reduced to anything less than the qualitatively whole activity in which reading takes place. Reading context cannot have meaning apart from the goal that motivates the reading, or outside of the whole activity of which context is a part. This supports Rosenblatt's emphasis on the role of motivation and purpose in the meaning making process.

[5] Leont'ev describes activity as "molar."

The Mediation of Activity by Tools

The second key concept contained in Leont'ev's unit of activity (Figure 4.1) is that tools mediate activity. Understanding mediation is essential to my category development if I am to answer the question of how the relationships between the reader, reading, and context are affected by contemporary technological mediation. Leont'ev takes his concept of mediation from Vygotsky's (1978, 1981a, 1981c) understanding that truly human activity is mediated by technological and psychological tools. Technological tools are what we typically think of as tools, physical objects that are used to manipulate and control the world around us. They mediate external activity. The psychological tool is language. Language mediates internal activity.

The characterization of language, both written and spoken, as a mediating tool is explained by its function. Language is comprised of signs that mediate "internal activity aimed at mastering oneself" (Vygotsky, 1978, p. 55). Higher psychological functions in human beings depend on symbolic representation. That is, "the use of signs leads humans to a specific structure of behavior that breaks away from biological development and creates new forms of a culturally-based psychological process" (p. 40). Vygotsky (1978) cites a number of studies of attention, memory, and recall as support for the mediation of thought by signs (pp. 40–49). Vygotsky's model of sign mediation is provided in Figure 4.2:

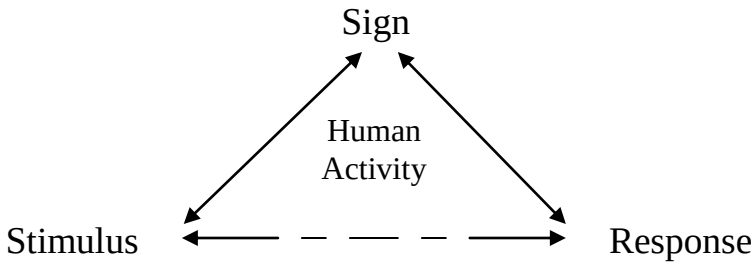

Figure 4.2. Vygotsky's sign-mediated act

Human psychology moves beyond animal psychology when direct stimulus-response is replaced by the mediation of signs that empower the subject to control the response.

Sign mediation is what makes psychological processes distinctly human, and distinctly social. The social and cultural origin of signs and language establish an inherent connection between individual cognition and social knowledge and meaning. Leont'ev (1981) provides a succinct summary of the cultural origin of mediating tools:

> The tool mediates activity and thus connects humans not only with the world of objects but also with other people. Because of this, humans' activity assimilates the experience of humankind. This means that humans' mental processes (their 'higher psychological functions') acquire a structure necessarily tied to the sociohistorically formed means and methods transmitted to them by others in the process of cooperative labor and social interaction. But it is impossible to transmit the means and methods needed to carry out a process in any other way than in external form-in the form of an action or external speech. (p. 56. emphasis his)

Both psychological and material tools are artifacts of the objects they were used on and the uses to which they were put. They are artifacts that carry within them the knowledge and experience of a culture. Uniquely human thought is the symbolic knowledge of the culture internalized.

While Vygotsky (1978, p. 55) starts with a clear distinction between technological and psychological tools, subsequent theorists represent their difference as the balance between their material and psychological aspects (Leont'ev, 1981; Cole, 1998). Cole (1998) summarizes the social and material character of tools according to CHAT:

> An artifact is an aspect of the material world that has been modified over the history of its incorporation into goals-directed human action. By virtue of the changes wrought in the process of their creation and use, artifacts are simultaneously idea (conceptual) and material. They are ideal in that their material form has been shaped by their participation in the interactions of which they were previously a part and which the mediate in the present. (p. 117)

All tools involve material and conceptual qualities. They are the symbolic product of social interaction and activity over long time spans. Language is weighted toward the conceptual while a hammer is weighted toward the material. But language includes a physical medium (sound waves, marks on a surface, glowing pixels on a screen) and the concepts it carries are artifacts of concrete experience.

Likewise, a hammer includes concepts in both its design and knowledge of its use. Rosenblatt pointed out this mix of the material and conceptual in written and spoken language in her transactive reading theory.

The mediation of activity by technological and psychological tools has two significant implications for a theory of reading and reading context. First, reading is a tool that mediates activities. I will say more about this below. Second, spoken and written language is an artifact of social and cultural history and as such, text and its meaning are inherently social. Vygotsky (1978) explains, "in the process of material production, people also produce language, which serves not only as a means of social interaction but also as a carrier of the socially elaborated meanings that are embedded therein" (p. 56). In contrast to Rosenblatt's personal meaning, Vygotsky emphasizes the social nature of the meaning of language. Meaning is social because it has developed over the society's history of action and interaction. This concept forms the basis of what has come to be known as New Literacy Studies. As an alternative to cognitive understandings of reading, NLS understands literacy as social and contextual, taking multiple forms in various times and places (Street, 2003). I elaborate on the social understanding of reading in Chapter 5.

Engeström's Advances on the Structure of Activity

Yrgo Engeström (1987) developed the theoretical advances of Vygotsky, Leont'ev, and a number of other similarly oriented theorists into a detailed theory and model of activity. Engeström determines that Leont'ev's formulation of productive goal-directed, tool-mediated activity is the most defensible theoretical unit for analyzing human activities after examining three theoretical schools of thought wherein "the concept of mediation, of thirdness or triangularity, is seen as the constitutive feature of human activity" (Chapter 2, The Triangles of Activity section, para. 19): 1) the sign-meaning theory of Peirce that found its most advanced state in Karl Popper's epistemology, 2) theories of intersubjectivity based on G. H. Mead's work, and 3) Vygotsky and Leont'ev's cultural-historical psychology. After examining the contributions of Leont'ev's son, Engeström (1987) finally concludes that "the essential elements and inner relations of activity were not comprehensively analysed and modelled by either the

older or the younger Leont'ev." (Chapter 2, The Third Lineage: From Vygotsky to Leont'ev section, para. 62). This is where Engeström takes up the task of deriving the basic unit of activity that includes both the essential elements and the relationships involved in all activity.

He conducts an object-historical "genetic" analysis of the evolution of human activity from animal activity to derive his basic model of human activity.

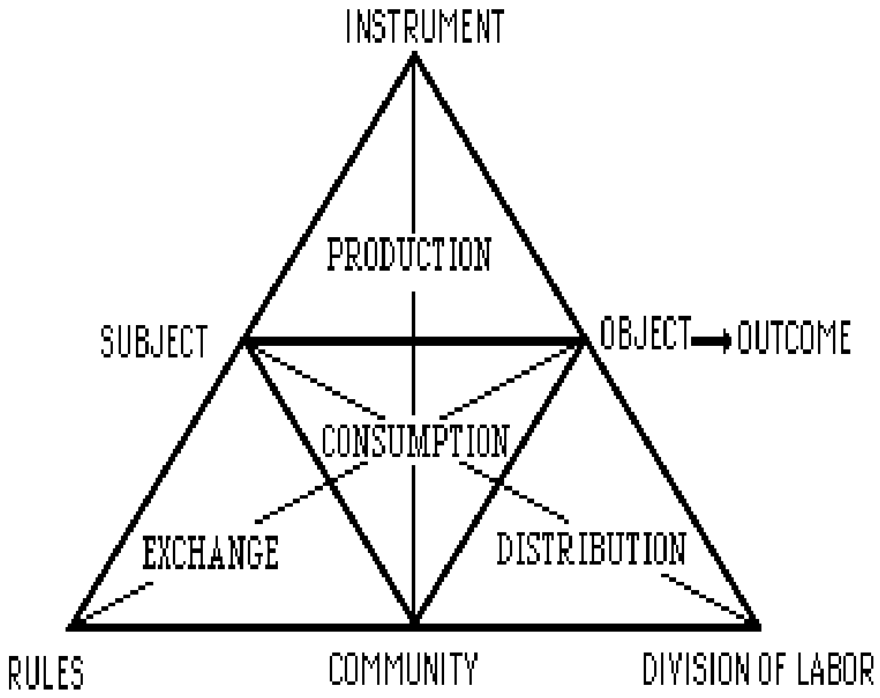

Figure 4.3. Engeström's model of human activity (Engeström, 1987, Chapter 2, The Evolution of Human Activity section, para. 14)

Engeström makes three claims for the model that are important to my category construction. First, Engeström presents his model as "the smallest and most simple unit that still preserves the essential unity and integral quality behind any human activity" (Chapter 2, The Triangles of Activity, para. 11). Second, he states that this model of activity makes it possible to analyze activity "as a contextual or ecological phenomenon. The models will have to concentrate on systemic relations between the individual and the

outside world" (Chapter 2, The Triangles of Activity, para. 11). Third, Engeström claims that this model provides an analysis of activity as culturally mediated. Engeström's theoretical model provides my category construction with an irreducibly whole, mediated unit of analysis that can be used to contextualize the reader and reading in the social, material, and historical conditions in which reading occurs. Further, the model explains the relationships between the constituent elements of the activity system.

Context as the social, material, and historical conditions.

The corners of each triangle are explained as:

- **Subject**: the individual/subgroup chosen as the point of view in the analysis.
- **Instruments**: material and/or psychological tools
- **Community**: individuals/subgroups who share the same general object of activity.
- **Division of Labor:** the division of actions between members of the community, working toward the object
- **Rules**: both explicit and implicit regulations, norms, conventions that constrain actions and the activity as a whole
- **Object-Outcome:** the object or "problem" toward which the activity is directed. The object is manifested as the outcome of the activity.

Engeström's choice of production, distribution, exchange, and consumption as the "dominant aspects of human activity" (Chapter 2, The Triangles of Activity, para. 12) comes from Marx's analysis of labor in the introduction to *Grundisse*. It should be noted that communication can take the place of exchange in this model. These four aspects are intertwined within all activities.

Contextual relationships.

Engeström (1987) explains, “The model suggests the possibility of analyzing a multitude of relations within the triangular structure of activity. However, the essential task is always to grasp the systemic whole, not just separate connections” (Chapter 2, The Evolution of Activity section, para. 12). Engeström’s theoretical model allows my analysis to move beyond the idea of activity in context that is often seen in general academic usage. My goal in this section is to elaborate a general theory of activity as context that can be used to theorize tool-mediated activity as the context of reading. The structure of activity can then be used to analyze the context of reading.

Each of the four sub-triangles is dialectical. I am defining dialectical here as the principle that each of the "dominant aspects" of the triangle contains opposing forces; each is in tension with its own contradiction. For instance, production also includes consumption, since to produce is to use energy, raw materials, other products, and the like. Further, the corners of each triangle are in dialectical relationship to the others. The subject is dialectically related to the instrument, to the object, etc. Finally, the corners themselves are dialectical.

The example that Engeström uses is the inner contradiction of the object. Under the conditions of capitalism, the object produced in an activity has both use value and exchange value. Use and exchange are in a clear contradiction because the use value of an object gives it an exchange value, but to exchange the object contradicts its use by the producer(s) (Chapter 2, Inner Contradictions of Human Activity section, para. 8). Engeström elaborates on these dialectics because they define the relationships between the constituents of activity, and they are the motive for change in activity systems. It is not necessary for me to explain the intricate workings of the activity system here.

Pulling it all together, an example.

Engeström provides a brief analysis of classroom reading assignment that I can expand on as an example to of how activity as a mediated unit of analysis that can be used to contextualize the reader and reading in the social, material, and historical conditions in which reading occurs. I will first describe a

classroom reading assignment. After setting the initial conditions, I will begin by determining the object of the activity, its true motive (Leont'ev, 1981). The analysis of this activity will provide us with an understanding of the text's place in the activity, the reader's relationship to the text, and so forth.

A text, a novel, is assigned for reading. There are grades attached to the assignment. The student needs to demonstrate that she/he read the assigned sections and "comprehends" the novel. The teacher uses a quiz on basic information to confirm that the student read the assigned sections. There is also oral reading and classroom discussion. The process proceeds until there is a final test on the book in which the student is required to write an essay about some aspect of the novel.

In this activity, the student is processing the text into certain required forms. The reproduced text is the object. The answers to questions, oral reading, explanations of story elements, etc., are actually the text re-presented. As Engeström (1987) points out, "the outcome of their activity is above all the same text reproduced and modified orally or in written form" (Chapter 2, The first lineage: Learning within School-Going section, para. 16). We can make the required forms of text production in this example the sorts of answers that fit Bloom's Taxonomy (Bloom, 1974): knowledge of facts from the text, comprehension of the story elements, application to personal experience, analysis of character motivation, etc.

Engeström's model of activity allows us to analyze reading in this activity as follows:

- The object of this activity is the reproduced text.
- The technological tools (instruments) that mediate the student/subject's production of text are the pens and paper, or computer keyboards, screens, and word processing software.
- The psychological tool that mediates the production of text is written language: the external and internal signs (I will specify alphabetic signs, i.e., print) and cognitive operations that the student has learned to use to mediate attention, memory, recall, and higher order thinking (Vygotsky, 1978).
- The subject is the reader.

- The rules are the established institutional norms for oral reading, group discussion, written answers to test question, etc. The criteria for written assignments are sometimes provided as specific, predetermined features described in the assignment instructions or assessment rubric.
- The community is the classroom members, students and teachers.
- The division of labor exists between the teacher and students.
    - The teacher assigns the basic activity structure, mediates student understanding, and grades the student's production.
    - The student engages in a number of goal directed actions that work toward producing the object (see below for an important qualification).
    - Peers engage in the same production and can influence or even assist with others' production.

In the example, reading mediates the production of the written answers. We could also call the reading "finding the right text to recite back in various forms."

Because the reproduced text is the object in this example, the inner dialectic of the reproduced text (the object) has particular implications for reading education. I said earlier that one possible inner contradiction of objects is that they have both exchange value and use value. In my analysis, the text produced has little use value for the reader. Engeström (1987) describes these textual values in this way:

> the object 'text' has a twofold meaning. First of all, it is a dead object to be reproduced for the purpose of gaining grades or other 'success markers', which cumulatively determine the future value of the pupil himself in the labor market, On the other hand, text tangentially also appears as a living instrument of mastering one's own relation to society outside of school. In this respect, the school text possesses potential use value (Chapter 2, The first lineage: Learning within School-Going, para. 21).

The object in this example is a rewritten text with exchange value. The reproduced text can be exchanged for grades. That is the object and motivation for the student as I have modeled it.

I also agree with Engeström that there is a potential use value in the reproduced text. Certainly, the use value is the ostensible motive expressed by teachers and schools. There is a use value beyond both its use as a social tool and its use by the teacher. When Engeström points out that the text can be

exchanged for "success markers" other than grades, he misses an important and immediate use value. Students can produce texts that position them within the classroom and school community. Oral readings can become satire, express disinterest, recontextualize the content, or any number of alternative readings. This is a dynamic of agency in participation that CHAT does not address.

What is the value for the teacher? The text has a use value for the teacher. It can be used to assign grades. Grades are a necessity of job performance in most educational institutions. The text also has use value if it is used to assess and plan instruction. Therein lies the contradiction of many school activities. The necessity of grading means that the text will always exhibit its dialectical contradictions to the teacher, though they may remain as an unconscious tension. For the teacher who wishes to use assessments to design planning, the text produced has use and exchange value. Ironically, the more use value the teacher places on assessments, the greater the tension and contradiction.

The structure of human activity as context.

Now to the main point of this example: If we apply the tentative suggestion above that tool-mediated activity is the context of reading, what is the context in this example? The answer is that the context of this reading event is the entire activity network. It is located in the community, rules, division of labor, text—united into a contextual whole through dialectical relationships between the constituents.

This conclusion is supported by Cassens and Kofod-Petersen (2006). The authors use Engeström's model of human activity to model the context-awareness of artificially intelligent systems. They describe their context model as "a multi-relational semantic network….[that] allows for the inference of relationships between concepts by construction of contextual dependent paths between them (p. 3). They too conclude that CHAT lends itself to an understanding of context as the network of constituents and the relationships between them. The contextual network gives any particular constituent of the activity system its meaning. Conversely, constituents lend to the total meaning of the multi-relational network.

My concluding statement regarding this analysis is that the structure of activity provides an understanding of reading that correlates well with Louise Rosenblatt's reading theory. According to Rosenblatt (1988) the reader's focus and attention is shaped by his/her "stance" toward the text. The process used to read material in order to pass tests on the content (an example of efferent reading) is different from the process for reading for pleasure and/or vicarious experience (aesthetic reading). Engeström adds the cultural–historical understanding that the reader takes a particular stance toward the text and engages in the reading according to the object/outcome that motivates the reading. Activity structure is a means for establishing a systematic and detailed understanding of how the object motivation affects stance (the reader–text relationship), and the reading process.

Shortcomings of Engeström's activity.

It might be apparent at this point that not all human acts are activities. As modeled so far, reading is a subordinate act within an activity. While it provides the macro context in which reading is situated, CHAT lacks specification at the level of the situational conditions under which reading occurs.

Leont'ev describes activity as composed of three hierarchal levels: activity, actions, and operations. Actions and operations are the subordinate acts that form the activity unit of analysis. In his theory of activity Leont'ev (1981)

> distinguishes, first, separate (particular) activities, using their energizing motives as criterion. Second, we distinguish actions – the processes subordinated to conscious goals. Finally, we distinguish the operation, which depends directly on the conditions under which a concrete goal is attained. (p. 65)

> These "units" of human activity form its macrostructure…it reveals the inner relations that characterize activity. (p. 69)

Activity is the overall event that begins and ends with the need and attainment of a goal. Actions are the "processes" of activity that are necessary for achieving the goal. Leont'ev (1981) explains that "Human activity exists only in the form of an action or a chain of actions" (p. 61). Likewise, actions only exist in the form of operations. Operations are the "means by which actions are carried out" (p. 63). Operations

are mediated by tools, and they are conducted under particular conditions. Actions and operations are the moment by moment "actual" level of activity. Actions and operations can be external and internal (mental) processes.

Leont'ev (1981) provides a helpful example of the differences between activity, action, and operation:

> The actions that constitute activity are energized by its motive, but are directed toward a goal. Let us take the case of a human being's activity that is motivated by food. The food is the motive. However, in order to satisfy his/her need for food, he/she must carry out actions that are not immediately directed toward obtaining food. For example, his/her goal may be to make a tool for hunting. Does he/she subsequently use the weapon he/she made or does he/she give it to others and receive part of the total catch? In both cases, that which energizes his/her activity and that toward which it was directed do not coincide. (p. 60)

In the example, the overall activity of getting food requires the subordinate actions of tool making and the skillful operations required to make hunting tools. At this point in the activity the actions are directed at material tools and not food, but the object "food" unites the actions into the whole of food-getting activity.

It is at the level of actions and operations that Leont'ev (1981) mentions the situation and conditions that define how an activity is accomplished. Operations are described as carried out under objective circumstances and conditions.

> Any goal - even one such as 'reaching point N'- exists objectively in some objective situation. Of course, the goal can appear in the subject's consciousness in abstraction from this situation, but the same cannot be said for the action. Thus, apart from its intentional aspect (what must be done), the action has its operational aspect (how it can be done), which is defined not by the goal itself, but by the objective circumstances under which it is carried out. In other words, the performed action is in response to a task. The task is the goal given under certain conditions. (p. 63, emphasis his)

We observe actual manifestations of activity on the level of operations in an objective situation under certain circumstances and conditions. And this is the level where context according to CHAT breaks down. Based on the constituents of the activity structure we can say that the conditions are social, cultural, economic, material, and historical, all in dialectical relationship to each other, but neither Leont'ev or Engeström delves into the level of specificity that would be needed to describe or classify the

types of concrete conditions and objective circumstances that could be developed into constituents of context of the immediate act of reading, let alone the internal contexts within the text, etc. The omission is understandable, since situations and conditions are unlimited for all practical purposes. The lack of specificity does, however, limit the use of activity structure to fully model the context of reading, since reading can be an activity and action, or an operation.

The problem specified.

The lack of specificity at the level of actions and operations is a significant problem with using Engeström's structure of activity as the model for analyzing and understanding reading and context. Activity theory provides a generic model of all activity. Analysis using the model allows us to position reading within the macrostructure of activity. The macro-structure reveals the social, economic, and historical contexts of a particular instance of reading. We can call the entire socio-historical context in which all reading takes place the macro-context. Activity theory does not provide the level of specificity needed to describe the micro-structural context in detail because the model does not extend into the structure of actions and operations. A theory of reading context must include the context of actions and operations because not every instance of reading is an object-oriented activity as described by Leont'ev.

This conclusion is supported by Huang and Gartner (2009). In their use of activity theory to model the relevant parameters of context in artificially intelligent "context-aware pedestrian wayfinding services" (p. 44), the theorists determined that the context of interest lay at the level of actions and operations. Their solution was to use action as the unit of analysis and use hierarchal task analysis to describe the context of wayfinding actions. Though activity structure is contextual, it provides a means of analyzing the macro-context but does not provide an understanding of context on the level of actions, the context of interest.

A theory of reading context can include Engeström's activity structure as macro-context, but it will still need significant expansion to include the immediate context of reading as an action and operation. Context is found in both the macro-structure of activity and the microstructure of Leont'ev's

(1981) “objective circumstances” and “certain conditions” (p. 63) under which an operation takes place. A theory of reading context will also need to describe context at this level as well

Problems within the Use of CHAT as a Context Model

There are two major problems with using the structure of activity alone to analyze reading and context. The first is its lack of a specification of the model at the level of the actual operations through which activities are carried out. The second problem is that activity theory presents every human act (both actions and operations) as part of a larger activity. Activity theory is premised on that assumption. That is a danger of generic models intended to describe an entire class of phenomenon.

Many comments made in passing in the works of these theorists can leave the impression that life consists of chains of operations and actions that are all a part of one collective activity or another. When Leont’ev (1981) says, “If we mentally try to abstract actions from the activities that they translate into reality, nothing would remain” (p. 61), such conclusions seem warranted: Every action (and by extension, every operation) is associated with a motivating activity. By definition, all activity is collective. That allows for one of two conclusions. Either every human act is ultimately motivated by and contributes to a larger socially shared object or outcome, or, there are human acts that are not part of activity.

It may well be the case that everything a woman or man undertakes is object motivated, and that the only the only non-motivated states are "true emotions” (p. 50) as Leont’ev (1981) claims. By focusing on the common structure of internal and external activity, the complexities of human–human relationships are missing. Activity theory is designed to analyze collective and voluntary activity. We have a view of cooperative activity enjoined for the good of the whole. There is no accounting for conflict, disagreement, resistance, ulterior motives, etc. For instance, how do the models of activity explain a situation where involuntary workers are sabotaging machinery within an activity driven by the goal to produce munitions for war? More to the point, how does the activity structure describe the motives, actions, goals, and operations of a room full of students involved in oral reading? Are we to believe they share a common

motivation and objective? Also, where does a person reading for private pleasure fit into object-motivated social activity?

I have already answered this question to some extent. Activity exists as actions and operations motivated by a shared object or outcome. Activity models are useful for analyzing collective activity with a shared object/motivation. It seems less than optimal for describing social and cultural situations where an ostensible motive is unilaterally assigned and participation mandatory. Leont'ev (1981) touches on this problem in his discussion of the problem of goal formation: "Under laboratory conditions or in pedagogical experiments, we always give the subject a 'prepared' goal; therefore, the process of goal formation usually escapes the investigator's attention" (p. 62). The "process" can hardly be missed if it does not occur. Leont'ev does not provide us with an explanation of how we can understand activities that include prepared goals. We are warranted in asking, given his object-motivated definition of activity, if laboratory and pedagogical acts are activities at all. If they are not, then what are they?

Rosenblatt's emphasis on the reader's choice of a purposeful stance toward the text can remind us that the subject does have agency in reading. Student readers do not always conform their actions to the ostensible object. There are schools of theory and research such as critical theory and resistance theory that do provide explanations of student resistance of the institutional classroom culture and agenda (see Delpit, 1988, 1995; Jennings & Lynn, 2005; Ogbu, 2008). Some students produce an alternative text. If that text is in contradiction to the standardized text expected by the teacher and peers, the true motive can sometimes be understood as producing a statement of resistance. It serves to position the reader in particular ways toward the other participants and toward the activity's object. The point to take away here is that the activity system never determinates the actual role a given individual will play. Leont'ev emphasizes the idea that actions can serve different objects, and vice versa. Individual readers have latitude in their own participation in activities that involve reading. I believe this indicates that the context of specific operations like reading (Leont'ev's circumstances and conditions) plays a role that is not modeled in Engeström's structure of activity.

CHAT: Conclusions

The purpose of my review of CHAT was to explore its potential as a mediated unit of analysis that contextualizes the reader, reading, and the text within the context of the constituents of activity as defined by Vygotsky, Leont'ev, and Engeström. In CHAT, the structure of activity is understood as the context for analyzing human practices such as reading. To say that activity is a single unit of analysis is to express the understanding that the constituents of an activity structure can only be understood in terms of their place in and relations to the entire activity system. These constituents and relations form a total context. CHAT provides a system of constituents and their relations that comprise the context for any particular constituent we wish to make the focus of analysis. When reading is an operation that realizes an activity, the activity structure allows for an analysis of the systematic structural relationships that comprise the macro-context of the reading event. CHAT avoids the dualism implied by the term "activity in context" by presenting all of the constituents in the structure of the activity structure as context. In this way, activity is indeed the contextualized phenomenon that Engeström sought to describe. Combined, these concepts provide a conceptualization of the context of reading. The constituents of the activity structure are generic specifications of the social, cultural, economic, historical, and material context of any particular instance of reading.

Though CHAT provides a contextual unit of analysis with specific constituents and a theory of relationships between parts and between a part and the whole, there are problems with using the activity structure as context. CHAT allows for analysis of the context of reading at the macro scale of the social and economic relationships within which reading is embedded, but is inadequate for finer grain analysis of the immediate context of the reading event, and the linguistic context of letters, words, sentences, etc. Thus, CHAT provides concepts that are extremely useful in conceptualizing the great scope of context, but is inadequate for developing a full theory of context. The structure of activity is too broad for use in describing the scope of context down to the level of the relationship between parts of a letter. A full theoretical category is most useful if it can as adequately describe that micro letter-level context, established in cognitive print theories, as it can the social, cultural, and material phenomena established in

CHAT. I must turn to compatible theories that provide concepts that are applicable to describing the entire scope of context. The end result will be the conclusion of this round of my analysis, a theory of context that that can be used to describe the new context of digital, computer-mediated reading.

Having examined the line of theory that understands context as the constituents and relationships that comprise the structure of an activity system, I now turn to a line of theory that understands human events and activities through the lens of an entire situation, or context. The second classical lineage I will bring into the dialogue is the school of pragmatism or "contextualism" as explained by John Dewey and Stephen C. Pepper. My purpose in to answer two outstanding questions: 1) how is meaning produced in the reader–text–context relationships? This is the problem of epistemology. 2) What is context at the level of actions and operations where reading actually takes place?

Situation & Context: Dewey, Bentley, and Pepper

In this section I will analyze two related theories that fall under the general heading, "theories of situation and context," or pragmatism and contextualism. Where activity theory provides a view of activity as a contextualized social-material system, this school of thought presents people, objects, and events as taking their name[6] and meaning from the "contextual whole." The general concept is that the "constituents" of a situation or event derive their positions, roles, and functions from the relationships established within the whole. The unit of analysis is the situation or event and incorporates both the object of analysis and its context.

This school of thought, however, provides an understanding of constituents and context that allows for analysis of context at any scope. Contextualism provides an analytical lens that can focus down to the micro-constituents and their context (e.g. the marks that constitute a letter or symbol), to macro constituents with contexts of greater scope than is typically sought (e.g. a dissertation in the context of the global political economy).

[6] In *Knowing and the Known*, Dewey and Bentley (1949/1973) develop an epistemological category they term naming. Naming is a part of knowing and indicates a transactionally derived designation. It can be distinguished from identifying since the latter suggests discovery of the inherent qualities of an entity.

Pragmatism: John Dewey & Arthur Bentley

I begin with Dewey and Bentley's (1949/1973) theory of the transactional event. Event has three forms: situation, occurrence, and object. I will focus my discussion on situation. Situation is the event seen transactionally, that is, as a contextual whole within which actions and objects are understood relationally. Dewey and Bentley's theoretical description of the transactional, contextual situation provides three concepts that contribute to my category construction:

1. Situations are understood transactionally when we view their constituents as interrelated and bound together as a contextual whole, a single unit of analysis.
2. The unit of analysis is the context in which the individual constituents take their positions and meaning. It is the context in which they are understood.
3. The relational whole is a pervasive quality of a situation. This quality binds the constituents into a contextual whole.

These principles can be used to describe reading. As we have seen, Louise Rosenblatt credited her understanding of the transactional relationship between reading and context on Dewey and Bentley's transactional epistemology. It seems warranted, then, to seek an explanation of a transactional understanding of activity and context from the source.

Rosenblatt (1988, 1994a, 1994b) identifies her primary source as *Knowing and the Known* (Dewey & Bentley, 1949/1973). In this work, Dewey and Bentley present a relational, or transactional, understanding of knowledge. They use "knowing" to indicate the subject in relation to his/her object. The "known" is the object in relation to its knowing subject. Neither can be understood separately, and in fact, they can only be "named" subject and object by virtue of their relationship to one another. Transactional epistemology can be generally understood as a view of the world that sees designations such as subject and object, internal and external as matters of analytical position and perspective rather than distinctions of independent entities. Transactional scientific inquiry does not recognize knowledge that claims to capture the essential properties of objects as they exist apart from the knower. This point was established in my section on Rosenblatt's transactional theory of reading.

Likewise, the constituents of an event, when observed as a full situation, can only be understood transactionally. Dewey and Bentley (1949/1973) assert that the word situation "should stand either for the environment of an object (interactionally), or for the full situation including whatever object may be selectively specified within it (transactionally)" (p. 111). Obviously, they use the transactional meaning. They argue against investigative approaches that observe the interaction of objects and events (the subject matter) within a field or total environment; that is, interactionally. Dewey and Bentley state that *situation* should be used to indicate, "event as subject matter of inquiry, always transactionally viewed as the full subjectmatter [sic]; never to be taken as detachable 'environment' over against object" (p. 112). This definition and distinction of terms is characteristic of their work and I will examine their similar distinction between situation and context below.

Since the purpose of *Knowing and the Known* (1949/1973) is to present an epistemology (p. 90), the transactional meaning of "situation" and "event" refers to the process of knowing. The meaning offered for "situation" is intended to describe or define a particular way of knowing or analyzing an event; it is an analytical perspective and approach. Dewey and Bentley (1949/1973) use the example of the Parthenon in Greece to clarify this perspective.

> The Parthenon is an object to the visitor, and has so been for all the centuries since its construction. It is nevertheless an occurrence across some thousands of years. While for certain purposes of inquiry it may be marked off as object-in-environment, for thoroughgoing investigation it must be seized as a situation. (p. 111)

The example shows that object, occurrence, and situation are terms signifying the observer's (or Knower's) various analytical perspectives on the object of interest. The situation is the object and occurrence understood as a whole. Dewey and Bentley's position is that a thorough investigation of an event is only possible if we take the entire situation as the unit of analysis.

So, Dewey and Bentley use the situation (a specification of an event) as the basic unit of analysis in scientific inquiry. Situation is the context within which the objects and events take form and meaning. The reverse is also the case. There is a quality of situations that binds constituents together to form a

qualitatively whole unit. It follows then that Dewey and Bentley present the whole situation as the context for understanding the parts.

In their discussion of situation, Dewey and Bentley often refer the reader to Dewey's discussion of situation in his book, *Logic: The Theory of Inquiry* (see footnotes pp. 111, 119). In *Logic*, Dewey (1938) expands beyond the discussion of situation presented in *Knowing and the Known*.

> What is designated by the word "situation" is not a single object or event or set of objects and events. For we never experience nor form judgments about objects and events in isolation, but only in connection with a contextual whole. This latter is what is called a "situation" (p. 66).

Dewey equates situation with "a contextual whole." The situation is the context for experiencing and understanding the constituent objects and events. Objects and events are understood "in connection with a contextual whole."

This leads to a question of fundamental importance to this paper: If "a contextual whole" is something other than the numerous objects and events that comprise a situation, what is context? Put another way, if we apply the reading theories of Chapter 3 and Leont'ev and Engeström's constituents of activity from earlier in this chapter to Dewey's "objects and events," what else can context be if it is not the spoken and written language, the material conditions (object, tools, the natural world) and the social circumstances and conditions (rules, norms, conventions, people's roles within the division of labor and other social organizations) that the individual encounters in any and all activities and situations? Part of the answer lies in Dewey's understanding of the "connection" of objects and events with a contextual whole.

I will start from the premise that Dewey's phrase "in connection with a contextual whole" is generally equivalent to "in relation to a contextual whole." This interpretation is warranted because it maintains the transactional sense of the statement, in contrast to more associational/interactive interpretations of "in connection with" that are possible. Fortunately, Dewey (1938) provides a detailed explanation of the pervasive quality of situations that focuses on relationships that form within the whole.

> A situation is a whole in virtue of its immediate pervasive quality. When we describe it from the psychological side, we have to say that the situation as a qualitative whole is

> sensed or *felt*…Stating that it is felt is wholly misleading if it gives the impression that the situation is a feeling or emotion or anything mentalistic…
>
> The pervasive quality is not only that which binds all constituents into a whole but it is also unique; it constitutes in each situation an *individual* situation, indivisible and unduplicable. Distinctions and relations are instituted *within* a situation; *they* are recurrent and repeatable in different situations. (p. 68, emphasis his)

In this passage Dewey emphasizes the relational connection of objects and events within a contextual whole. Dewey describes the interconnection of constituents as a pervasive quality that is sensed or felt, presumably by participants. According to transactional epistemology, the researcher's goal is to develop a sense of this wholeness through a particular analytical perspective. Dewey states that the "feeling" and sense of wholeness is not a feeling, emotion or anything mentalistic. Neither is it "an object in discourse" (p. 68). We are faced with the problem of understanding what the sense/feeling of qualitative wholeness is.

The answer lies in the transactional relationship between the knowing and the known. Dewey's epistemology does not allow for a dualism between that which is mentalistic (knowing) and the situation (known). The knowing (or knower) and known are designations of roles or positions within a single relationship. The distinction and relations between constituents only exist as a transaction between the knowing subject and the known objects and events. They take their names and relationships from their place within the whole.

We can say, therefore, that the participant's sense of the situation as a qualitative whole is a knowing, and the whole situation is the known, and that both are constituted in the relationship. The quality of wholeness exists transactionally; it is an experience produced between the knower and the known. This is clarified as the passage continues with a description of the way that a participant's understanding of discourse is dependent on her experience of a situation. The net result is an understanding that the unifying "pervasive quality" is experienced. Contextual wholeness is a sensed quality of situations. What then is quality?

Dewey (1938) again describes quality as a sense of wholeness that consists of, but is more than, the constituents and their relations in a situation.

> The intended…meaning may be suggested, although not adequately exemplified, by considering such qualities as are designated by the terms distressing, perplexing, cheerful, disconsolate. For these words do not designate specific qualities in the way in which *hard*, say, designates a particular quality of a rock. For such qualities permeate and color all the objects and events that are involved in an experience…
>
> Probably the meaning of *quality*, in the sense in which quality is said to pervade all elements and relations that are or can be instituted in discourse and thereby to constitute them an individual whole, can be most readily apprehended by referring to the esthetic use of the word. A painting is said to have quality, or a particular painting to have a Titian or Rembrandt quality. The word thus used most certainly does not refer to any particular line, color, or part of the painting. It is something that affects and modifies all the constituents of the picture and all of their relations. It is not anything that can be expressed in words for it is something that must be *had*. Discourse may, however, point out the qualities, lines, and relations by means of which pervasive and unifying quality is achieved. (pp. 69–70)

Even if I accept Dewey's assertion that the pervasive quality of a situation (or whole context) cannot be expressed in words but must be had, or experienced, if I am to establish context as a theoretical category in reading I must indeed fall back on the use of discourse to describe how the contextual whole is achieved. Dewey is faced with the same dilemma, and he provides the explanation that the quality of wholeness is an aesthetic sense that affects all of the constituents and relations of a situation. It is the sense that the constituents affect a synergy that establishes a contextual whole.

There is a very useful concept that runs throughout the discussion. Dewey consistently discusses his unit of analysis, situation, as composed of constituents (variably termed elements, distinctions, and objects) and their relations. He repeatedly ties the idea of wholeness to the binding of the constituents and their relations into a unique whole. Indeed, this "constituents and their relations" understanding of the contextual whole is also seen in the inherent contextuality of Engeström's model of human activity. I will continue to develop this concept as I examine Stephen Pepper's theory of contextualism.

First, however, I want to use Dewey's discussion of the textual situation as an opening to expand on a concept that has arisen repeatedly in the theoretical perspectives I have examined; the idea that the meaning of language depends in part on the situation described in the text. I first brought this idea into the discussion during my examination of Rumelhart's description of semantic context. Dewey's (1938)

discussion of situation in *Logic* continues with a passage on the dependence of the meaning of discourse on the situation to which it refers.

> Discourse that is not controlled by reference to a situation is not discourse, but a meaningless jumble, just as a mass of pied type is not a font much less a sentence. A universe of experience is the precondition of a universe of discourse. Without its controlling presence, there is no way to determine the relevancy, weight or coherence of any designated distinction or relation. (p. 68)

Dewey continues further along in the section, "as has been said, a qualitative and qualifying situation is present as the background and the control of every experience" (Dewey, 1938, p. 70). Put simply, Dewey indicates that the meaning of discourse is controlled by the participants' experience of a qualitatively whole situation. For reading, this means that at a minimum there must be a situation established within the content of the text within which we can understand the textual discourse. The relevance of the situation in which the reading event takes place is still on the table. We can say, by appealing to Rosenblatt's emphasis on the effects of a reader's purpose on the reading event, that the immediate situation of the reader and reading is relevant. After all, the reader's purpose is manifested due to some conditions that exist in the moment of reading. There may be pleasure to be had, in which case the reader is in a social and cultural moment that affords leisure time. There may be work to accomplish, in which case the reader might have been assigned the informational piece that is read (again the requirement is formed within the social and cultural position the reader occupies at the moment).

Dewey provides a "situated" view of the meaning of language. Discourse has meaning within the pervasive situation. In this regard, Dewey's use of situation is akin to the discussions of semantic context in the reading theories I have examined. For Dewey, meaning is specific to the context and situation. The reading theorists examined in Chapter 3 discussed the effect of the situation described in the text on meaning and comprehension. In particular, in my discussion of Rumelhart's understanding of "general context" effects, I concluded that by "general context" he meant the situation being discussed in the passage. The situation within the text provides the context for arriving at an understanding. This complements the understanding of semantics that Dewey is proposing.

To summarize my discussion of Dewey's "situation," I began with the overarching question of how objects and events are connected with (or in relation to) a contextual whole. Dewey's answer is that each situation has a pervasive quality that binds its constituents (subject, objects, and events) into a whole, and that this qualitative whole is sensed or felt. That leads to the question of exactly what it means to sense the quality of wholeness. Dewey's answer is that the unifying pervasive quality is experienced in the same way that the esthetic quality of a painting is experienced. Finally, we need to understand what Dewey means by the quality that is experienced. Dewey's rather unsatisfactory answer is that quality, as an experience, is indescribable just as "the quality of distress and cheer that marks an existent situation is… unique and inexpressible in words" (p. 70). Dewey's discussion stops short of a full description of the 'connection' of elements and relations with a contextual whole, a concept that I designated as central for developing *context* as a category. I will address that lack using the work of Stephen Pepper.

Discussion: Dewey's "situation".

The goal of this section was to examine Dewey's and Bentley's contribution to a theorization of context. I pull three concepts from transactional epistemology. First, a situation is understood transactionally when we view the distinctions and interrelations of its constituents as instituted within the situation and bound together in a contextual whole. Second, the situation, as the transactional unit of analysis, is the context in which the individual constituents take form and meaning. It is the context in which they are understood. Third, wholeness is a pervasive quality of a situation that binds all constituents into a unique contextual whole.

Though Dewey provides us with an understanding that a contextual whole involves both the constituents and their interrelationships, it still remains to be explained how the constituents of a situation are connected as a contextual whole. That is, Dewey's theory is inadequate for explaining how the pervasive quality of wholeness among the constituents is achieved. That question is answered by Stephen Pepper's analysis of the school of thought within which Dewey can be included: Contextualism. I will move on to that analysis next.

Dewey and Bentley (1973) present their view of knowledge as an alternative to interactive, cause-and-effect understandings of the world. The transactional perspective sees contextually whole situations as the unit of analysis for understanding the parts. Dewey's body of work presents a relational view of subjects, objects, events, language, etc. From a transactional perspective, each takes its position and "name" from the network of relationships that form a qualitatively whole situation. Clearly, Dewey believes that objects and events are only understood as part of that contextual whole. Knowledge of the world around us is established through a sense of the place of people, objects, and events within a contextual whole.

Because Rosenblatt based her theory of reading on Dewey's transactional theory, this interactive / transactive distinction is the same division seen between the reading theories at the start of this chapter. Though she describes the relationship between activity and context differently than Dewey, (Dewey does not use the term "mutually-constituted situation"), as an analytical perspective the distinction still holds. The (as yet unidentified) constituents of an instance of reading must be understood in terms of their relations to one another and their place in the whole. Dewey presents word meaning as specific to the situation in which it is used; that is, its context. His assertion that the meaning of words as specific to the situation parallels both Vygotsky's position on meaning, sense, and context and the discussions of semantic context in alphabetic print reading theories.

It is clear by now that Dewey typically speaks in terms of the situation rather than context. In *Knowing and the Known* Dewey and Bentley (1949/1973) dismiss the word context as "carrying many suggestions of transactional treatment. However, where it obscures the issues of naming and named, i.e. when it swings obscurely between verbal and physical environments, it is more apt to do harm than good" (p. 175). So, their distinction is twofold. For an unexplained reason they feel that including both the verbal with the physical obscures the term. They also seek to avoid the "surrounding environment" meaning of context. I read this as a terminological distinction. We have seen (in both the mediation of activities by language and Rosenblatt's transactive theory of reading and writing) that both verbal and physical context needs to be taken into consideration. The authors seem to agree since their designation

of transactional situations includes both. A relational understanding of context avoids the dichotomy between verbal and physical objects and reclaims the usefulness the term context; we reverse the obscuring by defining context using the transaction between the naming and named, whether in language or in the social-material world. Their definition of situation is, for all intents, equivalent to contextual wholes.

In Engeström we find activity presented as a contextual and ecological phenomenon without further explanation. He states that the contextuality is self-evident. Dewey significantly expands the idea of a contextualized unit of analysis, but his use of situation as the unit of analysis leads me to a theoretical crossroad. Dewey uses situation (the contextually whole event) as the transactional unit of analysis. Activity theory uses the unit of contextualized activity. These schools of thought both use a contextualized unit of analysis, but they describe their constituents and relations somewhat differently. This leads to a choice. The category of context being constructed can either apply to a single unit of analysis, for example, the structure of activity, or it can conceptualize context in such a way that it is able, in combination with the categories of other theories, to satisfactorily interpret the facts and phenomena within various contextual units of analysis.

The decision can be guided by the idea that the more useful the category, the better it is. In order to claim that the category being constructed is "portable," however, I must determine the necessary similarities between the theoretical units of analysis to which the construct applies. I must define the criteria of theories with which my developing category is compatible.

Cole (1995) distinguishes between theories that understand context “as that which surrounds” (p. 108) and theories that conceive of context as “that which weaves together” (p. 109). In his ongoing work on the subject, Cole (2003) connects the first perspective with interactionist views and the second perspective with contextualism. His analysis is similar to Dewey and Bentley’s distinction between an interactional understanding of the relationship between an object and its environment, and the transactional understanding of the relational constitution of both the object and situation. The understanding of context that is developing in my analysis is congruent with theories that understand

context as weaving, or binding, constituents into a qualitative whole. There are three ways that activity and situation share this perspective:

1. Both theories maintain the fundamental unity of the individual, the activity (or event), and the social/material world.

2. The constituents of a situation and an activity are distinguished and understood according to their relationships to each other and to the whole. In activity theory, the dialectical relationships form the constituents. They become what they are in their relations to one another. Though Dewey uses a transactional concept of relations, the similarities are obvious.

3. The two theories present the same basic perspective on meaning: Understanding constituents requires understanding their relationships to the whole system. Analysis and investigation begins with the unit (activity, situation) as a whole. The parts can only be understood in terms of the whole contextual system. As an analytical unit, the situation is transactionally understood through "functional observation of full system [sic]" (Dewey and Bentley, 1949/1973, p. 112) or analyzing all of the objects and events as a contextual whole. Likewise, the constituents of activity are understood through analysis of the activity system "as a contextual or ecological phenomenon" (Engeström, 1987, Chapter 2, The Triangles Of Activity section, para. 11).

These three theoretical premises form the criteria for selecting theories from which I can continue to build the category context. The decision I am making here is in favor of a definition of the category "context" that can take up the objects (categories, constituents) of other theories (e.g. reading theories) and satisfactorily interpret the objects and context within that phenomenon. I will put my definition of context to that test in Chapter 5.

Stephen C. Pepper: Contextualism

A contextual theory that fits all three of these criteria is presented by Stephen C. Pepper (1942) in his book *World Hypotheses: A Study in Evidence*. In *World Hypotheses,* Dewey's pragmatic theoretical perspective is identified with the world hypothesis (or school of scientific thought) that Pepper terms "contextualism" (p. 141). Pepper's description and analysis of contextualism substantially builds on Dewey's concept that wholeness is a quality of a given event.

More importantly, Pepper (1942) provides a vocabulary of theoretical categories for explaining how the object relations are established within a contextual whole and how the wholeness of context is achieved. Contextualism's categories are the basic concepts that contextualist theorists use to explain and describe the world. First, the contextualist interprets every event in the current epoch[7] according to its quality and texture. Quality and texture, in turn, are divided into sub-categories, one of which is context itself.

From a contextualist perspective, context is a distinction of function within a whole event. In the course of human consciousness attention is focused on a particular constituent within an event, and the rest of the event and its relational constituents become the context. Context is simultaneously the contextual whole and the network of constituents and their relationships that make up the whole. Goodwin and Duranti (1992) draw this same conclusion regarding context. "A relationship between two orders of phenomena that mutually inform each other to comprise a larger whole is absolutely central to the notion of context (indeed the term comes from the latin [sic] *contextus*, which means 'a joining together')" (p. 4). Though Goodwin and Duranti describe that which is being contextualized as the focal event, rather than the focal object, Goodwin and Duranti explain context as the phenomena in which the focal event is embedded that provide the resources needed to make sense of the focal event (p. 3).

[7] Pepper (1942) begins with the fundamental contextualist categories of change and novelty as global characteristics of the universe. A continuously changing universe makes any statement about the present increasingly irrelevant as time passes and changes mount. The current epoch, however, demonstrates enough stability that it is useful to understand quality and texture as enduring characteristics of event (pp. 235-236).

This understanding of context is compatible with understanding the structure of activity as context. The activity structure as a whole is the context, yet context is found in the constituents and their interrelationships that comprise activity. Likewise, in order to understand the objects and events (the constituents) of Dewey's transactional situation, we need to understand the situation as a whole. At the same time, in order to understand the whole we must understand the constituents. As I stated earlier, a useful way of understanding this view of context is to recognize that the unit we use to analyze any object is a whole context, but that context can only be discussed and understood by focusing on specific constituent objects and their relations. The object that is focused upon establishes the "focuser" as subject and becomes the nexus of a network of relationships with other constituents. This network of constituents is the context of the object of interest.

Grounding these concepts in a reading example will hopefully prove helpful. A person opens the Bible to the first page of Genesis and reads, "In". A subject and object are established in relation to each other. They are both in relationship to a whole network of other objects that are ALL the context of the reader–print relationship (if we follow Rosenblatt in distinguishing the meaningful TEXT from the marks on the page). Their relationship is contextualized in their relationship to the book of Genesis, to the overall Bible, the syntactic and semantic relations to other words and passages and all historical utterances that uniquely position the word *In* at this moment, the social conditions that prevail, the material surroundings, and so on. We can also focus within the word and call the *I* context for the *n* and vice versa. If we follow Rumelhart, the jots and tittles contextualize each other if and when we focus upon them. Of course, the reading event continues as the words *the* and *beginning* become text/focal objects (words that milliseconds before were context in relation to the word *In* in the phrase, "In the beginning") and the word *In* becomes context. Text and context are designations of functional relationships. Along the way the event takes on a whole meaning that exceeds the sum of its parts.

We do not want to say that there is one context for the text, perhaps the linguistic and historical-dialogical context, and another context for the subject, perhaps the social situation and material surroundings. The reader and text, in relationship, are contextualized within the entire event. We do want

to say something more along the lines of an explanation of events than just providing examples. This is the vocabulary and explanation that Pepper provides.

Pepper provides a general explanation of the quality and texture of events. The phrasing and ideas connect to my discussion of Dewey's pragmatism and also set the stage for greater specification.

> The quality of a given event is its intuited wholeness or total character; the texture is the details and relations which make up that character or quality.
>
> The two are not separable, though in different events one or the other may be the more prominent… There is no such thing as a textureless quality or a qualityless texture. It follows that contextualism denies that these are absolute elements. It denies that a whole is nothing but the sum of its parts. It even denies that a whole is a sort of added part like a clamp that holds together a number of blocks. A whole is something immanent in an event and is so intuited, intuited as the quality of that very event (p. 238).

"Texture" is a term for the subcategory of context I have been calling the "objects and relationships." "Quality" is the unification of textures into a whole. Pepper describes the intuited quality of wholeness by providing a number of examples. A face is recognized as a particular person without recourse to the individual features. The same can be said of our recognition of our home. All of this follows Dewey's sense of the pervasive quality of wholeness. The intuition that sees the wholeness of the many different textures sees the quality of a given event. Our typical way of viewing the world is to see a whole tree rather than a combination of bark, leaves, branches, etc. At least, that is how Gestalt theorists would have it.

The category of quality is further broken down into the sub-categories spread, change, and fusion. Spread can be called the duration of the event, such that duration is non-linear and represents the continuity of present moments of which any given present moment is a part.

Pepper uses the vocabulary of contextualism to explain the example of a sentence. The spread of a sentence is its entire presence. What came before and what may be anticipated to come next are present in every moment of reading. The moment in which one word (a texture) is read is a part of the duration of a reading event, but it is not understood or experienced as a single moment. When a single word becomes the center of focus, the determination of meaning becomes its own event, an event within an event. For

example, when the meaning of the word is unknown to the reader, the determination of its meaning becomes an event. The present is a texture that helps to establish the whole.

"Change" is understood in its common usage. Change is the continuous redistribution of the focus, tensions, relationships, meaning, etc., of the experience or observation of an event. The key point is that the quality of an event is continuously changing as the event unfolds.

Finally, "fusion" refers to the qualitative unity of the constituents of an event. “Quality always exhibits some degree of fusion of the details of its texture” (Pepper, 142, p. 243). Pepper uses the example of the fusion in a musical chord. It is a matter of perspective whether the listener hears the notes played simultaneously as a fused whole (a chord) or whether they are differentiated. The depth of fusion as a (sub)category is seen in the contextualist understanding that generally recognized qualitative units; that is, things that in everyday use are thought of as whole (e.g. a color, a leaf, a marble) can be understood as fusions of still smaller constituents. This concept can be usefully applied to Rumelhart’s (1994) description of the processing of a printed letter. Each letter is a fusion of smaller lines, loops, etc. Pepper concludes, “Fusion…is an agency of qualitative simplification and organization…Wherever a quality is had, there is a unit, and the tighter the fusion the greater the unification” (pp. 243-244).

With these three subcategories Pepper moves beyond Dewey and provides us with a more detailed conceptualization of what constitutes the quality of events. Though they tend toward jargon that hinders accessibility, the sub-categories spread, change, and fusion provide concepts that are useful for understanding the entire unit of analysis as a contextual whole.

For my current purposes, Pepper’s more significant contribution is his analysis of the category texture. Here the discussion provides a solid theoretical understanding of the object–context relations. In the background we still have in mind the question of how the specific constituents of activity and situation are bound together into a "contextual whole" that is qualitatively different than the sum of its parts. Pepper’s discussion of texture allows me to complete a basic conceptualization of context that I can elaborate and specify into a category of reading theory.

Pepper breaks down the contextualist category of texture into the sub-categories strands, context, and references. Texture, strands, and context are described as so conceptually intertwined that they must be discussed as a group.

> A texture is made up of strands and it lies in a context. There is, moreover, no very sharp line between strands and context because it is the connections of the strands which determine the context, and in large proportion the context determines the qualities of the strands. But by way of definition we may say that whatever directly contributes to the quality of a texture may be regarded as a strand, whereas whatever indirectly contributes to it will be regarded as context (p. 246).

We begin with texture as a specification of one particular constituent within the unit of analysis, the event. A texture is simply a constituent designated as the object of focus. Until this point I have spoken about objects or constituents as if they were singular wholes or unitary. Pepper reminds us that this is a fiction used to keep our analysis of any phenomenon from digressing into minutia. All object constituents are composed of still smaller constituents. Pepper calls them strands (p. 249). A word may be (and often is) taken as a texture-of-focus in an analysis of reading. We can see immediately that words have strands/constituents called letters, and letters have strands called loops, lines, etc., and onward. The sub-category texture theorizes the distinctions between constituents according to their place in the knower and known relationship. Pepper designates the names texture, strand, and context for the various relations and positions that constituents take on in the act of knowing.

The strands of an event are easily understood as the constituents of a texture or of the context. As constituents, their classification as strands is simply a result of the focus of the observer. They are constituents that take on particular relations at the moment of focus and attention. I will continue with the example of a sentence.

Having designated the sentence as our texture, the words become the strands and the strands beyond the sentence/texture are its context (e.g., the words and sentences that make up the rest of the paragraph, though as we will see, the context extends without limits). If we designate the word as our texture, the strands are its letters and the context is the sentence and beyond. The interrelationships

between strands determine the quality of the event, the textures, and the context. Textures are a specification of a particular grouping of strands (according to their function and position as the known).

As participation in, or analysis of, an event unfolds, strands are focused upon and become textures while the rest of the constituents/strands become context. Context is the interrelated network of strands that connect the texture in focus with the whole. Context is the matrix of constituent objects and their relationships to each other and to the focal object, the texture. Context is everything that is not the focal texture in a given moment.

A texture both contributes to and receives its meaning (or character) from the matrix of related constituents. Returning to the example of the fusion of a musical chord, the chord is a texture because the listener recognizes the fusion of its strands. The notes are strands. The context of the chord is the rest of the notes and chords being played by other instruments, the acoustic properties is the music venue, and onward. Given a concrete event we could specify constituents and relationships within the contextual matrix until we tired of the exercise. The choice of the chord as our texture and the limitation of the contextual considerations are determined by our needs and purpose. They are relative rather than fixed. This is a particularly useful conceptualization of context that makes a significant contribution to my category construction, and I will discuss the relativity of context in detail below.

Applying the concept of the qualitative whole, all of this can be said in reverse as well. We can begin with the whole and focus inward through the contextual matrix to any texture. In the example, we can understand everything remotely associated with a concert as a whole event, and follow lines of relationships inward until we arrive at one string of an instrument as a texture.

My analysis of Dewey's work resulted in three concepts that are still active in my category construction. They can be synthesized into the general statement that the unit of analysis (situation) is the system wherein distinctions and relations between constituents are constituted, and it is the total context in which they are understood. Situations have the quality of wholeness that binds constituents together into a unit of analysis that exceeds its parts and relations as a qualitatively whole system. The scope of

that system is limited by the purpose of the observer, rather than some inherent characteristic of the unit of analysis, since any unit is itself a part of a still larger situation and context.

In combination with his analysis of quality above, Pepper's description of texture adds much needed detail to the concept of context presented by Dewey. Pepper's sub-categories provide a theoretical explanation of the character of the contextual unit of analysis and the relationships that determine objects and context. An event (a situation or activity) is a unit of analysis that has the characteristics of duration, change, and fusion. The unit is an irreducible qualitative whole. The constituents of the event are distinguished as textures and strands by our analytical focus. Focus on a particular object establishes a texture (or object) and establishes the other objects as context. The constituents of the focal object are its strands. The relationships or "connections" between strands, textures, and context bind them together and give the event its quality. These relationships establish both the context of any given texture and the event's overall quality of "wholeness." It is this quality that necessitates taking the whole event as a total context. As Pepper stated earlier, texture is the "details and relations" that unify into the quality of the event. With the category of texture, Pepper completes his theoretical explanation of how the quality wholeness is achieved, the explanation that Dewey did not provide.

Pepper amplifies this understanding of texture, strand, and context using yet another sentence as his example. His sentence is, "A period will be placed at the end of this sentence." As a starting place he takes the phrase "at the end" as a texture.

> Now, with the phrase "at the end" taken as a texture, we may roughly say that its strands are "at", "the", and "end" and that its context is the other three phrases of the sentence. The meaning of "at", "the", and "end" contribute directly to the meaning of the phrase. But the total meaning of the phrase depends also on the connections of these strands with the outlying words and phrases which indirectly enter into the meaning of the phrase and constitute its context. The particular meaning of "end," for instance, in this phrase is determined by connections, partly grammatical and partly of other sorts, with the already written "period" on the one side and the about-to-be-written "sentence" on the other. These contextual connections are gathered up into the word "end," which contributes them as a group to the meaning of the whole phrase. (pp. 246–247)

The example serves to clarify the idea that the distinction between objects and context is relational. The meaning of any specific section of a written passage is determined by the relationships between the

constituents of which it is composed and its relationship to all of the other constituents of the event. Pepper's emphasis on the dependence of meaning on the connections between constituents brings detail to the emphasis I am placing on context as an ever-expanding network of constituents in relation to the object.

Pepper makes another point that must not be missed regarding the designation of a texture. The scope and scale of a texture depend on our purpose. We can designate a very small unit like letters and words, or larger scale constituents like novels. The boundaries of a texture are largely arbitrary since textures are designated as a unit of meaning for analytical purposes. This point is supported by Pepper's description of the relativity of textures, strands and context.

> We see also…that context, texture, and strand are relative to one another. If the phrase 'at the end' is taken as a texture, the surrounding phrases are context and the included words are strands. But if the whole sentence is taken as the texture, then the still wider references become context and the phrases of the sentence become strands. If a single word like "the" becomes the texture, then the words "at" and "end" become its context and its letters and phonetic and grammatical constituents become its strands (p. 248).

This relational description of context provides the breadth of scope that is required of a theory of context, a feature that I identified as lacking in activity theory. It is also applicable to written language. These features are highly useful to my construct. Their significance is discussed below.

While holding this "relationships to other constituents" concept of context in mind, we are also reminded that the quality of wholeness is also always active.

> Those elements, details, features, components are there and constitute the texture, but the texture has also its intuited quality, which is not reducible to these though it is precisely the wholeness of these. (p. 239)

I included the discussion of qualitative wholeness in both Dewey's and Pepper's work because the whole is a context with its own qualitative distinction (which has been detailed above). The schools of thought I have examined all insist that a thorough understanding of any object necessitates a systematic analysis of the network of objects within the whole contextual unit of analysis.

The reader may notice that I have omitted the sub-category references from this discussion. There are two reasons for this. First, Pepper himself isolates references to a separate discussion, and in Pepper's description, references are not tied closely to context. Second, the category makes very technical distinctions regarding the relationships between strands. For instance, the first type of reference is a "linear reference." In Pepper's example sentence above, the words in the sentence all have both "forward" and "backward" references. Pepper explains that

> [the word] "end" (in "at the end of this sentence") reached forward and achieved satisfaction in "sentence". It was the reference answering to the implied question, "End of what?" With the completion of "sentence," we knew "of what" and the reference was satisfied, and that strand terminated….From "end" this reference pointed forward to a satisfaction, from "sentence" backward to an initiation… (pp. 252–253)

The rest of the subcategories of references describe other possible relationships including convergence (or similarity) and instrumental references. The non-linguistic examples that Pepper uses to explain references lend themselves more readily to descriptions of the spread, change, and fusion of events rather than to an understanding of context.

Because this school of thought sees the relations between constituents as a major part of context, a specification of reference relationships seems, on the surface, to be significant to my category construction. However, I am omitting the concept of reference here and leaving the designation of particular word relationships to language and literacy theories. Linguists from a number of traditions have extensively theorized the concept of reference as the syntactic and pragmatic phenomena of deixis, anaphora, and indexicality (see Halliday and Hassan, 1976; Norrick, 2001; Ochs, 1990).

Discussion: Contextualism and the categories of context.

Pepper provides a theoretical understanding of both the quality of wholeness of an event and the functional relations of the objects and contexts of which that event is comprised. Pepper's explanation of the relativity of context, texture, and strand is fundamentally important for a theory of reading context. Context is the relational network of constituents of one's unit of analysis in relation to a focal object. It is

a relationship between constituents as well as the network of constituents defined relationally. The constituents of a unit of analysis both contribute to and receive their meaning from the matrix of related constituents; that is, their context. The "event" as a unit of analysis is generic. It does not specify a particular network of constituents and relations. Instead, the sub-categories of contextualism require application to a specific theory or model. A theory describing some actual event (for my purposes, theories of reading) provides the specific constituents and their relationships. Contextualism provides the categories for describing the characteristics of context, but reading theories are needed to specify the actual strands, textures, and context objects that constitute the reading event.

Pepper's analysis of a sentence is a case in point. His identification of the context in and of the sentence requires a theory of language. Though Pepper makes no specific reference to the theory that informs his analysis of a sentence, the terminology, constituents, and relationships demonstrate an application of basic linguistic terms to the general sub-categories of contextualism. It is the linguistic theory that provides the specific objects and relations that constitute the context of letters, words, and phrases, as well as the context of the passages and entire text. In the next section, I will combine my "intermediate" category of context (intermediate being the term used by Engeström to designate a category that needs to be tested through application) with social, cultural, and political theories of reading that extend contextual relationships beyond the words, sentences, and passages of cognitive, print-based theories to include the immediate social situation and sociocultural history.

The usefulness of contextualist terms.

A feature that stands out in Pepper's presentation of contextualism is his use of unfamiliar jargon to describe the sub-categories of contextualism. The term "quality" is broken down into the sub-categories spread, change, and fusion. The term "texture" is comprised of strands, context, and references. I find the terms an impediment to developing a theoretical understanding of context that will be useful in the field of literacy theory, research, and pedagogy. To construct a category that is accessible and useful, it seems advisable to avoid unfamiliar jargon as much as possible. Since Pepper himself had to provide detailed

explanations of these unfamiliar terms, as long as a congruent understanding of these categories is achieved, the use of the particular terminology is unhelpful and unnecessary. Therefore, wherever possible I will use terminology and descriptions that are more frequently used in the literature on literacy and language.

Discussions of the quality of wholeness, composed of spread, change, and fusion, are largely useful for theoretical or technical discussions of semantics and context. They describe the construction of meaning and the contribution of the whole to the meaning of the parts. When the contribution of the whole to the meaning of a particular constituent part is of interest, describing these qualities of the reading event in the concrete terms of the actual unit of analysis should prove adequate. For instance, in an activity as modeled by Engeström, the subject does not experience the rules, community, division of labor, and technology as distinct domains of the activity unless something happens to focus her attention on that sort of metacognitive awareness. They fuse together into an activity. In the general course of reading for a class assignment, there is seldom a conscious distinction between the roles individuals are playing and the rules or norms for engaging in the activity. More likely, the rules will fuse with the roles each member plays in the division of labor that is being applied to producing the assigned object, and so forth. Only the social critic will take note of the dialectical composition of the activity as it changes over time.

The category texture is far more relevant when we discuss contexts and reading. The texture is the object of focus (alternately, the constituent of interest), and can be as small as the features of a sign or as large as a period in the history of literature. "Strand" is a generic term for the components of which the focal object is composed; that is, the constituents of a larger constituent. Fortunately, the term "context" is common to both contextualism and literacy. So, in the following discussions of reading context, I will use the term "object of focus" for texture, "components of the object" for strands that compose textures, "constituents" for the objects that contribute to the meaning of the object of focus, and "context" to indicate the matrix of constituents and relationships that constitute the contextually whole event. I am also retaining the term ‘event’ to indicate the unit of analysis in reading. "Event" is frequently used to indicate

a specific occurrence of reading (see Heath, 1982; Moje, 1996; Rosenblatt, 1985). The familiar term is given precision as a theoretical category in pragmatism, and should prove accessible to readers in the field of literacy. (See Table 4.1.)

Table 4.1

Definition of Terms

Definition of Terms
Object of focus/constituent of interest: a constituent of a contextual event upon which interest is focused, a texture
Components: strands that compose the object of focus
Constituents: the objects that constitute the event and contribute to the meaning of the object of focus
Context: the matrix of constituents and relationships that gives meaning to the object of focus and constitutes the contextually whole event.
Event: a contextual human activity and specific occurrence of reading

I intend for the use of these specified terms to make my theory of reading context more accessible. Discussions of reading context are more accessible if we use familiar and conventional terms for the constituents of context rather than referring to the "textures" of a context. In this paper, language and literacy theories supply the specific terminology for identifying textures/constituents. For example, rather than using the terms texture and strand in reference to a word, we discuss a word (a texture) as composed of letters (strands) in an orthographic, syntactic, and semantic context. Rumelhart's textures/constituents are discussed as the orthographic, syntactic, semantic, and pragmatic textual environments. I will use the terminology in Table 4.1 as I continue with my category construction.

Problems in contextualist theory.

A minor problem with Pepper's analysis of context in a sentence is that it takes the sentence in isolation and fails to capture the context beyond the sentence rather dramatically. He goes into depth analyzing ever-smaller textures, strands, and contexts, but he does not acknowledge the ever-expanding context of the sentence. The omission may well be for the sake of clarity and is only worth pointing out because it amplifies the vitality and flexibility of Pepper's general concept. There is nothing in Pepper's theory that excludes broadening the scope of context beyond the sentence. In fact, as I will explain in my conclusions below, quite the opposite is true.

Also, while I see the value in the reduction of considerations in this example, and recognize that this is not a passage on linguistic theory, there is a relevant problem in Pepper's concept of the constitution of language meaning. This problem provides an opportunity to draw a theoretical conclusion regarding context and written language.

Pepper speaks of the direct meaning of the phrase and distinguishes it from the phrase's "total meaning" that is achieved through the indirect involvement of context. In the course of this paper, however, I have taken the position that any meaning of the isolated phrase "at the end" (which in turn is composed of the meanings of "at," "the," and "end") is dubiously abstract. In this example, the relationships within the phrase in isolation are grammatical. It is only a unit of meaning to the grammarian. As I stated above, reading a prepositional phrase alone on a page has no definite or practical meaning. In the actual practice of reading, the meaning of "at the end" is indeterminate without context. The evidence for this assertion is in Pepper's description of the object "end" as taking a particular meaning from its context. This point is actually addressed in the subcategory "references." For all purposes except grammatical analysis, Pepper's "total meaning of the phrase" is the only meaning. Even in grammatical analysis one defines objects and relationships, and therefore a context for understanding the phrase. This problem has arisen in many of the passages on language I have examined in both cultural-historical theory and pragmatism. All text is in a dialectical relationship with a context. Both transactional and dialectical theories hold that objects are constituted in their relationship to other objects.

In reading, there is a context within each grammatical object we focus on and there is a matrix of constituents in relationship to the object of focus. There is no context-free reading or meaning.

I therefore conclude that Bakhtin's dialogical orientation of discourse is a more useful conceptualization of word meaning, and the one I will use for the remainder of this paper. Bakhtin's sociohistoric meaning potential is more useful for analyzing what Pepper describes as direct and indirect contributions to meaning. Bakhtin's conceptualization maintains the premise that there is no context free meaning of utterances, yet by maintaining the meaning as potentials, dialogical theory does not specific a "one-size-fits-all" model of meaning.

For example, when considered as a texture in isolation, the phrase "at the end" has a field of potential meanings. It can be understood in its grammatical relations, which themselves only resolve into possibilities upon examination. It can indicate a location, meaning "when we arrive the end of X" (as it seems to in the context of Pepper's sentence), or it can indicate the conclusion of a time period. The phrase could also evoke religious and cultural meanings such as the eschatological phrase "at the end of days." The potential meanings are far too broad to detail here. When held up to the light, the phrase loses any claim to "a meaning." Its actual meanings are constructed in context by both the author and reader.

Situation and Context: Conclusions

Pepper's contextualism builds on Dewey and Bentley's pragmatic theory of the contextual event or situation. This school of thought provides a method of determining the context of a focal object of any size grain. Contextualism allows for a view of a moment of reading as a qualitative (and contextual) whole, or as a component of an ever-larger whole. The extent of the text and context depends on the focus of the subject(s) involved, though this should not be confused with saying that text and context are only what the subject is conscious of. The possibility that some or much of context does not enter into conscious consideration is still quite open, though an analysis of "how context works" is a stage of theory development beyond this paper.

The flexibility of the general categories defined within contextualism is both its strength and potential weakness. The ability to focus on both micro and macro contexts is vital, since theorists studying reading discuss context from the level of letter perception (see Rumelhart, 1977/1994) all the way through multi-volume theories of human communication (see Habermas, 1981). On the other hand, as Teun van Dijk (2009) points out, a theory of context can become a theory of everything, with the universe as the qualitative whole, if its scope is not limited in some way.

Pepper's passage on the "analytical consequences of the things we have just been saying" (p. 248) addresses the role of an observer's goal and purpose in limiting the scope of contextualization.

> Serious analysis for [the contextualist] is always either directly or indirectly practical…If from one texture you wish to get another, then the analysis has an end, and a direction, and some strands have relevancy to this end and others not, and the selection of strands to follow are determined from stage to stage, and the enterprise becomes important in reference to the end. (pp. 250-251)

From this perspective, analyses of linguistic context effects, as conducted by Rumelhart and Stanovich, are adequate for achieving the researcher's goal(s). Their analyses are intended to determine the role that context plays in the recognition of a specific set of objects of focus (textures). There are a limited number of components of which their objects of focus are composed and constituents to which they are related as context. These factors are determined by what is considered relevant in the linguistic theory to which they are applying an information-processing framework, namely the orthographic, syntactic, and semantic structures of written language.

On the other hand, as I will show in Chapter 5, when using the contextual categories of socially oriented theories of literacy, the texture might be a sociological construct, such as the concept of women's economic independence as presented in a novel. According to critical theories of literacy, the constituents and relationships that form the context of this texture reach beyond the novel into the experience of the reader(s), social and cultural ideologies and practices, economics, politics, and beyond.

Context: A Working Conceptualization

I have arrived at a basic conceptualization of context. Context, and here I will discuss context of a reading event, has two access points. We can begin with the reader focusing on a text. When focus falls on a particular object in a reading event, that constituent becomes an object of focus. Dewey and Bentley's concept of transaction provides us with the understanding that the choice of a constituent as a point of focus establishes both the object and its context. Context is the interrelated network of constituents that connect the object of focus with the whole, giving it its identity, function, and meaning. Context is the matrix of constituent relationships of which the object is a part.

As a basic statement, context is the relational network of objects (material, linguistic, social, and conceptual) that gives an object its identity and meaning. This is a relational understanding of context. Nothing in the reading event is inherently context. Objects become context when, in a specific situation, they enter into a semantic, transactional relationship with a given object of focus for the reader/ meaning maker. In that moment everything in the events becomes part of the relational matrix through which the observer's object of focus derives its meaning and identity. For reading, this means that 1) whatever part of a text the reader focuses on in any given moment is the object of focus; it becomes text through the act of focusing on it to construct meaning; and 2) the constituents of a reading event that are contributing to the reader's construction of meaning for the text object are context. No part of a reading event is inherently a text (in the more theoretical terminology, no part is inherently an object), and no part is inherently context. This is established in transactional theory, contextualism, and a dialectical understanding of subjects and objects. As a constituent in a reading event becomes the object of focus, the network of constituents adding to its meaning is extensive, even if we isolate meaning making to the linguistic context acknowledged in interactive theories. The reader may well be largely unconscious of their contributions and roles, and even their existence.

When a researcher, theorist, teacher, or reader/writer seeks to understand and work with context, the task is to consciously identify the text (in all its modes) and identify the factors (constituents) that are

playing a role in the meaning of that text. The dynamic remains the same for the analyst as it is for the reader. Whatever is focused on, be it the identification of a word or web link, the meaning of a paragraph or image, the theme of a novel, etc., is the object, and everything that contributes to the identity and meaning of the object is context. The context of any object of focus in reading is comprised of all of the other constituents that contribute to its meaning and determine its place within the whole. The limits of the contextual network that contributes to meaning during reading are indeterminate. While the limits cannot ultimately be determined, the major forces involved in any context can be identified either by their empirical effect or theoretical relationship. Ultimately, because the true limits of any moment of meaning more than likely reaches universal, the theorist and analyst set limits on the scope of considerations. The limits of the contextual network must be determined by an observer's purpose (Pepper, 1942; van Dijk, 2009, p. 3).

The second access point to context is to begin with an entire theoretical unit of analysis. If we begin with a "contextual whole" as a unit of analysis, as with Engeström's activity structure and Dewey's situation, it is necessary to start with the entire reading event as a system, and then determine where any particular object fits into the network of related constituents. Indeed, as the term "contextual whole" indicates, the unit of analysis is the context of each of its constituents. A relational understanding of context designates each of the constituents of the unit as part of the context of the others. The relationships between the any particular constituent and the other constituents establish the object's identity, function, and meaning. A unit of analysis is contextual when the distinctions and relations between its constituent objects are understood as being established by the whole. As we will see in the next chapter, the reading event is in fact the term that is used for the contextual whole in "new" socially oriented literacy studies.

A basic statement of this access point is that context is the whole within which objects and relations take their form, function, and meaning. For reading, this means that a reading event is the contextual whole that gives a word, the meaning of a paragraph, or the theme of a novel its identity and meaning.

This definition is in many regards not surprising. After so lengthy an examination of theoretical understandings of context we arrive back at an understanding that is akin to what Predelli (2005) calls "the textbook definition of semantics" (p. 8). The central thesis of Predelli's recent work, *Contexts: Meaning, Truth, and the Use of Language*, is that "semantics has to do with certain relations between the (or at least some among the) expressions in a language, on the one hand, and typically extra-linguistic objects, on the other" (p. 8). If the meaning of text is understood as established in relations of linguistic and extra-linguistic constituents, and semantics is defined as such, then the definition of context, all that accompanies text and contributes to its meaning, will probably not be found so far away. In fact, according to the definition I have developed here, it is no different. Context, as I have defined it, is found in the relations between and among the linguistic and extra-linguistic objects in a reading event, objects and relations that form meaning. The distinction between context and text is a subjective distinction; their designation and function depend on the focus of attention in the process of meaning construction.

It is also remarkable in its similarity to Bakhtin's (1981) presentation of word meaning. Bakhtin's description of meaning does not draw a distinction between text and context. Meaning is established within multiple relationships. Words conceptualize objects by establishing relationships with all of the other words, value judgments, accents, etc. that have previously been associated with the concept in discourse. He explains that

> any concrete discourse (utterance) finds the object at which it was directed already as it were overlain with qualifications, open to dispute, charged with value, already enveloped in an obscuring mist – or, on the contrary, by the "light" of alien words that have already been spoken about it. It is entangled, shot through with shared thoughts, points of view, alien value judgments and accents. The word, directed toward its object, enters a dialogically agitated and tension-filled environment of alien words, value judgments and accents, weaves in and out of complex interrelationships, merges with some, recoils from others, intersects with yet a third group: and all this may crucially shape discourse. (p. 276)

It is within "complex interrelationships" that a word conceptualizes a specific "image" of an object. The image of each word is the unique meaning and shape it takes in the each instance of use. Authors and speakers establish complex relationships that shape the intended meaning of written language.

Since the historical–empirical method of theory development I use draws together theoretical concepts that to some degree have been picked up and exchanged in the literature, the similarity of ideas is actually to be expected. The similarities can be seen as an indication that this conceptualization of context captures some of the coalescence of current thinking.

There is one more central idea that has developed in this chapter that needs to be stressed. The concept of the situation is vital to an understanding of context. Situations are closely related to context. The appeal to situation that is repeated in interactional reading theories, in Vygotskian psychology, and in Dewey and Bentley's pragmatism all indicate the way a specific configuration affects meaning. The concept of situation operates to signify a particular contextual configuration. Situation can be defined as the particular configuration of objects and relations within the contextual whole. While context is the whole that exceeds the sum of its constituents, situation is the actual configuration that is used by participants, readers in this case, to make sense of the parts and the whole. I hesitate to state this as the participants recognizing and participating in the formation of a familiar configuration / situation because that idea goes to the heart of theories that attempt to explain how context functions: how it is established between participants, its cognitive and social elements and their interactions, the exact ways that context effects meaning formation, etc. (see Gee, 1996; van Dijk, 2008, 2009). I am working here at the level of the analysis of the category "reading context" and category construction rather than a theory of context that explains its workings through actual empirical research. Testing my construct on that level is a next step beyond the category analysis in this dissertation.

Instead, I will qualify situation as signifying a particular context, a specification of an actual configuration of objects and relations in a contextual whole. For instance, surfing is a situation that is constituted by objects (surfboard, water, waves, surfers) and their relationships (surfer to board, board to water, surfer to surfer, surfers to the history and significances of surfing), and that particular configuration is unique to that moment due to the dynamism of both the physical and social constituents of the situation. It can never be repeated.

In concluding these foundational thoughts I add the final qualification that both cultural–historical theory and contextualism allow us to consider the historical development of the constituents of a context as well as the duration (Pepper's "spread") of the event as integral to the contextual whole. Time plays a role as both the history built into each object and the actual duration of the event. As the historical development of constituents, time is both a characteristic of contextual constituents and a constituent itself. As the duration of the (reading) event, time is a dimension of context along with space. A more precise way of stating this is to say that context has constituents and also characteristics. Those characteristics are the dimensions of time and space.

In the next chapter, I will apply the category of contextualization I have developed to social and then technologically mediated theories of reading in order to 1) develop the sub-categories that constitute a full, theoretically defensible definition of context, and 2) describe the changes in contextual constituents and relationships that occur when reading is mediated by contemporary networked communication technologies. As I analyze newer socially oriented reading theories, I will emphasize their understanding of the phenomena that constitute the context of a reading event and their understanding of the relationship between these contexts and the meanings that readers construct for texts.

Chapter V

A THEORETICAL CATEGORY OF READING CONTEXT FOR THE NETWORKED MEDIA AGE

Socially Oriented Reading Theories

In Chapter 3 I examined the understanding of context used by cognitively oriented reading theorists in their descriptions of the print reading process. As noted in Table 3.2, print reading theories acknowledge both linguistic context (orthographic, semantic, syntactic) and the history of experience in social and cultural contexts that forms what Rosenblatt (1988, 1994a,b) terms the reader's personal "linguistic–experiential reservoir" or resources for making meaning during reading. In Chapter 4 I defined context as the relational network of objects (material, linguistic, social, and conceptual) that gives an object its identity and meaning. Having established a working definition of context in Chapter 4, in this chapter I return to developing the sub-categories of a full theoretical category of reading context as it can be understood in the contemporary historical moment.

In this chapter the questions at hand are 1) what are the objects that constitute context; that is, the sub-categories of which context is comprised? and 2) how does the mediation of networked communication technologies change context? I begin by examining reading context as it is understood within the socially and culturally oriented theoretical perspectives that fall under the umbrella term New Literacy Studies (NLS; Gee, 2000b; Prinsloo & Baynham, 2008; Street, 2003). I then examine the contributions of contemporary theories of technologically mediated[8] language and literacy in order to draw out the key concepts and questions that form our current understanding of context in technologically mediated reading, the ultimate goal of this dissertation. At the conclusion of that section I provide an actual empirical analysis of an image as new text. I conclude the bulk of my category construction with a

[8] In this chapter I use the terms "technologically mediated" and "digital" in reference to literacies that occur within and through networked communication technologies (NCTs), as distinct from the cultural historical understanding of all primary meditational tools as technologies.

detailed analysis of the effects that technological mediation is having on reading context. I explain how the temporal and spatial distance between communicants that characterizes print has been spread into a continuum of time and space. Understanding the place of space and time within context makes the magnitude of the changes in all of the constituents of context clear. I move on to an application of my category of reading context to actualempirical data that serves to clarify my theoretical category through a concrete example. In this section the actual empirical data is a study of how theorists from various theoretical perspectives analyze an instance of a child's oral reading. In the end, the categories that Rosenblatt and others use to distinguish between the texts and contexts of spoken and written language are negated, in the dialectical sense, and subsumed into a new contextual configuration characterized by temporal and spatial spread.

Context according to New Literacy Studies

As detailed in my methods section, in order to answer the first question above I now analyze contemporary literacy theories that draw more on the social sciences of anthropology, ethnography, sociology, and sociohistorical psychology rather than cognitive science (Gee, 1999b; Maybin, 2000). This body of work includes theories of technologically-mediated literacy that look beyond print and account for texts composed of multiple modes (sound, image/icon, picture, etc.) of representation and expression (Abbott, 2002; Kress, 2003; Prinsloo & Baynham, 2008). The prevailing concepts of context in socially and culturally oriented reading theories allow me to continue the work of expanding and clarifying the current thinking on reading context. In combination with the definition of context developed in Chapter 4, this set of historical–empirical (theoretical) data will provide a range of constituents and relationships that are necessary for conceptualizing the current state of reading context. As I explained in Chapter 4, my basic theory of context comes to fruition when combined with language and literacy theories that provide the specific constituents and contextual relationships of reading events. Cognitive print theories give us linguistic and individual psychological constituents of context (Rosenblatt's experiential reservoir). This

second group of theories specifies a wider range of objects and relations that extend beyond the context of letters, words, phrases, passages, and entire texts. They provide an understanding of the context of both the immediate and historical situations in which reading occurs, the context of the reading event.

I begin with a brief introduction to New Literacy Studies. This overview leads to an understanding that this new socially oriented school of thought understands context as social, cultural, historical, political, and material and locates the meaning and form of contexts within social practice. I then use Cynthia Lewis's (2001) theoretically grounded analysis of reading in one classroom to develop the constituents of the reading as a social practice context as they are understood within the socially, culturally, and politically oriented NLS theoretical perspectives from which she draws. My analysis leads to the conclusion that the body of work in NLS understands context as including linguistic, social, cultural, historical, political, spatial, temporal, and material constituents. These general constituents are sub-categories of their own comprised of overlapping constellations of material artifacts, technologies and tools, ideas, and practices. The sub-categories are often broken down further into institutional contexts (e.g., educational), economic contexts, etc., but such distinguishing can (and does) go on indefinitely. As a heuristic I subsume these distinctions under the sub-categories of the social or the cultural while acknowledging that the definitions and boundaries of these categories are by no means fixed or agreed upon.

The rationale for selecting New Literacy Studies as the theoretical school of thought from which I can develop the constituent sub-categories of reading context is that NLS understands reading and context as an irreducibly whole contextual "reading event." In keeping with this theoretical orientation, NLS uses the reading event as a contextual unit of analysis. NLS understands reading events as mediated by language and material artifacts. Perhaps most important in light of my working category, NLS takes a relational view of the role of context in the transaction of meaning for text and context. As Gee (2000a) states it, "meaning and context are mutually constitutive" (p. 62). Meaning and context take form and identity in their relationship to one another. Their form is a particular, ever-shifting configuration, and their identity is established transactionally as the inquiring eye singles out text. (Text and context are

distinguished by the eye of the beholder.) It is unclear how Gee distinguishes between meaning and context, though a distinction similar to the TEXT (meaning of text)–context distinction fits well with my construct. NLS, at least as presented by Gee, understands context as established in a transactional semantic relationship.

Scribner and Cole's (1981) *The Psychology of Literacy*, along with Brian Street's (1984) *Literacy in Theory and Practice* are often referred to as having begun the movement within literacy studies away from a view of literacy as decontextualized cognitive skills toward a new understanding of literacy as comprised of practices that vary with context (Hull & Schultz, 2001; Kim, 2003; Street, 2003). The "new" theoretical perspectives in literacy studies that have developed since these groundbreaking publications consciously reject the understanding of reading as composed of a series of discrete skills, the understanding that characterized the prevalent print literacy theories examined in Chapter 3 (Gee, 1999b; Perez, 1998; Street, 2003). Instead, these new perspectives on literacy take the position that "literacy need[s] to be understood and studied in its full range of contexts—not just cognitive, but social, cultural, historical, and institutional, as well" (Gee, 2009).

NLS provides my category construction with a sociocultural understanding of reading as socially meaningful practices that "both shape and are shaped by particular social, cultural, historical, and material contexts" (Stone, 2007, p. 50). This list of contexts to which Gee and Stone refer have become almost formulaic in their consistent refrain within NLS (see Lankshear & Knobel, 2007). They form the starting place for my development of the constituents of context as informed by NLS.

Brian Street (2003) describes the distinction between the old and new as lying in the shift to understanding literacy as social, political, and contextual, taking multiple forms in various times and spaces.

> What has come to be termed the "New Literacy Studies" (NLS) (Gee, 1991; Street, 1996) represents a new tradition in considering the nature of literacy, focusing not so much on acquisition of skills, as in dominant approaches, but rather on what it means to think of literacy as a social practice (Street, 1985). This entails the recognition of multiple literacies, varying according to time and space, but also contested in relations of power. (p. 77)

The first key point I want to emphasize in Street's presentation of the "new" understanding of literacy is his recognition that there are multiple literacies and multiple "readings," each configuration of reading being inherent to a specific temporal, spatial, and political context (see Hull & Schultz, 2001; New London Group, 1996). Street's reference to the "relations of power" stresses the struggle to authorize particular reading practices and meanings and ways of knowing over the many that are possible. The political context of reading refers to this power struggle inherent to both practice and meaning. It acknowledges the place of reading within the struggle to authorize particular understandings and practices over and against others (see Lankshear & McLaren, 1993). The political context of reading arises from the fact that there are different "readings" found in different contexts. The understanding that reading changes with context is necessary for developing a category of reading context that defines the unique context of technologically mediated reading and the changes that have occurred with networked communications.

The second key point in the quotes from Street above is that reading is understood as a social practice. Reading and writing are to be understood as practices that vary according to the different contextual configurations within which they are situated. Indeed, contextualizing reading and writing within domains of social practice is one of the defining characteristics of New Literacy Studies. Reaching back to Scribner and Cole's (1981) seminal work on literacy "as socially organized practices" (p. 236), we find researchers defining literacy as "not simply knowing how to read and write a particular script but applying this knowledge for specific purposes in specific contexts of use" (p. 236). In a more recent explication of the NLS perspective, Lankshear and Knobel (2007) expand on the idea of reading as a contextual practice from a dialectical perspective.

> There is no practice without meaning, just as there is no meaning outside of practice. Within contexts of human practice, language (words, literacy, texts) gives meaning to contexts and, dialectically, contexts give meaning to language. Hence, there is no reading or writing in any meaningful sense of each term outside social practices. (p 2)

The centerpiece of NLS studies and the "social practice perspective" on literacy is this idea that domains of practice form a "context of practice." That is why NLS often talks about reading as realizing

its form and meaning in the context of practices. As Lankshear and Knobel explain it, the formation of meaning occurs in the dialectical relationship between the text and social practice context of reading and writing. As a result, NLS theorists such as Jim Gee (2009) will speak interchangeably about "social, cultural, historical and institutional contexts" as in the quote above, and then in another place state that "the NLS … are based on the view that reading and writing only make sense when studied in the context of social and cultural (and we can add historical, political, and economic) practices of which they are but a part" (Gee, 2000b, p. 180). For the sake of brevity I will refer to these practices and contexts as "social practices" and "social contexts," with the understanding that I mean "social" writ large, as in the social sciences.

While I want to avoid a length discursion on the definition of social practices at this point, it is important to identify the distinct understanding of context as it relates to social, cultural, and historical practice in the above passages.[9] Reading practices are said to be a part of larger social and cultural practices. They are "observable in events which are mediated by written texts" (Barton & Hamilton, 2000, p. 9). It is the social practice, with its routinized behaviors, actions and operations, tools and objects, beliefs, attitudes, values, understandings, power relations, and social structures, all developed over time, that is the "context" of reading (Gutierrez & Stone, 1998; Hull & Schultz, 2001; Maybin, 2000; Reckwitz, 2002). Social practices are historical, or alternately, are understood in an historical context, because they

> encode a social and cultural history. …Accordingly, a focus on practice makes visible the social and cultural history of the practice, an understanding of what is being accomplished in the moment, as well as an understanding of the future goal or object of the activity. (Gutiérrez & Stone, 1998, p. 7)

They are political because of the inequality of power inherent to the social and ideological relations (Street, 2003). Beyond that general characterization social practice means different things as it is used by various theorists and researchers (Hull & Schultz, 2001). My next task is to develop the constituents of context as typically identified in NLS and the theories from which it draws.

[9] For a detailed discussion of social practice theory as a specific school of cultural theory see Reckwitz (2002). Practice theory is contrasted with cultural theories that emphasize the individual mind (mind vs. behavior dualism), the text (discourse, communication, and text), and intersubjectivity (symbolic interaction).

Before moving on to that development, I want to provide a rationale for defining the constituents of the contextual reading practice as constituents of context. First, there is precedence in the concept of activity as context wherein the constituents of the contextual activity system are the constituents of context. Reading can be understood as a contextual event, and its objects and relations can be identified as the constituents of the contextual unit of analysis (Gutiérrez & Stone, 1998). Second, there is currently no formal theory within NLS of which I am aware that can be used to explain the relationship of practice and context. Finally, the terms "context of social practices" and "social contexts" are used interchangeably in the literature, Gee's listings of practices and contexts above being a prime example. Therefore, using the contexts of human practice to identify constituents of context does not violate any established principles, and it works as a means of making sense of the NLS understanding of context.

As a guide then, I will follow Street's (1994) explanation of social practices and context:

> There are many different ways in which we act out our uses and meanings of reading and writing in different social contexts and the evidence from different societies and eras demonstrates that it is misleading to think of one single, unified thing called literacy…I prefer to work from what I term an 'ideological' model of literacy, that recognizes a multiplicity of literacies; that the meaning and uses of literacy practices are related to specific cultural contexts; and that these practices are always associated with relations of power and ideology. (p. 139)

Street represents reading as a socially meaningful practice that takes multiple forms and meanings in different social and cultural contexts. Reading practice is a contextual phenomenon in NLS, and NLS uses a practice-as-context unit of analysis similar to the activity-as-context understanding examined in Chapter 4. This person–reading–context unit of analysis is a criterion for inclusion of a theory in my category development.

To conclude this overview, NLS states that reading is best understood as a social and cultural practice (Maybin, 2000), and that the forms of practice that reading takes depend on the context of their use. There are two ways that context is described in NLS: 1) reading takes its form and meaning in the context of social and cultural practice, and 2) reading takes its form and meaning in social, cultural, historical, political, and material contexts. These ideas are used interchangeably, and I am temporarily interpreting this to indicate that NLS see reading practices as contextual phenomena. I have provided a

rationale for this conclusion, but it requires substantiation through my analysis of Lewis's (2001) research. Finally, texts and context dialectically comprise the specific meanings of each instantiation of reading. An excellent example of the NLS understanding of this last point is provided by David Bloome in my analysis of "Listening to Erica Read" (Goodman & Anders, 1999) below. I now move on to examine Cynthia Lewis's (2001) theoretically grounded analysis of reading in an elementary school classroom in order to develop the sub-categories of context I have identified out of the NLS literature so far: social, cultural, historical, and political.

NLS Research: A Social, Cultural, Historical, Political, and Material Understanding of Context

In this section I analyze Lewis's (2001) study of "four classroom practices involving literature: read-aloud, peer-led literature discussions, teacher-led literature discussions, and independent reading" (p. 4). My purpose here is to develop the constituents of context from the various "contexts" considered relevant within NLS. The general theoretical statements to which I have referred thus far need to be grounded in actual empirical data. Just as the constituents of context in cognitive reading theories are developed out of specific empirical data, so too the constituents of context according to social reading theories are developed through empirical data. My purpose for examining Lewis' empirical research is to develop the specific constituents and relationships that comprise the context at the level of a specific reading event. Lewis (2001) is selected as theory historical data because Lewis provides an extensive analysis of actual empirical data using the social and cultural reading theories of the New Literacy Studies. It is within that analysis that the constituents of the contextual reading event take shape. Specification of the constituent categories of context must take place at the level of a specific literacy event.

In her work *Literacy Practices as Social Acts*, Lewis (2001) examined the literacy practices of a fifth grade classroom over the course of a school year. Lewis works within the social and cultural practice conceptualization of reading that characterizes NLS. She introduces her work with a theoretical overview

that provides some detail regarding her foregrounding of context as a means for understanding classroom literacy practice. Lewis used what she termed a "sociopolitical lens" to examine reading events by "narrating interactional contexts" (p. 7). She explains up front that "the connection between social context and literacy practices was central to this study" (p. 7), and that her focus was on literacy practices as part of larger cultural practices. Specifically, Lewis frames each reading event "with the sociocultural conditions of its occurrence" (p. 8). First, in order to understand the social conditions that shape the immediate literacy event she followed Goffman's insistence on analysis of the conditions that "are available to and in local settings" (as cited in Lewis, 2001, p. 8). Second, in order to "extended beyond the local setting" (p. 8) to Gee, Michaels, & O'Connor's (1992) "sociocultural setting" (as cited in Lewis, 2001, p. 8), Lewis used discourse analysis to understand the "the activity system and ideological underpinnings of the discourse" to form an interpretation of the meaning making within the event (p. 8). Third, Lewis "characterized the dominant meaning of each literary practice within the overarching umbrella of cultural practice" (p. 8). I understand the local social setting, the sociocultural conditions, and the cultural conditions of the event to refer to context.

Lewis's theoretical perspective, developed as a synthesis of several socially oriented schools of thought, fulfills the criteria established in Chapter 4 for the third set of theory-historical data I will use in my analysis of categories (after cognitive and classical theories). Lewis draws from contextual approaches to the analysis of literature events, theories of the social construction of knowledge (social constructionism), NLS understandings of literacy as social practice, discourse studies, performance studies, and theoretical perspectives that emphasize the sociopolitical character of "the reader-text relation" (p. 16). The reader may recall that the criteria for including any work in my analysis are 1) it must maintain the fundamental unity of the individual reader, the reading activity, and the social/material world, 2) understand the constituents of a (reading) event as distinguished and understood according to their relationships to each other and to the whole, and 3) analyze the parts in terms of the whole contextual system. These three premises form the criteria for theories from which to detail the category reading context. The theoretical overview that prefaces Lewis's study includes these three concepts.

The first and second criteria are encapsulated in Lewis's explanation of her understanding of reading, the individual, the social group, and context. From performance studies she takes what she calls a "performative view of self and context" (p. 13) which is a relational understanding of the way that the students and teacher enact or perform reading, context, and identity. She explains that "From this perspective, speakers and writers take up positions in relation to the expectations of others and the social codes and discourses available within a given context" (p. 13). Lewis concludes, "A performative view of literacy sees context as dynamic and manifold in its relation to performers. An individual or group performance is created by context that is re-created by the performance" (p. 16). Here we see Lewis working within the established understanding that the constituents of the contextual literacy event take their form and meaning through a relationship of reciprocal construction. This passage also explains her position on the third criteria, that the parts take their being within the whole event. Following established principles in NLS, Lewis uses the literacy event as a contextual unit of analysis within which the reading of individual students is best understood (Barton & Hamilton, 2000; Street, 2003). Lewis describes her study as focusing on contextual events as a whole. She explains,

> Because the connection between social contexts and literacy practices was central to this study, I focused on the interdependent social events in the classroom that were related to literature. Deciding to focus on contextualized events meant narrating interactional contexts rather than describing each focal student as a particular case. (p. 7)

Lewis's approach to understanding student reading and classroom interaction is to analyze the contextual reading event.

In her explanation of the social, cultural, historical, and political dimensions of literacy practices Lewis describes the network of objects and relationships through which meaning and identity is established during reading. That is, she provides us with a socially oriented understanding of context grounded in theory. According to my working definition of context, we can define specific constituents of reading context by examining Lewis's understanding of the objects and relations that form the literacy events in her study. Of course, my separation of contextual constituents into discrete sub-categories is for

the sake of clarity. In an actual context the principle of transactional co-construction defines these categories as inseparably related.

Social Context

Lewis explains that reading must be understood from a social perspective "because literacy practice is enacted not only through social interaction among people who have social histories and statuses, but also by readers who have been constructed though social codes that shape their relationships to texts" (p. 4). In Chapter 4 we saw the idea that codes, or rules, are one of the constituents of the contextual activity system. Here, there are socially established codes that affect the relationships of readers to texts. The meaning of literature also involves "people constructing knowledge together through social interaction." I understand describing reading in terms of the social interactions of sociohistorical people as the local social context of reading. I have already explained that contextualizing reading within social interaction and social practice is central to NLS. The idea that social codes established within a social group affect the individual's relationship to the text is a description of the effects of the local social context. The idea that the codes and rules that govern activity systems like classrooms (Engeström, 1987) are historically developed and maintained in social systems points to the social historical context of reading.

Building on the perspective of performance studies Lewis sees "all social action as performative" and uses a "performative view of self and context" (p. 13). In brief, this view understands subjectivity and identity as relational, negotiated, and performed in context. Lewis portrays the performance of roles in a reading event as dependent on

> the moment-to-moment shifts that occur during interaction, but also on the relationship established by these students in and out of the classroom, each student's position and status within the classroom and neighborhood play a role as well, as do their relations to discourses within the classroom and to larger cultural norms. (p. 13)

The production of selves, according to Lewis, depends on conditions in the social context. She provides an understanding of identity as established in relation to other students, social status, discourses, and

cultural norms. The idea that identity is established in context is similar to the principles I have already established, although I would say that the self is established in the contextual relationships that constitute an event. That construction of the idea does not contradict the general thrust of Lewis's argument.

As is evident in the previous passages, Lewis's understanding of the social also focuses on "the production of subjects through discourses that regulate practices and rationalize actions and events" (p. 11). Throughout her discussions Lewis presents discourse as mediating social practice and the meanings that are negotiated by participants in reading events. This in turn leads to the production of subjects and identities within the context of the literacy event. "Discourse…includes not only classroom interaction, but also the worldviews and ideologies that regulate and define particular social contexts and activities" (p. 12). Lewis uses Gee's (1996) notion of discourse as the ideological medium through which individuals both perform identity and recognize one another's performance in context. The recognition is possible because certain roles and subjectivities are afforded within the reciprocal production of discourse and context that establishes an event. One problematic area of Lewis's work is a tendency to represent discourse as "regulating" or causal in relation to context. Though at points she makes it clear that "just as context shaped performance, ongoing performances continually shaped and reshaped classroom context" (p. 176), when it comes to discussions of discourse it is given a controlling role in Lewis's work, and in NLS in general. The quotation above provides a good example of that tendency.

In her analysis of Nikki's performance of literature discussions Lewis provides an example of the role of discourse in the production of social fields, the production of practices and meanings, and the production of relationships to text. Lewis explains that both Nikki's and Nikki's mother's

> embodied literacy practices were regulated through discourses related to social class, education, and disciplinary institutions. The meaning Nikki's mother gave to literature can be viewed… as 'habitus' for Nikki, a social field about which she formed (through the social codes that were available to her) embodied perceptions, tastes, and actions relative to literary texts….Furthermore, Nikki's mother's discourse was constituted within larger institutional discourses as well. (p. 11)

Lewis's analysis describes two discourse contexts as the source of Nikki's literacy practices. Broad institutional discourses are given voice by her mother to form the local social context. Lewis uses

Bourdieu's concept of the *habitus*, or manifestation within the individual of the larger social structure (or field), to describe the effect of the social context on Nikki's formation of literacy beliefs, attitudes, and practices. The local social context is then described as constituted within the larger social context of the "institutional discourse" of higher education to which her mother gives voice. We see in this how a broad institutional discourse and its attendant ideologies are a specific kind of social context for local practice and beliefs. Lewis describes discourses as including both interaction and "also the worldviews and ideologies that regulate and define particular social contexts and activities" (p. 12). Hopefully the example serves to clarify the principle within NLS that discourse establishes social context. In much of NLS, discourse is a catch phrase for the entire system of communication through which people construct a context, a text, a meaning for the text (verbal or written), and ultimately their own subjective identity.

Elizabeth Moje (1996) lends substance to a relational understanding of social context in her analysis of the affects of social relationships on the production of meaning. Moje emphasizes the contextual quality of literacy through an examination of social relationships as contexts.

> Each act of literacy is embedded in a network of social relations, for people use literacy as a way to make meanings for themselves and for other people. Those meanings are always contextualized by the social networks or communities in which individuals find themselves. In classrooms, the meanings made from uses of and talk about content and literacy situate specific events of literacy, such as reading, writing, and talking, in social practices. (p. 175)

Moje's analysis of classroom social relations as one dimension of the context of reading corresponds to both Lewis's description of the significance of relationships and the relational conceptualization of context that is basic to my own category development. Moje describes social practices, literacy events, and the meanings made during reading as contextualized within social networks. Social, as a sub-category of reading context, is this constellation of social phenomena (objects in multiple relationships) that participate to greater and lesser degrees in the transaction of meaning during reading.

Cultural Context

Lewis looks at culture on two levels, the multiple cultural systems that are active on a large social scale and the local culture formed when people work, learn and live together. Lewis describes the classroom as a cultural context of the second sort. "Viewing the classroom as a culture is useful in that it provides a context for examining discourse and ritual as they represent group life and, in this case, define what it means to read and discuss literature" (p. 12). Discourse and ritual are understood in the context of culture, and we can also say that they establish cultural context according to Lewis.

> Rituals are enacted and reenacted as practices that shift in meaning from setting to setting…Rather than a cohesive system of beliefs, actions, and evaluations…, culture is defined here as a dynamic system within which social relations and identities are continuously negotiated. (p. 12)

Lewis sees culture as the system of ritualized practices and relationships in which meaning and identity form. This conceptualization comes close to the working definition of context postulated in this dissertation. The ritualized practices and relationships are context because they are the objects and relations through which text forms meaning. Lewis provides my definition with a theoretically grounded meaning for cultural context.

Lewis's study is based on the idea out of NLS that classroom literacy practices can be understood within the context of both local and broad cultural norms, practices, and meanings. Literary practice was

> shaped by both the local culture of the classroom and community and by the larger culture, by which I mean broad cultural norms and symbols…. I want to emphasize here that local cultural norms and symbols cannot be divorced from those of the larger culture. Local norms are shaped by larger cultural norms. (Lewis, 2001, p. 8)

explain that identity is constantly negotiated within the social system of the classroom. Identity and social relations are negotiated, presumably, through norms and symbols. We understand that the norms and symbols are contested, and thus culture is characterized in part by the struggle to authorize ways of reading as well as the symbols that are available in a culture and their meanings. This leads to Lewis's discussion of the political nature of literacy below. In her analysis of Julia's classroom, Lewis identifies four ways that Julia (the teacher in the study) "explore[s] cultural norms and symbols within a reader response framework" (p. 78):

1) discussing the text as constructed by people;

2) relating the text to personal experience;

3) drawing out the ways that personal connections to texts are culturally constructed;

4) situating the text and student's assumptions in culture.

Each of these moves can be understood as cultural contextualization. Lewis provides specific examples of Julia contextualizing a discussion of the afterlife in Einsteinian physics, personal experience, and cultural beliefs. Introducing these ideas into the meaning of the book the students were reading is an excellent example of the way that objects (the ideas just listed) enter into relationship with the text and become context. Lewis explains the effect of this norm of contextualizing as establishing and maintaining norms of reading practice as well as "shap[ing] the boundaries of what was likely to receive attention in a text and what was likely to be understood" (p. 80). This example provides us with a picture of how Lewis understands cultural context in terms of both broad cultural norms and symbols (the afterlife) and local cultural norms and symbols (performance of competent interpretation) that are at work in the construction of both reading practice and the meaning that get made.

This description of culture is remarkably similar to Lewis' description of the constitution of social context through discourse, but that is not problematic for my category construction. An identification of the objects and phenomena that constitute cultural context is all that is required. We only need to define the specific constituents and relations for my construct to function adequately. All specifications of relevant constituents are recognized as dependent on and restricted by the theoretical perspective that informs the specification (Pepper, 1942).

The final distinction in the passage regarding the effect of the broad culture on the local culture is important in that it draws attention to a tension within social theories of literacy. In discussions of contexts in the plural (in-school versus out-of-school contexts, family versus institutional contexts, local versus global contexts) the point has been made that such distinctions risk establishing a misleading dichotomy (Cole, 1995; Hull & Schultz, 2001). Rather than conceiving of different contexts, or as Lewis does, as the local being influenced by the general as if there is a line of demarcation, my construct

suggests that all contexts include social, cultural, political, etc., configurations of objects and relationships. To talk about them separately is simply a heuristic for describing particular constituents of the context. Culture is a theoretical distinction of a general constellation of phenomena that participate to greater and lesser degrees in the transaction of meaning during reading.

So if we want to analyze the immediate situation of silent reading of a fictional work assigned by a teacher, we can discuss the relationships in and between the constellation of objects/phenomena and relationships that comprise the local classroom culture and the constellation of institutional context as a specific social context. The distinction between what is cultural and what is institutional is plainly a heuristic for discussing object relations that have been grouped together in our existing definitions of cultural and institutional 'contexts': rules for how much reading is to be done, the positions each participant can take (including resistance, facilitative, authoritative, etc.), norms for the types of behavior and interpretive responses to the text expected of the student, the book, the teacher, the student, the classroom, etc.

That allows us to view the places where contexts merge (as in the confluence of home and school contexts when children "play school") as shifts in the configuration of what we recognize as the single context, a perspective that provides interesting possibilities for viewing such situations along a continuum of text and context rather than using notions of hybridity that are now standard in NLS (see Black, 2007; Thorne & Black, 2007). The problem with conceptualizing contexts and texts as hybrid is the potential to reify particular contexts and texts into set objects. A dynamic relational understanding of context allows us to describe the cultural, social, political, etc., constituents of one whole context without recourse to the rather vague references to different and multiple contexts that pervade the literature. I suggest discussing a single dynamic context and qualifying which constituents and relations one means when discussing the social, the cultural, the political, the economic, etc.

Historical Context

Lewis's historical perspective is one that is quite familiar by now. First, reading is shaped in part by the participants in the reading event who themselves are historical beings. Lewis explains that "literacy practice is enacted …through social interaction among people who have social histories" (p. 4). Participants have their own history of involvement in and understanding of reading. We saw this understanding of the relevance of personal history in Rosenblatt's (1994b) explanation that "the linguistic-experiential reservoir reflects the reader's cultural, social, and personal history" (p. 1064). I will term the personal history of experience described here the "personal" constituent of context. This maintains the sense used by Rosenblatt and retains the important sociocultural idea that social and cultural beings have a unique personal trajectory of experience and a unique internalization of what their societies and cultures provide (Vygotsky, 1981c).

Using Julia as an example of the historical character of context, Lewis explains that "to understand the kind of culture that Julia hoped to create with her students, one must know something about Julia, her background, and her beliefs about teaching and literature. As with any teacher, Julia's background played a role in shaping the expectations for social and interpretive competence in this class" (p. 61). To understand how reading is constructed in the social institution of Julia's classroom we need to understand Julia's current beliefs and practices in the context of her social development. Lewis describes the many voices and experiences that contributed to the historical development of Julia's beliefs about reading as emphasizing "the complexity of classroom context and the myriad lives that all the members of the classroom carry with them" (p. 67). This is the personal dimension of context.

But there is a second way in which reading context is historical. As just mentioned, literacy practices are also historical in that they developed through time; they manifest in a current form that is ontologically bound to its development in the past (Gutiérrez & Stone, 1998). Also, the meanings that are possible and the meanings that do get constructed are historical. They are constructed and maintained within social and cultural groups over time. Lewis provides the example of a discussion in which Julia responded to a student's statement that he wanted "the good guys to die for once" (p. 138) by

contextualizing his statement in a particular cultural historical literary precedent and ideology: "That's an interesting notion because the Greeks killed off all their heroes. It's a fine literary tradition to want the hero to die. It's the history of tragedy" (p. 138). Lewis explains that Julia's "probes and responses moved students to situate the text socially, culturally, and historically" (p. 139). These historical dimensions are often what is meant in NLS by reading practices and meanings having a historical context. In order to indicate that social and cultural constituents of context are inherently historical I will append the term historical to each, as in social historical and cultural historical. For example, the rich significance of "the good guys to die for once" (p. 138) includes the historically developed and maintained cultural concept of the hero dying along with all that it entails. Bakhtin describes language in just this way.

Finally, as with all of the other constituents of the reading event, the historical is also political, because those histories formed in situations where the attempt to authorize practices and understandings was occurring. In order to develop this idea fully, I will refer to a number of complimentary voices to build on Lewis' discussion of the political aspects of context.

Political Context

Lewis explains the political dimensions of context as deriving from her understandings of performance and discourse. "My lens is political because these histories, statuses, and codes carry differential power in the classroom and beyond" (p. 4). In large part her understanding of the political context of reading has come out in my discussions of social, cultural, and historical context. NLS theorists and researchers discuss the political context of reading by referring to the ideological character of both reading practice and reading meanings (see Gee, 1996; Street, 2003). Lewis accounts for the power dynamics involved in the participation of the participants in the reading events she analyzes as well as the power inherent to texts and the discourses out of which her subjects make meaning from texts. She describes the power dynamic in terms of sustaining and transgressing social and interpretive expectations. "The roles performed by the key players in this discussion sustain certain structures of power based on factors such as social class, gender, age, perceived ability, and peer status, but they also interrupt the

influence of those very conditions" (p. 110). Lewis recognition that the roles played by participants in reading events both sustain and interrupt the status quo is a dialectical understanding of the relationships of reading practice.

To explain the political struggle to authorize ways of reading that represent the interests of specific groups in society, Lewis appeals to research within NLS that "revealed the micropolitics of reading in particular contexts, demonstrating how social status and institutional power legitimized particular ways of reading over others" (p. 10). She draws primarily from critical social theory to explain this struggle to authorize particular practices and meanings.

Critical social theory is a theoretical perspective that takes a critical stance toward the political and economic structure of social systems. It sees all human activity, including reading practice, as either supporting or resisting the status quo. Social critique is a refusal to go along with the current state of affairs and the common ideas that support it because the status quo within human societies is at this time inequitable and unjust. To be critical is to question that status quo, to analyze why society is as it is, to lay bare both its contradictions and to suggest its possibilities for transformation (Lowenthal, 1987). It is believed that a critical awareness of the political character of reading empowers readers to transform the social, economic, and political system in the interest of a more humane society (Carrington & Luke, 1997).

According to this perspective, understanding reading practice as socially constructed through a historical process leads to understanding reading as inherently political. This is so because the social historical production of reading occurs under conditions where power to authorize reading practices and ways of understanding is unequally distributed. Literacy practices, concepts of text and reading, and the socially constructed knowledge people bring to their transactions with text can be understood as forms of cultural capital. All people's capital is not evenly valued, and the capital that is most valued is not evenly distributed (Luke, 2000). Thus the current configuration of practice and possibilities for meaning interpretation privileges and values the reading and worldviews of some groups over others and positions

people accordingly. That is a definition of political power and describes a political quality of the objects and relations of context.

Placing reading in political context also includes the assumption that texts are inherently ideological. Assuming all texts support some interests while marginalizing others places the text in political context. Critical literacy theory embraces the perspective presented by Street (2003) and Lewis (2001) that texts are involved in the society-wide struggle to authorize particular ways of understanding the world. Texts implicitly (or not so implicitly) work to construct certain ways of being while proscribing others. Even the most mundane text carries a sociocultural history that represents certain interests and perspectives. Luke (2000) describes how reading something as everyday as a passage in a social studies textbook describing a geographical area is full of syntactic and semantic constructions that afford and constrain understandings that represent the perspectives of particular social groups. Analyzing the ways that language use in a text affords some meanings while discouraging others is placing them in political context. To put a text in political context the reader takes a critical stance toward the text by analyzing the worldviews (epistemologies and ideologies), identities, and the interests that the text supports, neglects, and/or rejects. This establishes particular types of text-mediated relationships between the reader and author, the reader and ideologies, the reader and the sociocultural group(s) whose ways of being and ways of thinking are represented. These are political reader–text–context relationships.

The political character of objects and relations is also found in the relationships of production and distribution of texts. Throughout Western history the production of (material) literature has been controlled by those who had the social and economic power to own the technology needed to produce and distribute it (Marx, 1978). This restriction on access to production lends an authority to the limited commodity (Kress, 2003), and thus to the ideas contained therein. For an example of the effects of this process one only needs to consider how newspapers and school textbooks are still broadly considered to speak with an authority and objectivity that exceeds that of blogs or political pamphlets.

Political context involves both objects and relations. The social historical process leads to the unequal power distribution and contradictions within practice and ideology described above. This creates

dialectical tension between the objects that comprise context. Lewis recognizes this phenomenon in the contradiction in the power structures active in classroom literacy discussions. Students, teachers, and parents gave voice to discourses that were at times in contradiction to one another. Indeed, the entire discussion of positioning subjects and objects in context implies that participants had the political power to establish particular contextual configurations. Contextualizing reading politically requires analyzing the power dynamics involved in the object relations of context. The political sub-category of reading context is a constellation of phenomena that participate to greater and lesser degrees in the transaction of meaning during reading.

Material Context

The lack of a materiality in Lewis work is significant. In the theoretical background she establishes for her work, Lewis critiques CHAT for failing to understand the subject as a product of discourse. Because Lewis emphasizes language as the sole mediator of subjectivity, she concludes that CHAT "does not account for the production of subjects through discourses that regulate practices and rationalize actions and events" (p. 11). As I have just described, she adds to this the ways that the unavoidable ideologies represented within all discourse construct subjective identities (see Street, 2003).

Lewis's assertion that CHAT fails to account for individual subjectivity through discourse alone is accurate. Her dismissal of the cultural–historical understanding, however, is based on her own presuppositions regarding discourse and an incomplete treatment of CHAT's presentation of the production of subjects. Vygotsky (1978, 1981a, 1981c) and Leont'ev (1981) present activity as mediated by psychological and technological tools. The psychological tool is the language that Lewis favors. Technological tools are the physical objects that are used to manipulate and control the world around us. As we saw in Chapter 3, individual subjectivity is mediated by both physical tools and discourse. Physical tools cannot be disregarded because they encode the cultural history of their use and mediate the relationship between the subject, the physical world, and the social world in ways that are not immediately tied to discourse (using a definition of discourse centered on language use).

In her dismissal of materiality, Lewis leans toward the philosophical idealism that characterizes NLS theory and research that focuses on the function of discourse (see Reckwitz, 2002) to the detriment of material mediation. Lewis emphasizes the significant ideological dimensions that discourse contributes to context and forgoes the influence of the material dimensions, or, more fully, the concrete spatiality and materiality of literacy events. Discourse in this view becomes the engine that drives social practice and life, so that Lewis can say, "Discourse, as I use it throughout this book, includes not only classroom interaction, but also the worldviews and ideologies that regulate and define particular social contexts and activities" (p. 12). Consideration of the material conditions of a reading event are noticeably lacking.

Lewis' emphasis on discourse as the medium that constructs and is constructed by contexts and participants is characteristic of much of the NLS (see Gee, 1999a). There are other voices within the field that balance that emphasis by including an anthropological analysis of the materiality of tools, artifacts, and physical space (see Scollon, 2001). In his description of the production of positional identities, Leander (2002) asserts the necessity to account for the material (or "physical") in our analysis of the social production of meaning.

> The language of "positioning" that has been appropriated by critical social analysis (e.g., position, location, center, margin, third space, etc.) directs us, like other metaphors (Lakoff & Johnson, 1980), to a closer analysis of how social meaning is both physically and symbolically realized. The analysis of positioning that does not carefully map the metaphorical and physically real spaces of situations, locations, and associated positionings has been critiqued as meaningless. (p. 200)

Leander's consideration of the physical when analyzing positioning is instructive because Lewis also emphasizes the positions and positioning of the teacher and students in her study. Where Lewis focuses on the discursive/ideological production of (metaphorical) positions and "spaces" (p. 176), Leander draws in other voices that include the physicality of real spaces in the production of social meaning. This brings physical space into the discussion of context. I will address space below.

Recognizing the materiality of context allows us to maintain a focus on the ways that the physical realities of a given situation are involved in the transaction of certain meanings. Within a classroom, the layout of desks, pathways and barriers, the shared pen, pencil and tools jars, and the literature all matter.

The example of a shared reading in an elementary classroom serves to clarify the significance of the material. Beginning with a mat on the floor of an open space, we see that the mat suggests sitting or lying down. The open space is itself a specific use of the material that suggests group placement. Students use the space by positioning themselves in very prescribed ways. The importance of this context object is clear when we think of how immediately obvious a violation of the positional constraints is: anyone who has spent a day in a typical American classroom knows that a child who moves outside of the boundaries, who orients herself away from the center stage, or who doesn't keep her hands to herself is open to rebuke. The big book is propped on an easel. It is raised up above the crowd. The size of the book, its color(s), and its thickness all matter. We can continue to dig into ever smaller units of the material: the printed text is a material manifestation of phonemes just as the phonemes take the material form of sound waves when they are read aloud by teachers and students. The position of the reading area within the four walls is also significant; occupying a central spot versus a peripheral placement could matter.

Norman Fairclough is a linguist and social theorist who presents an understanding of language and literacy that accounts for the material. Fairclough (2003) understands discourse dialectically; discourse is related to the other constituents of social practice, including the materiality of an event, by dialectical co-construction. He applies critical social theory (with its historical materialist perspective on social practices) to discourse analysis.

> Critical Discourse Analysis is based upon a view of semiosis as an irreducible element of all material social processes (Williams 1977) [sic]. We can see social life as interconnected networks of social practices of diverse sorts (economic, political, cultural, family, etc.). (p. 205)

Fairclough is careful to include the materiality of "body language or image" (p. 205) in his description of the role of discourse in social activity, representation, and ways of being (p. 206). He lists the elements of every social practice as:

- Activites
- Subjects, and their social relations
- Instruments

- Objects
- Time and place
- Forms of consciousness
- Values
- Discourse

Fairclough describes these elements of social practices as dialectically related in that "each 'internalizes' the others without being reducible to them" (p. 205). The overt consideration of the materiality of social practices is clearer in Fairclough's work than Lewis's. When this understanding of social practices is applied to reading as a social practice the materiality (instruments, objects, and places) of context is reasserted.

Scollon (2001) builds on Fairclough's understanding of the dialectics of social practice in his presentation of the theoretical category mediated action.

> The unit of analysis of a mediated discourse analysis is the mediated action (not the Discourse or text or genre). That is, the focus is on social actors as they are acting because these are the moments in social life when the Discourses in which we are interested are instantiated in the social world as social action, not simply as material objects. We use the phrase 'mediated action' to highlight the unresolvable dialectic between action and the material means which mediate all social action (Wertsch 1998) [sic]. That is, we take the position that action is materially grounded in persons and objects and that it is unproductive to work with purely abstracted conceptual systems of representation. …There is no action without participating in such Discourses; no such Discourses without concrete, material actions. (p. 3)

Scollon's mediated action provides a unit of analysis similar to mine in that it recognizes that discourse cannot be relegated to the purely abstract world of psychological communication. Language is manifested in a dialectical relationship with the material objects involved in any action. It is necessary to draw Fairclough, Leander, and Scollon into the discussion of reading as a social practice because, as Lewis exemplifies, contemporary social literacy theory vacillates between the materialism of cultural–historical theory and the idealist tendency in NLS. We always need to keep in mind that in every reading event there is a constellation of material objects that participate in the meaning making transactions of the event.

Space, Time, and Context

The final point I want to consider before moving on to an application of my category to an actual empirical study is how space and time fit into a theoretical category for reading context. Fairclough considers time and place to be elements of literacy practices. Leander and Lewis speak of spaces. Where Lewis focuses solely on the discursive construction of social space, Leander explains social spaces as produced through both discourse and the arrangement of physical space. I will first construct an understanding of space and then move on to examine how time figures into reading context.

As we have seen, space is addressed in two ways in social theories of literacy. The first is to discuss abstract spaces that are established through discourse and practices. A detailed explication of this position within literacy studies that use a social, contextual understanding of reading is the theory of third space. Third space theory understands the social spaces where literacy learning takes place as composed of multiple layers of scripts. Scripts are "the routine discursive practices of the various social spaces of learning contexts" as well as "a range of recurring patterns of activity within and across events in which members' actions display stable ways of engaging with others" (Gutiérrez & Stone, 1998, p. 9). Scripts, as routine patterns of language and social practice, signify recognizable situations that allow people to locate and orient themselves in space. The idea of scripts is the social situational equivalent of the reader's semantic recognition of the situation described in a text, a familiar unfolding of a situation in a fairytale for instance. People establish multiple spaces in social situations through their talk and actions. To explain the effects of scripts, Gutiérrez and Stone (1998) suggest

> the theoretical construct of 'social space' or habitus (Bourdieu, 1991) to describe the various patterns of participation that occur in overlapping and mutually informing but seemingly exclusive places where teacher and students reside and interact. We describe these as "official", "unofficial" and the "third" spaces within which various scripts or normative practices are employed. (p. 9)

Though the idea of "third spaces" where multiple scripts come into dialogue to negotiate social significance, practice, and meaning (p. 10) would be interesting to pursue in more detail, the key point for context is to understand that one dimension of the spatiality of context is this discursive construction of social space.

The explanation of space provided by Gutiérrez and Stone (1998) and the literacy theorists and researchers who have built on third space theory have made significant contributions to understanding the role of discourse in creating and sustaining literacy learning spaces, but there is a problem in this position that lies dormant in their very descriptions of discursive space. They lack an accounting for the materiality of space. Accounting for the physical leads to the second way of conceptualizing space. If we begin with the description of space as enacted in the language and actions of participants in an event, there are two directions in which our analysis can proceed. The first is to turn inward and discuss the psychological/symbolic social spaces that interaction produces. This is seen in Lewis (2001) and Gutiérrez and Stone (1998). The other possibility is to turn outward and consider the physical formations that embody space in concert with the conceptual/discursive construction of space. Interaction, discourse, positioning, and everything that goes into a social space occurs in physical space, and physical space is not an empty, meaningless void in which conceptual space floats. The physical is dialectically related to all that occurs in and through it.

Leander (2002) provides us with this more robust accounting of the discursive and physical realization of social spaces. Narration is the symbolic discursive contribution to spatial production. Participants in actions narrate scenes that represent the subjective positions and the actions that can occur in the scene. In a sense, the participants in an interaction "speak" into existence the social world they seek to achieve. The production of scenes is not complete unless we consider how participants use the physical space, artifacts, and bodies to produce social space. “The production of embodied spaces . . . involves the movement and coordination of group formations to create physical space relevant to floor management and control, as well as microlevel individual movements, such as gesture and gaze” (p. 194). Discursive narration and physical coordination and representation of space together produce the spatiality of an event. When we begin to consider physical arrangement of bodies, gestures, and gazes the scope of the physicality of the meanings of an event comes into view. The material objects that contribute to the meanings made in reading events are, by my definition, context. This certainly includes the physical as well as discursive spaces that are constructed in events where literature and reading play a central role. As

a concrete example of the discursive and physical production of space we can imagine how the social space of "reading aloud to the teacher" (below) is accomplished. Through the student and teacher's narration of "we are engaging in a pedagogical oral reading" with its attendant norms, discourse genres, significations of conforming or transgressing the ways they embody the performance through the seating arrangement, their posture, where the gaze of each is directed, the holding of the book, etc.

The role of time in context can be seen in the phenomenon of producing contextual space and in the social practices and activity through which space is produced. In the discussion above I deferred the temporality of producing social space for this separate discussion. Gutiérrez and Stone (1998) and Leander (2002) both describe space as established through a process over time. Space is constructed and negotiated by participants in both the moment and as an unfolding process. Gutiérrez and Stone (1998) describe the social and cultural settings of activity and literacy practice as "occur[ing] as a part of laminated, overlapped, and interwoven social phenomena that occur in the moment and across time and space" (p. 4). They explain the activity and interaction that produce space both synchronically and diachronically. A synchronic analysis of the production of social spaces understands the "in the moment" simultaneous layering of discourse and social practice (and we should add placement and use of physical objects including bodies) that produce a single moment of social interaction. The diachronic view of production takes a view of activity and practice over time. In this view they include the historical character of practice that has already been established (the dialectical history of development still present in the current configuration of a practice), the immediate flow of time during which the situation and practice unfolds, and the future in the form of goals and objects (see Leont'ev, 1981). So the dynamism of context occurs both in the synchronic moment with its multiple relationships and living "wholeness," and in the diachronic spread of an event (Pepper, 1942) as the relationships shift, new objects enter into the relational whole, the relationship to existing objects dissolves (but remains encoded in the current configuration), and onward. If we separate out the sub-category "historical," time still remains as the phenomenon of spread.

So where do space and time fit in reading context? What roles do they play? For the answer to these questions I must turn to my working definition of context. Space and time are constituents of reading context if they are part of the system of objects and relationships that give meaning and identity to the focal object. This is clearly true in the case of space. Physical space, embodied space, narrative/discursive space are all inextricably involved in the positioning of individuals in social space. Thus they contribute to what we might call a contextual or situated identity and subjectivity. Reading occurs in both social and physical space, and both are involved in the construction of meaning (meaning of the text, of the practice, of the reader).The same argument can be made for the production of meaning. Narration, scripts, activity, and artifacts are used to transact and negotiate a space that identifies participants, artifacts, norms, and practices, etc., and space is simultaneously constructed in the same transaction. The possible roles subjects can play and the meanings that can be made are simultaneously afforded and limited by their social–material spaces. Readers, even a solitary reader on a mountaintop, are situated within a social–material space that is a part of the object-relationship context structure through which the reading event is meaningful and a meaning for the text is established.

In these characteristics a description of a space can be considered a description of a specific contextual configuration. What is space but the physical, social, and semiotic configuration of people and things? Yet we cannot dismiss space as just another way of describing context, or reduce space to a sub-category of social context: social space. Space is the constituent of context that contains but exceeds materiality and social practice. In conjunction with social space it includes proximity, arrangement, position, and movement, as well as their abstract social-conceptual equivalents, and these are absolutely essential to keep in mind. This characteristic establishes space as an "object" in the contextual relationship. Alternately, space is the physical and social dimensionality of context. Spatiality keeps our concept of context grounded in the three dimensional material and socially “figured worlds” that mediate identity and action (Holland, Lachicotte, Skinner, & Cain, 1998). Space plays three roles in reading context: as the dimensionality of the material place, as the social space in which reading occurs, and as the physical–social objects that readers use to make sense of text.

Time is also a dimension and an object of reading context. If we postulate an eternal "now" without the flow of time from the past, context remains in stasis. The same letters remain in focus and their object relationships hold them in position without change. It is a literacy event without duration, synchronicity without diachronicity. But such statements are meaningless. Human being is both spatial and temporal. The visionary literacy pedagogue Paulo Freire (1993) states that our awareness of time defines humanity; it is a unique form of consciousness in the world. Human beings can reflect on the historicity of their individual and corporate existence. In our awareness and organization of time, time is an object in the contextual relationship. For example, readers are aware of time in the event. Readers contextualize the events that take place within narrative texts in the past, present, and future. We establish temporal order of cause and effects within expository writing. There is also institutional and situational organization of time for reading. The organization of space and time contributes to our understanding of a literacy event of which we are a part, whether alone, or in church, or a classroom. Reading is temporal. If we turn to Bakhtin's (1981) explanation of the dialogical orientation of discourse, the words we read are alive with the history of their use, uttered in an historically unique moment with positional meaning, and anticipating the future answering word. Time plays three roles as reading context: as historicity (which I have followed NLS in separating out as the constituent sub-category *historical context*), as the phenomenon of time that forms a dimension of the contextual reading event, and as an object in the contextual reading event.

The Sub-categories of Reading Context According to Social and Cultural Literacy Theory

My analysis of socially and culturally oriented perspectives on reading defined the contextual whole as the reading event, and provided a number of contextual sub-categories that extend beyond the linguistic context of cognitive theories. In the reading theories of New Literacy Studies paradigm, reading is understood as a social practice that occurs in contextual literacy events. Because this school of thought starts from the premise that literacy can only be understood by considering both practice and the context

in which it occurs, it is well suited for use in defining the contextual character of reading and reading events as well as the objects that constitute context in reading events. NLS defines a number of 'contexts' that are a part reading events. They are summarized as the constituents of context in Table 5.1.

Table 5.1

Summary of the Constituents of Context According to Cognitive and Sociocultural Perspectives

Context:	**Linguistic**	**Personal**	**Local Social**	**Social Historical**	**Local Cultural**	**Cultural Historical**	**Political**	**Material**	**Spatial**	**Temporal**
According to Cognitive Literacy Theories	√	√		ν		ν		ν		
According to Social & Cultural Literacy Theories	√	√	√	√	√	√	√	√	√	√

Table 5.1 presents the general sub-categories of reading context according to cognitive and social/cultural literacy theories. The table also brings out the central differences between the cognitive and sociocultural understandings of context. Cognitive theories do not include the local social and historical conditions as constituents of the context of the reading event. Neither do they consider the power dynamics involved in the text, the immediate context, or the relationships. I am not saying that no cognitive researcher or theorist considers the power differentials involved in constructing concepts and comprehension. It's just not a feature of the dominant conception of reading context. This conclusion

makes sense since theorists like Rummelhart and Stanovich begin with the premise that the context of reading is cognition, and they base their theories on studies conducted under laboratory conditions using approaches they believe control the effects (or relevance) of the immediate context. The partial checks in the cognitive considerations (ν) represent concepts that are within the spectrum of consideration in cognitive print literacy theory, but are not developed into the full theoretical categories as they are understood in social literacy theories.

Social theories consider the local situation in which the reading event occurs, the social and cultural constituents and the power dynamics at work, to be relevant context for meaning making and reading practices. They also theorize spatiality and temporality in a way that is foreign to cognitive print reading theory. Overall the table presents the sub-categories that constitute the contextual reading event according to both cognitive and sociocultural reading theory. In combination with the constituents of context identified in chapter four these sub-categories form the context that transacts with the reader and printed text to produce a meaningful TEXT.

A Working Definition of Reading Context

I have reached the point in the development of my theoretical category when I can identify the major sub-categories that constitute my working definition of context. I will begin by reviewing the contributions of each of the theoretical perspectives I have examined. Then I will synthesize them into one definitional statement.

My analysis of cognitive theories of reading context provided my definition of categories with a useful but incomplete list of sub-categories that constitute context. Interactive cognitive theories focused almost solely on the linguistic context: orthographics, semantics, and syntax. Although they followed a psycholinguistic terminology that includes pragmatic context, neither of the theories I drew from provided any substantial treatment of what is meant by the term. Rosenblatt's assertion that personal linguistic knowledge forms in social and cultural contexts

defined the boundaries of cognitive print reading theories' definitions of context. As explained in my discussion of Lewis' explication of the historical dimensions of context, I have termed this the personal constituent of context. Furthermore, Rosenblatt brought a transactional epistemology to a school of thought dominated by interactional concepts of the relationships involved in context. Though this introduced a transactionally mediated understanding of reading as well as a consideration of what I am calling the social historical and cultural historical constituents (sub-categories) of context, these ideas were not as theoretically developed within Rosenblatt's reading theory as they are in other schools of thought that I subsequently examined. I concluded that cognitive theories of reading context fail to adequately account for the immediate social, cultural, and material conditions under which actual reading takes place. Neither do they have an adequate historical understanding of the reader, text, and context. They do, however, provide us with these sub-categories of context: orthography, semantics, syntax, and personal internalization of the social historical and cultural historical. Rosenblatt's work also touched on the social historical character of language and its use.

In Chapter 4, my analysis of three historical lines of theory (cultural historical activity theory, pragmatism, and contextualism) addressed the inadequacies and questions that remained from chapter three. These three theoretical traditions directed my development of a theoretical definition of reading context to an understanding of reading as a mediated contextual event where text and context are a matter of functional relationship within a contextual whole. They also continued the work of identifying and developing the full scope of sub-categories that constitute reading context.

After examining the cultural historical analysis of human activities I concluded that the constituents of the activity structure are satisfactory specifications of the sub-categories of the macro-context of a reading event. By specifications I mean that each of the corners of the triangles in the structure of activity is a theoretical description of a sub-category of reading context. Those sub-categories are rules, the community, the division of labor (roles), the subject (reader), the object, and instruments

(tools: both language and material instruments). In order to maintain the unity of context, the contextual whole, and to avoid talking about "contexts" in the plural I have been calling these sub-categories the constituents of reading context. I hope that the term expresses the fundamental unity of context while maintaining the idea that context is composed of numerous sub-categories that we need to be able to discuss.

The structure of activity provides a contextual system that allows us to model reading, but CHAT does not have a theoretical definition of context per se, and it inadequately models the actions and operations where reading and reading context are often found. That is, activity structure lacks a specification of the constituents of the immediate context of reading at the level of individual actions and operations (Huang & Gartner, 2009). It does not allow us to model linguistic context or how an individual reader forms an understanding of text, for example. Neither is there any consideration of the space-time of activity. In order to form theoretical descriptions of the sub-categories of reading context at this level activity I turned to pragmatism, contextualism, and New Literacy Studies.

Pragmatism and contextualism provided functional-relational understanding of context as well as generic sub-categories that can be used to define a general contextual unit of analysis, the event. The concept of transaction provided my category with the understanding that it is the subject's focus that establishes both the object and its context. Context is the interrelated network of constituents that connect the object of focus with the whole, giving each object its identity, function and meaning.

Pragmatism and contextualism leave us with the "event" as a generic contextual unit and provide a working vocabulary for describing context in terms of transactional relationships between generic objects, but they do not specify a particular network of constituents and relations. They do not define the specific sub-categories that are required for a full theoretical definition of reading context. Instead, the generic sub-categories of contextualism (event; quality and the sub-categories of quality spread, change and fusion; texture and its sub-categories strands, context and references) require specification using a theory or reading. In principle I can derive those specifications from any number of theories of practice as long as they 1) maintain the fundamental unity of the individual, the activity, and the social/material

world, 2) understand the constituents of the contextual whole as established in their relationships to one another and to the whole (dialectically or transactionally), and 3) understand human thought and action as mediated by language and material artifacts. I identified New Literacy Studies as the literacy theory that fulfills these requirements.

I completed my specification of the sub-categories of context using NLS. Specifically, NLS understands reading context to be constituted by, or consist of, orthography, semantics, syntax, personal cognition, society, culture, history, politics, the material environment, time and space. As was the case with the constituents of context identified in cognitive reading theories above, in my analysis of NLS I outlined the sorts of objects that are typically included in each sub-category using examples from the literature, but it is not possible to try to list every social context object or every material context object, etcetera. It is not even possible to list a representative selection of objects, since a representative list would need to resort to a new round of category development in order to form the categories that would be represented by examples.

This leads to a significant limitation of this theory construction. While I have constructed a theoretical definition of reading context, my definition relies on sub-categories that are undefined. For instance, what distinguishes social from cultural context objects? Where does the local culture end and the cultural historical objects begin? I will pursue this further in my discussions of the limitations of my research at the end of this chapter.

Reading Context Defined

A synthesis of the constituents of context according to cognitive reading theories, cultural historical activity theory, pragmatism, contextualism, and New Literacy Studies provides me with a theoretically coherent description of the contextually whole reading event. The event begins with the reader, text, and context. The reader focuses on a text. When focus falls on a particular object in a reading event, that constituent becomes an object of focus, a text. Engeström's explanation of the dialectical nature of activity system provides us with the understanding that the reader and text (subject and object)

are established in their dialectical relationship to each other. Dewey and Bentley's concept of transaction provides us with the understanding that the choice of an object as a point of focus establishes both the object and its context. Context is the relational matrix of context objects gives the text object the reader focuses on its identity, function and meaning. The constituents of context are rules, community, the roles/division of labor, material and linguistic tools/instruments, orthography, semantics, syntax, personal cognition, society (local and historical), culture (local and historical), history, politics, the material environment, time and space.

The first four are taken from Engestrom's activity structure and are just as effective if conceived of as alternate specifications of the other constituents of context as identified in cognitive and social reading theories. In that case, the rules, community, and the social roles and division of labor are alternately sub-categories of the society (local and historical) and the culture (local and historical). They are also historical and political. The material tools can alternately be conceptualized as one of the physical/material objects in events (for where do tools stop and props, furniture, etc., start?). The written language as tool is better theorized in terms of orthography, syntax and semantics. This synthesis of context according to activity theory and context in reading theory works to provide a layer of specification to minimally offset the lack of definition of the constituents of context of which I spoke above.

An example is in order. A girl sits down to read a letter sent to her by her grandfather. A reading event is underway. The act of looking at the first markings on the paper establishes a reader, text, and context. The event, "Kisha Reading Grandpa Paul's Letter," is qualitatively whole in terms of Kisha's experience of it. Nevertheless, the event is comprised of a network of objects that are dialectically and transactionally constituted. As Kisha reads, her focus constantly shifts. As she focuses on the first letter string, "Dear," the orthographic structure and redundancy, semantics, and syntax are context for constructing a meaning, as is her personal experience of the social convention that letters often begin with the word Dear, a signification of relationship between Kisha and her grandfather. The letters "Dear Kisha" that were a moment ago the focal text become context for understanding the letters, "How are

you?". Moving beyond the linguistic context, Kisha has personal history that she brings to the event, and that structures, among many things, her expectations and purpose. The matrix of social relationships, roles, rules and norms, etc. plays a part in the meaning transacted during the event. Kisha's role as a granddaughter/reader and Paul's role as grandfather/writer affect the meaning of the text. The local social relationship of Kisha and Paul, the individuals, manifests the social historical and cultural historical relationship of granddaughter and grandfather. That relationship depends on the historical norms of the culture(s) of which they are a part. The relationships contribute to the meaning Kisha is constructing for the text. So does the history of their correspondence, whether the letter is initiating communication or continuing it. There are power dynamics that affect the relationship between Kisha and the message, and this is, to some extent, an extension of the power positions of Kisha and Paul. Kisha sees Paul as strongly authoritative in a paternalistic manner, so her relationship to the message is postured accordingly. When we examine the material context objects of the event, the paper is context, and whether the letter is written on stationary or the back of a paper bag alters the significance of the letter. Paul writes on his own letterhead as he always has since his first letter to Kisha. This materiality adds a continuity that connects this event and reading to the history of letter readings. Kisha enacts a social and material space through discourse and practices that unfold over time in the event. As she curls up in her favorite pile of pillows away from the rest of her family, Kisha uses the physical space, artifacts, and her body to produce a social space. Time is managed by Kisha; she reads some sections slowly, rushes through others, and rereads still others, and her management of time affects the meaning of the text.

Though the example touches on a number of context objects and seems rather lengthy, it still seems woefully incomplete. Hopefully it serves to clarify my theoretical definition. The alterations to this example that occur if I change the letter the girl is reading to an instant message on a screen are the subject of the next and final section of this dissertation.

Technological Mediation and Context: Technologically Mediated Reading

In this section of my category construction I draw out the key concepts and questions that form our current understanding of the affects of new technological mediation on reading context. The central premise of this section was established in Chapter 1. Changes in a culture's technologies and the social relations involved in their use lead to changes in social practices and beliefs, including reading (see Coiro, Knobel, Lankshear, & Leu, 2008). To this I added the premise that the various reading theories, and their conceptualizations of context, that arise over time can be understood as historical artifacts, descriptions of the reading beliefs, values, and practices that characterize particular periods and places in human history. Because the project of defining the current theoretical category of reading is vast, my specific interest in this dissertation is focused on the effect of new technologies on reading context.

The understanding of reading and reading context presented in my analysis of New Literacy Studies was still focused exclusively on reading alphabetic print. The question of the affects of new technologies on reading context is not answered in the theoretical perspectives examined so far. I therefore pursue one more round of analysis of categories. This final section of the paper results in a theoretical description of reading context in the age of computer mediated reading using networked communication technologies.

As networked communication technologies (NCTs) proliferated with the development of the internet and data-exchange telephony, so too did research and theories regarding networked communication (Coiro et. al., 2008; Georgakopoulou, 2006; Winograd, 2001). Consideration of the affect of NCTs on reading and reading context can be found in multiple fields including New Literacies Studies, a field of literacy studies that is related to but distinct from New Literacy Studies (see Coiro et al., 2008; Leu, Kinzer, Coiro, & Cammack, 2004), computer-mediated communication (see Georgakopoulou, 2006), information literacy (see Kapitzke, 2001), and ubiquitous computing in information sciences (see Dey, Abowd, & Salber, 2001). I will briefly examine the case for including and excluding these schools of thought from consideration here.

In ubiquitous computing some rather detailed category construction took place during the past decade as computer programmers and information scientists grappled with the lack of an adequate definition of context in their field. Though there have been notable attempts within this field to use CHAT to model context (see Huang & Gartner, 2009; Kofod-Petersen & Cassens, 2006) the most recent work that expresses the advanced state of understanding of context uses an interactive understanding of relationships. Overall, ubiquitous computing still lacks an understanding of mediation and mediated relationships. I have therefore eliminated the field from the discussion.

Information literacy is divided between two takes on the goals and orientation of the field. The first perspective sees information literacy as the ability to locate and effectively use information and communication technologies (Information Literacy Meeting of Experts, 2003). This includes the ability to think critically about the source and quality of information. The second perspective draws from the sociocultural and critical social theories that inform NLS (see Kapitzke, 2001). It looks at reading as social practice and information as ideological. This second group often couches its discussions in terms of a "critical information literacy" (Swanson, 2004). Most of the work in information literacy can be excluded from my consideration of theory-historical data because it lacks both a contextual unit of analysis and a mediated understanding of reading. Any individual works that draw from the theoretical traditions and concepts that inform NLS can be considered separately.

New Literacies Studies and computer-mediated communication, on the other hand, stem from the same theoretical roots as New Literacy Studies and approach online reading as contextual, technologically mediated practices. Though much of the early work was tentative and descriptive, theoretical analyses have begun to take shape.

As the newness of the literacies that occur with and through NCTs became an object of study, one of the early questions that emerged was how to understand the texts that were being produced. NCTs enable authors to construct their communication using a number of modes besides writing of alphabetic text. Burnett (2002) observed that there was a tendency to study the new in terms of the old; the new modes of communication were being subjected to the old theories used to describe language, particularly

the semiotic understandings of structural linguistics put forth by de Saussure and Roland Barthes. Burnett (2002) concludes that "there would be nothing inherently wrong with this were it not for the fact that there are distinct differences between texts and images, and these differences need to be theorized rather than elided" (p. 149). The theories of reading within New Literacy Studies were, at that point in its development, inadequate for describing or analyzing the types of reading that are mediated by NCTs.

Changes That New Media Brings to Text and Context

A year later, Gunther Kress (2003) answered that need with a frequently referenced theoretical analysis of the new modes and media of communication in the digital age. In *Literacy in the New Media Age*, Kress (2003) distinguishes between the pre-NCT dominance of print writing, used in books, and the post-NCT dominance of image, used on screens.

> Two distinct yet related factors deserve to be particularly highlighted. These are, on the one hand, the broad move from the now centuries-long dominance of writing to the new dominance of the image and, on the other hand, the move from the dominance of the medium of the book to the dominance of the medium of the screen. (p.1)

Kress sees technological development as accompanied by a social shift away from the semantic and epistemological affordances of print. The ease and low cost of multimedia representation is moving text toward visual imagery in combination with writing, sound, and hypertextuality. Central to this conception are what he calls the logic and affordance of the old written text and new image-based text.

> The organisation of writing – still leaning on the logics of speech – is governed by the logic of time, and by the logic of sequence of its elements in time, in temporally governed arrangements…. To say this simply: in speaking I have to say one thing after another, one sound after another, one word after another, one clause after another, so that inevitably one thing is first, and another thing is second, and one thing will have to be last. Meaning can then be—and is—attached to 'being first' and to 'being last', and maybe to being third and so on. (pp. 1-2)

Kress's emphasis on time and space makes his theorization of the changes in text particularly useful for describing changes in context. The effect of time on meaning is highlighted in this passage. In keeping with the analysis of time as a sub-category of context above, the temporal arrangement of speech follows a logic of sequence which represents a temporal semantic arrangement. This is true of writing as well.

Time is attached to the meaning potential of the TEXT. Logic, as it is used here, appears analogous to my idea of relationship. This works since logic often involves statements of relationship (A=B, B=C, A=C). So we have the idea that 'the organization of writing is governed by temporal relationships', and Kress does speak at other points in terms of the relations between syntactic 'elements' and the relations between image elements (below). We should note here that the temporal arrangement of text is inseparable from the spatial arrangement of the print on the page. First, second, and last do not just refer to meaning; they also refer to the spatial arrangement of text. This point is taken up by Kress in his discussion of affordances.

In this passage Kress (2003) specifies relations that until now I have been discussing as the transaction between linguistic context and text to produce meaning (orthographic, syntactic, and semantic context). But a problem now arises with that conceptualization of 'intratextual' relations. Only written text affords the context of linguistic relationships discussed throughout most of this dissertation. According to Kress, the image does *not* form meaning through the linguistic contextual relationships we are familiar with from alphabetic print. This is the point that both Burnett (2002) and Kress want to emphasize. The contention is that we need a new terminology and understanding of the context of the image.

In the same passage, Kress explains the alternate logic of the image:

> The organisation of the image, by contrast, is governed by the logic of space, and by the logic of simultaneity of its visual/depicted elements in spatially organised arrangements…. In visual representation the placement of elements in the space of representation – the page, the canvas, the screen, the wall – will similarly have meaning. Placing something centrally means that something else will likely be marginal, at least relatively speaking. Placing something at the top of the space means that something else will likely be below. Both these places can be used to make meaning: (p. 2)

Here Kress takes up the idea of space and the spatiality of the image. Spatial relationships of the elements of representation also effect meaning. Where space was spoken of in terms of the three dimensional physical world and the social spaces in my discussion of the spatiality of reading context above, here we have the interesting corollary of two-dimensional arrangement of the elements of the image (and the arrangement of print, as we will see). Kress describes the relationships within the image as spatial.

“Whatever relations are to be presented about the world have inevitably to be presented as spatial relations between the depicted elements of an image” (p. 2). In this Kress provides us with important understanding of what we can call the spatial mediation afforded by images, though as we will see, he overstates the case here.

In Kress’s (2003) view, the image affords a different sort of mediation than writing, and the differences have to do with these temporal and spatial relationships within the medium itself. The possibilities for representing meaning afforded by writing are inherently temporal and sequential. The reader and writer are constrained in general by “the ordering of elements (syntactic/grammatical and lexical) in the conventionalized sequences of syntax” (p. 20). Their relationships are sequenced and represented in time. "Joe loves Jane" is different from "Jane loves Joe." Though we cannot be absolute about this, especially when Kress speaks about linearity, for an entire book exists simultaneously, and readers do not always follow the prescribed path. Also, we know from the research on context that readers do look forward to make decisions about what came before (Rumelhart, 1994). Meaning is revised in a temporal but non-linear manner. Kress acknowledges this in his discussions of the sequencing of print as a "quasi-temporality" that derives from the sequencing of language.

The possibilities for representation using images are inherently spatial and simultaneous. The arrangement of elements in relation to each other and to the whole has meaning that is all simultaneously displayed. But Kress’s (2003) statement that the image can only represent the world through spatial relations deserves some attention. The semiotic work of image is not purely spatial. Spatial arrangements can be designed to infer a certain flow of attention in a manner similar to the temporality of print. The viewer is free to begin anywhere, but as Kress points out, there are conventions to constructing and interpreting images, as there are with print. Therefore he explains that the design and display of an image “‘encourages’ rather than ‘compels’” (p. 4.) the viewer to take a particular path through an image. This is accomplished through spatial placement as well as “making some elements salient through some means – size, colour, shape” (p. 4). In this way images have a temporality, because, just like the recognition of a

letter or word in print, the recognition of an image occurs in the time it takes to transact the features into text-context and establish meaning.

In a similar manner, a second look at the spatial and temporal logics of alphabetic text and image reveals similarities that are not stressed in Kress's discussion. Consider orthography. Are letters and words not spatial? While acknowledging the linearity of text, is not Stanovich's description of within-word orthographic context a spatial representation and visual phenomenon? Within a word the letters surrounding individual letters or letter groupings affect recognition of morphemes and words. Even the linearity of text is relative, since the height of letters matters along with their distribution left and right.

Discussions of the logic of the image stay at or above the level of the potentially meaningful sign, the visual equivalent of the morpheme. But we can imagine a level of the image that functions in a similar way as orthography. Are not all words and images constructed of smaller elements that alone mean very little or nothing? We only can identify the marking l as a number one or the letter l by its relationship to nearby markings: "1+2" versus "leg." At a different level, aren't the circle in the letter b and the circle in the symbol ☺ the same until other markings are added nearby? The difference, of course, has been commented on many times. Letters generally represent sounds/phonemes rather than meaning/morphemes.

Are letters and words not simultaneous in the same way as individual signifiers in an image? When we consider the import of temporality in the image versus text, how many microseconds of consciousness matter? Surely we do not process the elements of complex images any more simultaneously than we do the letters of a printed word. As I will explain in my analysis of an image below, proximity matters in the identification of meaningful units of an image as it does in the identification of meaningful units of a word. My point here is that we can dig down into the image's constituents to reveal significant similarities to the composition of the alphabetic sign. Though Kress is careful not to create an exclusive binary, there is still more depth to be explored in the similarities and differences between the representational logic of the image and alphabetic text.

Actual-Empirical Analysis of the Logic of the Image

In order to examine the logic of the image I will use the painting by Jean-Baptiste Greuze (1756), *Broken Eggs*.

Figure 5.1. Jean-Baptiste Greuze (1756), *Broken Eggs*

As we look at the painting we might take in the entirety of the image/event in what seems a moment, but closer consideration demonstrates the way we have actually scanned the features and transacted numerous text-context relationships to establish the meaningful event. We can use Kress's concept of spatial relationships to examine the texts and contexts.

On the most basic level, Greuze has a bright central foreground surrounded on three sides by a darkened room that 'frames' what we will call an event (see Figure 5.2 below). The details of the room are blurred and unfinished against the fine, sharp detail of the framed event, adding to the likelihood that we will choose the objects in the bright center as the dominant text and allow the room to recede into framing context.

The young woman in white and blue, with bright pale skin and a basket of eggs is the brightest area of the image, and that part of the image stands out, drawing attention to the young woman. Where does she stand in relation to the other objects in the image (her context)? There is a borderline of both light and objects leading back and forth from the young man's head, through his gaze at the older woman and her gaze back at him, through the line of his arm and her right elbow, to the child who peers back into the foreground, and back again. Indeed, as depicted in Figure 5:2, we can follow the light and lines from the child's gaze across the bright basket of eggs to the young woman's feet and back up to the man's inclined head. The event is framed now in a triangle that contains its major elements. Another line runs from the man's hip through the lines and light of the legs to the boy, creating a frame within the frame. The second frame is the triangle that contains the brightest sections: the young woman and the eggs.

Many of the other elements of the painting draw attention and literally point to this second triangular area with the young woman and basket of eggs. At the center of the larger triangular frame the older woman's hand points to the basket. So does her foot along with the orientation of her body and the body posture/orientation of the young man. This 'encourages' a path of attention back to the eggs, one of which is broken.

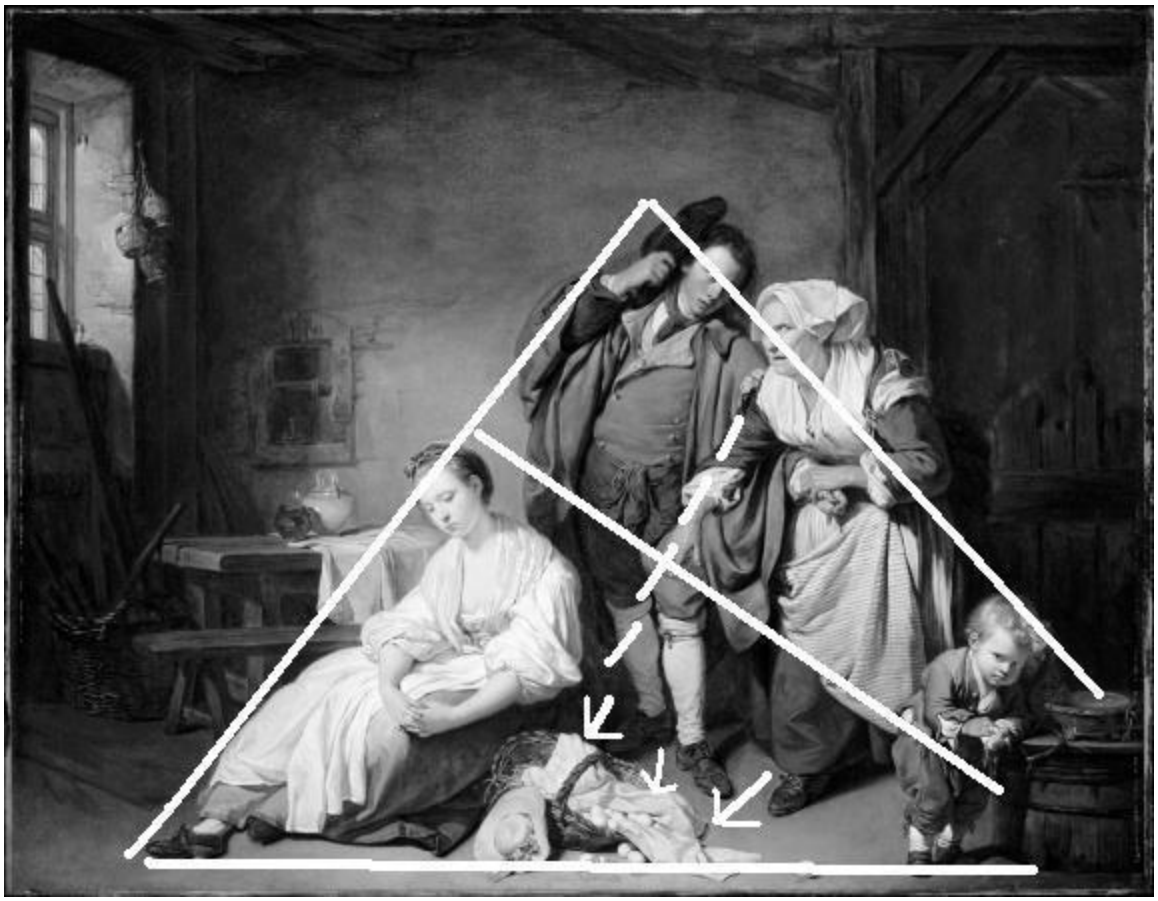

Figure 5.2. Jean-Baptiste Greuze (1756), *Broken Eggs*, with spatial borders and lines

This brief look at only a few of the elements of Greuze's *Broken Eggs* serves to demonstrate the spatial affordances and relationships of image as well as the temporal flow of attention that is suggested by the spatial arrangement. Altogether the image is a whole event, the meaning of which is transacted in numerous focal object–context object relationships.

Of course I have only touched on the surface of these relationships. The arrangement of the bodies can be used to construct meanings regarding the social relationships being established. The young man and older woman create an intimate pair. If he appears to be leaning down and blocking her from entering the space occupied by the young woman and egg basket, she also appears to be restraining him by the wrist. The young woman and child are turned away from the center of the main frame occupied by the pointing hand. Kress discusses the significance of the center and margins, and here we see two

participants who are removing themselves from the center occupied by a symbolic accusation. Finally, I have already unavoidably used social, cultural, and historical contexts to interpret some of the image. Familiarity with the cultural symbolism of white as virginity and broken eggs as virginity lost (Thompson & Fahy, 1989-1990) brings an entire constellation of cultural objects into the context used to construct a meaning for the painting. The politics of female virginity is then implicated in the meaning of the event. But the main point of this exercise is the weight of spatial affordances in the image, particularly the positioning and design of the objects, and the location of elements of the image in space.

The New Text: Text and Context in the Image

Before moving on I want to test my categorical definition of reading context on this image, since images and layouts of all sorts are characteristic of what I will call the *new text*. Notice that when we focus on any one object, the young woman for instance, two contextual phenomena occur. First, we see that the object/young woman is composed of still smaller objects/features that I identified in Chapter 4 as components of the object of focus. According to my definition, the woman focused on is text. She is simultaneously context for these components, and the object of focus. So the young woman is one object, and her white covering is a component of that object. The young woman is at the same time a context of the white covering; they are in a transactional relationship wherein each identifies the other and gives the other meaning. The white cloth is not virginity if not worn by the young woman. The young woman is not virginal without the white cover.

Second, we see that the young woman/object is in a number of contextual relationships that, again, transact with the woman to establish her identity and meaning. The young man stands at her back blocking the older woman, establishing a relationship between them of guarded and guard. (Alternately, the older woman can be seen to be holding him in place and directing him toward the focal eggs and basket.) If we focusing on Kress's concept of the major significance of spatial relationships in images, we see the eggs are connected to the young woman by proximity (space), and in a rather interesting way each takes on the identity of the other. The eggs and broken egg take on the identity of "virginal young

woman" and "virginity lost" while the young woman takes on the identity of broken eggs. The identity and meaning of the young woman is greatly obscured if we spatially separate her from the context object broken egg. If we move the eggs into the shadows on the table in the back left the meaning of the young woman shifts dramatically. She might be sitting demurely avoiding the accusation of the older woman for any number of (unknown) reasons. The basket of eggs without the proximal context of the young woman in white could, in its new context, be the result of any number of (unknown) causes and symbolize neglect, or unfinished business, or perhaps nothing at all. And all of this is only established through the reader's transaction with the social, cultural, political, and historical constituents of context that establish the meaning potential of the objects "young woman in white" and "broken egg" within any given reading event. Of course, the context we are talking about is never merely within the image any more than it is ever merely the linguistic features within the text. It is the whole context of your reading of the image right now. It is my hope that this brief analysis demonstrates the functional ability of my definition to describe text and context in images as well as text.

Kress (2003) provides a similar qualification of the temporality of print. If the relationships of image are not simply spatial, neither is the syntax of print purely temporal. As Kress develops his theoretical description he backs off of these definitive statements and qualifies them as the dominant but not only representational affordances. He provides a useful description of this point by stating that that the sequence of writing "is linear/spatial, with a quasi-temporality as I read along the line, in time" (p. 20). Contemporary print-based text (and I would argue that this too is a product of modern word processing technology) signifies meaning relationships spatially as well as temporally. The examples that Kress gives are the adjustment of ***FONT***, and layout of the text and page:

- "The 'force' and
- the 'feel' of the text have changed. It has become
- more insistent,
- more urgent,

- more official. It is now about
- presenting information." (p. 16)

So the text–context relationships in alphabetic print can become spatial by arranging the positions, shapes, and colors of the print in a way not unsimilar to the spatial relationships in the painting by Greuze.

We also need to keep in mind, as I stated above, that up until this point Kress is talking only about intratextual text–context relationships, the contextual relationships between objects *within* the form of representation. By this I mean, Kress is describing only the text–context relationships of the sign (print and image), not the entirety of context with all of its sub-categories as it is defined in this dissertation. So his analysis of print and the image is necessary work at the level of the linguistic text-context discussion in chapter three. He is talking only about the production of meaning through the internal features of signs. He is using linguistic theory to explain the temporality of the syntactic relationships of print and semiotics to explain the spatial relationships of the image.

This discussion implies a tendency in the literature that bears explicit recognition. The emphasis in my analysis of Kress is on the image and alphabetic print. Nowhere is significant consideration give to the other modes of communication and how they transact with each other in 'reading' a truly multi-modal communication. Kress describes the logics in exclusive terms. That is, one ascends in the amount of information it conveys while the other descends in significance. What of the interaction of the two, and what happens if we see the entire "communicational ensemble" (p. 21) as a transactional network contributing to an overall meaning? Kress's examination of this question is inadequate to the complexity of the task. He relies on de Saussure and Pierce's semiotics to examine the sign affordances of various modes, but we are left with his questioning the relationships between modes. My work states decisively that one of the relationships is a transactional relationship of context.

As the work continues Kress picks up the topic of the social, cultural, and historical nature of these sign systems. He covers the ways that meaningful social worlds are established through text genres. Kress's discussion of the textual and linguistic construction of social worlds (which he calls "generic organization", p. 101) and social roles and identities does not cover any ground that is substantially new

to my category construction. The most significant point comes when he connects the semantic and technological affordances back to the social and cultural context in which they developed and from which they take their meaning: "Of course, the inherent affordance of the mode has large aspects of social and cultural work to it; it is possible because of the cultural work with the affordance of the material aspect of the mode" (p. 156). In my section on CHAT I explored the cultural-historical nature of the tool. Kress brings this idea to the mode as a tool of communication. Each mode's representation potential is shaped by the dialectic between the affordances of its physical properties and the social uses to which it is molded.

Because communication through NCTs uses multiple modes of representation, the new text has been termed multimodal. Multimodal texts, as the name indicates, can and do include speech, images (moving and static), music, sound effects. It communicates using modes that register through the senses of sight and hearing. Each of the modes has particular affordances for meaning making, and a number of authors in the field of new literacies remind us that reminds us that in our theory building we also need to keep in mind that there are affordances for both cognitive as well as affective, imaginative, or visceral transactions (Abbot, 2002; Burnett, 2002; Kress, 2003).

I add that there are now kinesthetic affordances. Material technology and practices have always included bodily practice and sensation. The touch and response of the keyboard has been with us since the invention of the typewriter. The mouse, on the other hand, allows readers and writers to move around in text. The mouse and cursor are the electronic cousin of the finger pointing at text to focus attention. The click is a mechanical function that is purposely kinesthetic. As an electronic function it could be accomplished by any number of input modes, but pointing, clicking, and dragging establish a materiality to the distribution of text objects on the screen. Further, clicking has come to symbolize 'selection' and connection through hypertextual affordances (see below). NCT interfaces now incorporate physical sensation and movement in a number of ways. They vibrate or wobble in the user's hands, and they respond to the user's motion. The NCT that provides the most obvious example of interactive kenesthesia

is gaming, where the controls now create sensation and respond to the user's motion, and screens can be built into headpieces that move the visual image in response to the motions of the user.

Unfortunately, the discussion of multimodality in much of the literature (including Kress's work) subtly shifts the emphasis away from reading and onto the text. While Kress begins with an insightful and useful theorization of image and alphabet that blends the text and how it is read, the project becomes describing multimodality rather than describing the 'reading' of multimodal communications. This is an area for more thought because, while there is voluminous discussion of multimodal texts, as a field we are still at the beginning of understanding what 'reading' a multimodal text means, and how it is accomplished. A start to that process is to recognize that on some level the various modes of a communication contextualize each other. All of the modes incorporated into the multimodal text carry a part of a message. Whatever else we say about their role in the communication process, according to my definition of reading context we know that each mode is contextualized by and contextualizes the others. Multimodality must surely lead us to new descriptions of the rich and complex transactions between cognitive, affective, and kinesthetic experience of communication. On the 'text heavy' side of the discussion, multimodality has led a number of theorists and researchers to talk of the 'writing' of new text as "design" (Janks, 2010; New London Group, 1996). We need to ask what is new about the context of "designed" text, and how we read the modes in relation to each other.

Kress's (2003) answer lies in the "logic of the screen." The spatial affordances of the image can be extended to the entire screen, and the reader uses the communication affordances of each of the modes contained therein. The spatial arrangement of the features on a given page (its text, images, links, advertisements, videos, etc.) creates suggested paths and semantic connections and associations just as the internal logic of the image does. Kress points out that the print text convention of starting at the top left corner no longer holds on the screen. Instead, spatial layout is designed to present different possibilities in the various areas of the screen. There is no uniform layout to the screen as there is to the printed page. Instead, different layouts and appearances have come to represent different genres of multimodal text and the different genres of websites. Since Kress wrote and published this work, layouts of text, image, links,

boxes have become conventionalized, and users have come to recognize combinations of layouts, fonts, colors, and backgrounds as signifying various genres of websites: wikis, video sites, social networking sites, corporate and academic home pages, and many others. Generic layouts set a context that frames the reader's expectations and interpretations.

Multimodal texts are not entirely new. News magazines that employ considerable image and spatial layout with alphabetic texts have been around for quite some time, as have video communication that employs music, image, alphabetic text, and many of the other features that we now associate with the multimodality of the networked screen (Snyder, 2002). If we ask if anything is truly new about NCT mediated texts, there are two other characteristics of the new text that need consideration, hypertextuality and multiplicity. While these are both characteristics of text, à la my criticism above, I will seek to emphasize how we read them wherever possible.

Reading Text and Hypertext

Hypertextuality is a technological affordance that manifests as an historically new textual phenomenon. It makes text interactive, malleable, and infinite. The computer language underlying the text on the screen allows for any object to be connected to another data on the network via a link. My use of data to describe the other end of the link is intended as a generic term for the multitude of results that can occur when the link is accessed. The standard for the first several years of the World Wide Web was for links to take the reader/viewer to another web page. That is still possible, but it is just as possible that hypertextual links connect the text or image to music, a video, a larger image, or any number of multimedia displays. There are semantic and navigational affordances to these connections (Burbules, 2002).

Links suggest some form of association between the linked item and the target data. That association can be example, amplification, continuation, alternate, support, or any other form of semantic association. If I take this dissertation and add hypertext, I could change many of my parenthetical references to hypertext that links my text to the actual documents (as long as the reference is available

online). My citations of previously published work that I am drawing from or want to refer the reader to become pathways to the work itself. The meaning of my link depends on its context, just as it does with the paper/text version. It depends on the relationship that the user/reader transacts with the text.

Burbules (2002) provides us with an analysis of the functional and semantic relationships of hyperlinks that describes five features that, while perhaps questionable, provide a basis point for my discussion. Burbules sees hyperlinks as:

1. bi-directional
2. single point to single point
3. static
4. established by the author
5. flexibly symbolized.

Directionality involves both navigation and semantics. The link moves the reader on to the target data and suggests a linear connection of the ideas. What Burbules is describing is a temporal semantic relationship between linked objects. Burbules stretches the point to call links themselves bi-directional because the return trip actually requires clicking the back icon rather than the link, but he has a point when he explains that the semantic effect of the reverse is different, again due to the linear connection of ideas.

Single point static links are related affordances. The semantic relationship is binary, and a link always arrives at the same destination. Burbules points out that this limits representation if we "view meaning as multiple, multilayered, and semantically complex" (p. 76). I would argue that the linked objects are always in multiple contextualizing relationships, but his point that the link itself is reductive is well taken. Burbules characterizes the semantics here as "associationist" though as I said above, the association is dependent on the context established by the writer/designer and reader/viewer.

Burbules' forth point is that the author establishes the links rather than the reader. He sees that right to establish links as typically unquestioned and taken for granted by the reader. That dynamic lends hyperlinks a political context due to the potential for ideological persuasion. This has changed to some degree through the evolution into what has been termed Web 2.0 (see Lankshear & Knobel, 2007). The

second generation of web design, function, and use is characterized by a flexible architecture and reader-author relationships that allows reader/viewers to 'write back' and become involved in the production of design and information. The massively popular cites Facebook, YouTube, and Wikipedia all allow users to add links, text, photo's, etc. to the existing page. The affect on context, as semiotic association, can be seen as socializing, pluralizing and dialogizing what was once an individual statement. This new affordance is not without its own political contexts either.

Finally, the computer language of hypertext allows for the link and its destination to be represented in a great variety of ways. Single characters, icons, words, passages, images, any textual object can be linked. That allows for a very open semiotic. This is arguably the most dynamic characteristic of hyperlinks. The designer can use the temporal logic of print, the spatial logic of the image, a combination of affordances or a single semiotic unit (though most signs are inevitably composed of still smaller characteristics).

The point that is significant for the analysis of context is easily missed if we focus only on these author-directed binary jumps of association. The links we are describing create a virtually infinite text. The hyperlink places another entire text within the space of a link. Intratextual links locate a text within a text. Regardless of the association, the link is a symbolic and functional insertion of whatever is at the other end of the link into the current text. For example, within the imagery and print dialogue of an online zombie comic the author might insert a link to a YouTube video that presents an ironic monologue on the meaning of the zombie in modern culture. That video ends with links to 'related' videos and also links to the main page of the creator of the ironic monologue. Having pursued the first, second, or third link I can return to the original zombie comic, and my textual transaction extended through that path and continues on the original site.

Alternately, I can follow links for the span of a human lifetime. For the first time in history every text (every digitized and networked text) is contained in one massive hypertext. Yes some, even many links are dead ends, and quite a lot of text is behind passworded gateways, but the magnitude of text linked to text is a unique phenomenon in history. Whatever conclusions we might draw about the

selectivity of search engines, the design of enticements to pursue certain paths, or the politics of gaining attention on the network, hypertext is new in history. “Links are not simply navigational tools but ways of conveying meaning” (Burbules, 2002, p. 77). Each link establishes a contextual relationship that affects the meaning of the text we are reading until we don’t care to pay attention any more. We can classify some as extremely weak associations and some as quite strong, but each defines a relationship in the text-context event.

Text as Singular and Multiple

The last characteristics of the new text that I will examine are the concepts of singularity and multiplicity. Under the technological order of the manuscript, there were original manuscripts and there were copies. In the technological order of the printed book, there was an original, and then there were copies made by machines. It became a bit more difficult to be clear about which was the original and which the copy, since printing technology involved a transformation into type at first, and contemporary printing is transformed from a digital version into print. The machined copies were somewhat more accurate than human copies, and the cost in human time and labor per book was reduced as it often is by machines. That generally allowed for more copies. Each manuscript and book was material and had its place in space and time. Individuals or groups of people could come to the document and read it, or hear it read. The print was fixed from beginning to end. There were multiple copies that occupied singular spaces and times. Some readers read alone. Others heard the written text read aloud and transacted a meaningful TEXT of their own from the oral language. Then there were groups of individuals who gathered round the same text and read individually. Finally there were groups of individuals who each had a book of their own and read silently together or, stranger still, in semi-unison orally. These latter two largely occurred in pedagogical and religious situations. There are other types of recitation of memorized text, etc., but this sets the ground necessary to make my point.

In the technological order of the networked screen, there is the hypertext. It’s singular original exists in multiple places simultaneously. If at first read this sounds like hyperbole, consider the text of the

instant message. For simplicity's sake we will posit two writers with two computers, two keyboards, and two screens, and two speakers (since one of the modes of most instant messaging applications is sound). The first writer, username, GR8_1 begins:

GR8_1: "Hello NeMeK! How R U?

The characters appear on both screens. Do we say that the original is the pattern of pixels on GR8_1's screen? Why? Because GR8_1 typed it and the characters (probably) appeared on GR8_1's screen milliseconds before they appeared on NeMeK's screen? This is a fiction of relative perspective. We can just as easily say that the original is the binary code in the memory of GR8_1's computer, and that it distributed copies of code through a network to each of the screens. But to call the binary code an original text is irrational, useful only to copyright lawyers. We could as easily define the code of the fingers on the keys as original. Surely the code becomes text when it is transmitted from the computer and decoded as light emitting from a screen. If we do not want to give up on identifying original and copy by this point (for we are now faced with the destabilizing realization that at its core text is nothing but lighter and darker patterns on paper or screen), then surely we are forced to admit that the original is simultaneously on both screens. Otherwise we must agree with Katherine Hayles (1999):

> In contrast to the fixity of print, decoding implies that *there is no original text* [italics added] – no first editions, no fair copies, no holographic manuscripts. There are only flickering signifiers, whose transient patterns evoke and embody what G.W.S. Trow has called the context of no context, the suspicion that all contexts, like all texts, are electronically mediated constructions. (p. 47)

The suspicion that both TEXT and context are mediated constructions is the conceptualization that I have been fostering all along, at least as far as their meaningful realizations. But the idea that original textual media exists simultaneously on both screens is just as tenable. The text that is used to transact TEXT is multiple and distributed. Therefore the context is also multiple and distributed. The idea I am seeking to develop here is that hypertext is capable of being 'present' in multiple places at once, in real time. As username: NeMeK replies,

NeMeK: I’m good :-) How R U?

authorship of this text is also multiple and distributed. This is unique in history as well. Multiple authors physically separated by great distances can co-author a single text simultaneously, in real time. They are both writing the one text that is before them. On one level the co-presence of text establishes a co-presence of authors. Rather than the binary of author and reader separated by space and time, we have two reader-authors sharing simultaneous spacetime. Their disembodied copresence is manifested in a coordinated production of communication and the formation and presentation of self and self identity (Zhao, 2005).

On another level, the subjects are separated from each other by both space and the very technology that brings them together. All interaction that occurs is mediated by text which is mediated by NCTs. In order to mutually construct meanings and their interactional identity they use the contextual affordances available to them in NCT mediated text as well as the contextual meanings that are used by all readers of correspondence, both paper and electronic. In many ways instant messaging appears to resemble correspondence, but I have detailed major differences in their texts and contexts, specifically in the realm of time and space. These two sub-categories are the focus of my final points regarding the changes in context in NCT mediated reading. I begin by briefly looking at the spacetime of written and spoken communication. These two modes provide familiar situations that will enhance the clarity of my analysis of space and time.

Technological Mediation and Spatio-Temporal Spread

First, there is a large body of work on local, physically copresent communicative interaction. In general this work agrees that social and physical space and time, identity, coordinated action, and meaningful communication are transacted (they produce and are produced by) and negotiated (due to the

contestation of representations and positions) by participants through discourse (narration and scripts), kinesics, (body and facial language), social practices, physical arrangement of bodies, and artifacts (Holland et. al., 1998; Goffman, 1981; Gutiérrez & Stone, 1998; Leander, 2002; Zhao, 2005). Multiple spaces and meanings are being negotiated simultaneously (synchronically) and the entire process occurs over time (diachronically) (Gutiérrez & Stone, 1998; Leander, 2002). This is the long, academic-speak way of stating that people use:

- spoken language
- body posture and body language
- actions
- physical artifacts and tools
- physical space
- time

to establish a multimodal text and context in face-to-face situations.

Second, the text–context transactions of traditional alphabetic print books are now well established in this paper. People use the physical book with ink on the pages to transact a meaningful text. The context that they have available for use in the transaction involve the subcategories detailed above. For this example I will use a single reader sitting at home reading a book for pleasure.

Rosenblatt develops a useful description of the texts and contexts in these two situations. Both spoken and written communication involves the mediation of a physical text. In speaking, the physicality of text includes sound waves, but there are also other modes of communication in the text of speaking and listening. Here I am particularly talking about symbolic visual cues that are essential to the meaning we establish in face-to-face interaction. Rosenblatt points out that there is a considerable range of contextual conditions that the listener can use to transact a meaning for the exchange.

> A conversation is a temporal activity, a back-and-forth process. Each has come to the transaction with an individual history, manifested in what has been termed a linguistic-experiential reservoir. The verbal signs are the vibrations in the air caused by a speaker. Both speaker and addressee contribute throughout to the spoken text (even if the

> listener remains silent) and to the interpretations that it calls forth as it progresses…The specific situation, which may be social and personal, and the setting and occasion for the conversation in themselves provide clues or limitations as to the general subject or framework and hence to the references and implications of the verbal signs. The speaker and addressee both produce further delimiting cues through facial expressions, tones of voice, and gestures. (1994b, p. 1061)

So, in talk, several media of communication contribute to the text. Sound waves, facial expressions, and gestures compose the physical text. The text of face-to-face talk is transacted synchronically and diachronically, but in general the meaning being made is synchronous with the production of the text.

As we would expect, Rosenblatt describes the context as playing a role in the meaning of the 'verbal signs' as well as the 'general subject and framework' of the communication. The context includes nonverbal dimensions such as time and the 'setting and occasion'. The physical setting and the social occasion are part of the talk and its interpretation. So are the personal and shared purposes. I understand her use of 'setting' to include the space and physical objects in the area around the talk. This is distinguished from the 'occasion', which is the social significance and purpose(s) of the talk, i.e. the social space.

According to the theoretical descriptions of communicative interaction referenced above, these sub-categorical constituents of context are co-produced by the participants. The speaker, text, and listener are involved in an immediate transaction (immediate in terms of time) of text and context. In spoken language physically copresent of the participants allows them to engage in the co-production of space and time in ways that are not possible in interactions that are mediated solely by alphabetic text. In spoken text there is a shared temporality and spatiality to context.

Rosenblatt (1994b) describes the texts and contexts of reading in contrast to those of speech:

> Many of the elements that contribute to spoken transactions are missing-physical presence, timing, actual setting, nonverbal behaviors, tones of voice, and so on [.] The signs on the page are all that the writer and reader have to make up for the absence of these other elements. The reader focuses attention on and transacts with an element in the environment, namely the signs on the page, the text. (p. 1061)

The material signs on a page mediate the communication of meaning between an author and reader separated by time and space. The material text is a code fixed by the author at some time in the past that

awaits a transaction with a reader to take on meaning as a transacted TEXT. Written text lacks the nonverbal text (facial expressions and gestures for example), the verbal tone and inflection that are part of the spoken text. The reading scenario I am describing also lacks the shared time, place, and situation that are in play in spoken texts. The only physical mediation of meaning between the author and the reader is the alphabetic text. The context of a reading transaction lacks the shared spatial and temporal setting and flow found in speaking.

How does this relate to NCT-mediated reading? Networked communication technologies spread the space/time of reading between the poles I have been examining. On the one end of communication technologies there is reading that closely resembles the reading of books. The online articles I reference in these pages are an example, as are emails, online books, and archived texts of all sorts. They have reached a relatively static or completed state. On the other end there is the text and context of virtual realities. The texts established in virtual reality closely resemble the text and context of physically copresent speaking. Between the two poles there are texts, readings, and contexts that span the continuum (Georgakopoulou, 2006). The final point I want to pursue is this idea that NCT mediated context is characterized by spatial and temporal spread.

I will explain the spatio-temporal effects of NCT mediation on reading by looking at the space and time of email and the space and time of virtual three-dimensional multiplayer online environments. I suggest that the two represent text/context borders between which most if not all other NCT mediated text/contexts fall. For the example I will take it as established that there is a program/application interface that frames the focal text. Some sort of 'window within a window' is ubiquitous to NCT environments, and we need to acknowledge that the frame establishes a very specific context that both attributes and is attributed the significance of 'X' computer environment (at the least): "I am working in an email context with its affordances and limitations" or "I am working in a multiplayer online game context with its affordances and limitations." Having acknowledged this dynamic I now leave it in favor of the phenomena I want to emphasize.

The text-context relationships of reading an email are predominantly the same as those of non-NCT mediated reading. Because the author and reader are separated by time and space, the transaction of meaning relies entirely on the text. Email text combines alphabetic print, images (including emotive symbols), and hypertext as well as their contextual affordances. The affordances of the components of email text have already been detailed. The reader is as removed in space and time from the context of the author as is the reader of a letter or book. As a result, the author and writer must use the context relationships that are inherent to the components of email text to establish meaning. As we have seen, this involves artistic semantic contextualization by the author (Bakhtin, 1981) and the reader's transaction of a subjective meaning out of the potentials that exist in the author's coded text. The spatial affordances are augmented by the affordances of email text, but email context is still fundamentally defined by a complete dislocation of the meaningful expression from the meaningful interpretation in both time and space. It lacks the meanings of inflection (emoticons are gross approximations), body positioning and body language, facial expressions, the management of the space, the material mediations of meaning and the use of artifacts, all the contextualization that is possible in face-to-face interaction. This is one end of the space-time of NCT mediated reading.

At the other end of the spectrum is the new text of virtual reality. Virtually real multiplayer online environments are complex interactive virtual spaces that establish many of the same contextual relationships that were explored in the discussion of face-to-face communication above. The very term 'virtual reality' indicates that the NCT environment allows for large degrees of similarity to real world, three dimensional spatial, temporal, and material interaction. There are distinct differences, particularly in the behavior of material objects and what Jim Gee (2003) has termed the 'psychosocial moratorium principle" (p. 207). By this he means that "learners can take risks in a space where real-world consequences are lowered" (p. 207). While it is true that there has been a lot said about the possibilities for experimenting with online identities and actions apart from one's 'real' life (Zhao, 2005), even that is relative in online games. Players' identity performances and general actions do have virtual-world social, economic, material and political consequences. The important characteristic of virtual worlds is that the

semiotics of communication occurs in real time and shared virtual space. Avatars use multiple sign systems to communicate, sign systems that approximate the affordances of real-world face-to-face interaction:

Talk: Some games use alphabetic text bubbles above the heads of avatars as well as chat channels in a box overlaid on the screen. The chat channel acts as a real time instant message conversation stacking the conversational turns identified by the name of the writer/speaker. The same shorthand and keyboard-based emoticons can be used, as can hyperlinks. Other games just use the chat channel. Still other virtual environments combine incoherent phoneme babble (pseudo-voice) with an interactive instant chat window.

Bodies: Avatars move and take up positions relative to one another in virtual three –dimensional space (see Goffman, 1981)

Artifacts: Avatars gather around, use, and discuss the 'materials' of the virtual world (Steinkuehler, 2004).

Social Practices and Activity: Virtual 'talk' is contextualized in activity, and both are contextualized in an actual community of practice (Steinkuehler, 2004).

Images: Some multiplayer environments feature in-game screens that show still and moving images for advertising, community event scheduling, or political purposes (see Hemp, 2006).

Ultimately, the space time of the multimodal communication in online virtual worlds serves to allow for the same text-context relationships that produce meaningful interaction in face-to-face talk.

In between these two extreme text-context modalities lie the rest of the NCT mediated literacies. It does not take much consideration to see the similarities between the chat/text talk of online worlds and that of instant messaging. As we saw above, instant messaging is temporally and spatially hybrid, with the text occupying multiple spaces simultaneously but the reader/authors separated by physical space and unable to exchange the non-textual context and communication. Space and time do not allow me to explore each technology and its texts and contexts, but I believe the examples of email, instant messaging,

and virtual talk. Technologically mediation dramatically alters the traditional binary between spoken and written texts and contexts.

I will now turn my discussion to an analysis of one child's reading using my working category of reading context. This process within the historical empirical method is explained in Chapter 2 as actual-empirical analysis and uses an empirical study as data upon which I can test the main and sub-categories I have developed.

Actual-Empirical Data to Test and Clarify Category Construction

The third type of data that Holzkamp (as cited in Engeström, 1987) includes in the development of theoretical categories is actual-empirical data. Actual empirical data is used to test my category and bring its features out clearly through a concrete example. I chose Goodman and Anders's (1999) comparison of six researcher's theoretical perspectives because their project provides a unique opportunity to enter my category into dialogue with both cognitive and social perspectives on a reading.

Yetta Goodman and Patricia Anders (1999) asked six researchers with different theoretical orientations to analyze the same reading event. The researchers were provided with data on an oral reading by a 10-year-old named Erica and asked to analyze the child's reading. Using the category of reading context that I have developed I analyze the concepts of context that underlie the analyses from the various perspectives represented in the paper. Again, the purpose here is to clarify my category by bringing it to bear on specific data that is already part of an analytical dialogue. As Engeström (1987) points out, the results of an analysis of actual-empirical study helps to further clarify and develop my categories.

Goodman and Anders explain that they selected researchers from six different perspectives to analyze a reading event because they "believe that researchers' theoretical orientations guide interpretation of a language event, such as an oral rendering of a story" (p. 197).The authors state that they chose Patricia Cunningham and James W. Cunningham because their "scholarship and practice

represent the assumptions of the 'skills model'" (p. 197). Tim Rasinski represents the same perspective. Diane Ford was chosen as the voice representing Reading Recovery. Yetta Goodman represents the miscue-based perspective. Gopa Goswami was Erica's teacher and represents the retrospective miscue analysis perspective on instructional practice. Finally, David Bloome analyzes the reading event from a sociocultural perspective. I analyze each of the contributor's analysis to see which, if any, of the constituents of context each perspective takes into consideration in an analysis of an oral reading event.

The researchers in the report were given "an audiotape and transcript of Erica's reading, a copy of the reading material (with no miscues or errors designated) a transcript of an unaided retelling, and a brief description of Erica" (p. 178). They were asked to respond to five questions:

1) "What does an oral reading and retelling tell us about a reader?"

2) "What is this reader's strengths?" [sic]

3) "What is this reader's weaknesses?" [sic]

4) "What more do we need to know about the reader?"

5) "What instructional plans should we have for this reader?" (p. 178)

I chose this article for analysis in hopes that it would prove helpful in clarifying my category through a juxtaposition of different perspectives on context using the same reading event. The paper provides a unique opportunity to compare concepts of context used to describe the same situation and event. Given the perspectives represented, the artifacts provided to the researchers, and the questions asked of them I did not consider it unreasonable to expect that considerations of context would arise in their discussions. Both the dominant 'cognitive skills' perspective as well as the sociocultural perspective place a strong emphasis on effects of context cues at the levels of letter and word recognition and meaning making. If any or all of the researchers include other factors as relevant to a basic understanding of Erica's reading, we can hope to see other constituents of context addressed.

One further purpose the empirical study serves is that it speaks to the value of my theory of context through its silence. The article assumes that reading is print reading. It is silent about digital, multimodal literacies, even though the date is well within the networked communication technology age.

The study could be updated and its relevance increased by conducting the same type of perspective comparison on the new multimodal text of communications environments.

That said, the purpose here is not to test the capacity of my definition to reveal context assumptions in research. My purpose here is to use implicit and explicit references to Erica's focal objects and the factors that each theorist sees as contributing to Erica's construction of meaning for that textual object. I define those factors as the context of Erica's textual transaction. I conduct this analysis of actual-empirical to clarify my own theoretical category. In order to do so I will follow the same procedure to analyze the understanding of context presented by each perspective.

I will analyze the authors' understandings of reading context using the working definition of context developed in chapter four. I will look first at the objects the authors identify as Erica's focuses. This provides my analysis with the objects of focus. These are by definition text. I will then identify the authors' presentation of the factors of the event they believe are contributing to Erica's understanding of the textual objects of focus. I will limit my identification of textual objects of focus to Erica's transaction of a meaningful text in her own mind and her transaction of an oral text. While identifying objects in the environment as objects of focus and thus text (and reading as reading both the word and the world, as Paulo Freire describes it) is an acceptable approach given my working definition, for the purpose of clarifying my category it is cleaner and clearer to maintain this distinction between texts and context for now. Finally, I will include consideration of the reading event as a contextual whole should any of the authors approach Erica's reading from this access point.

Context in the Reading as Skills Model Perspective on Erica's Reading

Patricia Cunningham and James W. Cunningham, representative of the 'skills model', make no explicit reference to context. They comment on Erica's accuracy, rate, sight word recognition, decoding of one- and two-syllable words, and comprehension. Then they list more information they would want to know about Erica, and finally they provide tentative instructional recommendations. Within the

Cunningham's analysis we can identify considerations of both orthographic and pragmatic constituents of context.

The objects the authors identify as Erica's focuses are *letters, words* and *meaning*[10]. Their discussion of word recognition, a main idea in both their analysis of Erica's oral reading and their instructional recommendations, emphasizes her automaticity with high frequency words and decoding using regular letter patterns and analogous word forms (p. 182, p. 183). The authors do not suggest any context effects on automatic word recognition. The factor that the authors present as contributing to Erica's recognition of the words in the text is orthographic redundancy. The factor they believe contributes to Erica's understanding of the text is her pragmatic knowledge of the situation described in the story, pragmatic knowledge that she had gained through reading similar stories and real life experience.

Stanovich (1980) describes automatic word recognition as "rapid context-free recognition ability" (p. 64), and since the Cunninghams do not present any factors as contributing to automatic word recognition I am taking the object 'high frequency sight word' as context free in their view. Their emphasis on the use of regularity of letter patterns for decoding and recognizing unfamiliar words points to the effects of orthographic redundancy or orthographic context on word recognition found in interactive models. For example, the authors suggest that since Erica recognizes the words *my* and *day*, "we would show her how knowing these patterns could help her read and spell words she missed such as *try* and *stay*" (p. 183). The authors also attribute the within word context of orthographic redundancy with affecting the recognition of words with more than one syllable, and state that they would teach Erica to use regular word endings and letter patterns to read unfamiliar words.

Predictability based on pragmatic knowledge is the context factor in the Cunningham's analysis of Erica's meaning making or comprehension. They state that "The Man Who Kept House" is a predictable story and suggest that Erica was able to read and comprehend the story using "prior

[10] Throughout my analysis of Goodman and Anders (1999) I refer to the objects each author identifies as Erica's focuses. I include in this group contextual objects that they suggest Erica *should* be using as she reads.

experience with similar stories and real life" (p. 48). Once Erica understood what was happening, they suggest, she used pragmatic knowledge gained from prior experience to "fill in a great deal" (p. 182). I interpret this statement to refer to pragmatic context effects described by Rumelhart in his interactive model of reading. In that discussion, Rumelhart attributed comprehension of sections of a passage to the reader's understanding of the situation described within the passage. This analysis of the Cunningham's contextual considerations is of course quite incomplete. Regardless, by applying my definition of context to their understanding of reading I am able to identify two constituents of context: within word letter patterns and pragmatic knowledge of story situations.

Tim Rasinski also represents the 'skills' perspective. Rasinski does explicitly mention context. Among his instructional recommendations Rasinski includes asking Erica's parents to turn on the captioning while Erica watches television. He states that Erica's fluency, word recognition, and comprehension will improve through "practice in reading that is supported by the context of the television program" (p. 192). This comes at the end of a passage wherein he describes a number of ways he would use social context to support Erica's reading.

In his assessment of Erica, Rasinski's emphasis is on fluency, word recognition, and comprehension. While he is concerned that she does not decode words 'efficiently' and suggests instruction to improve Erica's word recognition and vocabulary, Rasinski describes Erica's meaning construction as proficient. Rasinski also comments on Erica's interests, reading behaviors, perception of reading, perception of text difficulty, self perception as a reader, study and test preparation, and strategies for decoding and comprehending words and text. He goes on to describe his foremost instructional goal as helping Erica "increase her rate of reading to become a more efficient reader" by teaching her to "process the text more accurately and quickly without loss of comprehension" (p. 191). This is followed by a lengthy passage on instructional recommendations describing approaches he would use to increase fluency, decoding, and word recognition and understanding. Rasinski emphasizes the *authenticity* of the instructional activities he suggests. This is a buzz word in the field indicating that the students use reading, writing, speaking, etc. for the same purposes that people outside of school classrooms use

literacy (though the suggestion that the purposes of activities in one context are transportable to another is highly dubious). Within Rasinski's analysis, considerations of letter combinations and patterns, personal interest, the purpose of reading, and social interaction and participation can be identified as constituents of the context of Erica's reading.

The textual objects Rasinski identifies as Erica's focuses are letter combinations, words, and meaning. This is the text she is transacting. Words and meaning are coupled with fluency and mainly spoken of by Rasinski as a unit: fluency, word recognition, and comprehension. The contextual constituents that Rasinski presents as contributing to Erica's recognition and understanding of words are found mostly in his discussion of the word study approaches he would use to increase Erica's word recognition and vocabulary knowledge. He connects Erica's interest in words and their importance to her with improved word recognition. At the end of the section he ties interest to motivation. Using interest to motivate Erica's reading conforms to Rasinski's emphasis on the authenticity of the reading Erica is asked to do. I associate the reader's motivation with purpose and purpose with the reader's construction of meaning. This is justified in light of Rosenblatt's (1994b) assertion that "factors entering into the total transaction, such as context and reader's purpose, will determine the reader's choice of meaning" (p. 1063). I don't distinguish the reader's purpose from the context of reading as she does because purpose is directly tied to the meaning made, and I have defined everything that is not the focal text but contributes to its meaning as context. Indeed Green and Chandler (1990) describe the '*context of purpose*' as giving meaning to, motivating, and guiding the process of educational research and practice in the same way that Leont'ev (1981) describes human activity as goal directed and motivated.

Because the purposes of reading establish a relationship to text and contribute to its identity and meaning, we can include *purpose* as a constituent of the reading event. I do not, however, see purpose as a separate sub-category. In this example, there are presumably personal connections and associations that bring meaning to the words Erica studies. Rasinski also believes that intrinsic personal interest gives purpose to and motivates Erica's learning of new words. Likewise, Rasinski describes other purposes that are oriented toward social positioning and identity (below). Therefore I am identifying purpose on the

level of specification of personal and social context. Each of the sub-categories consists of specific phenomena, objects, and relations that are identified in our analysis of an actual empirical event. Here Rasinski has identified purpose as playing a role in personal and social context.

Rasinski also suggests that Erica sort words by "semantic features" and letter patterns and combinations: “blends, long and short vowels, digraphs, affixes, and other features… words that have the spelling of other words within them” (p. 192). These are easily identified as semantic and orthographic contexts. Rasinski states that focus on these ‘features’ of words (features that I identify as constituents of context) will give Erica greater control and understanding of words and word ‘features’.

The constituents that Rasinski relates to the unit of fluency, word recognition, and comprehension are personal interest and social performance of the text. Again, because these elements of the reading are involved in the meaning that Erica makes during reading, they qualify as constituents of context. Rasinski notes that “reading material that …taps into her interests is most likely to result in more reading on her part” (p. 191). Erica’s personal interests create motivation and purpose, and they act as a constituent of context in the same manner as described above. Rasinski suggests having Erica read to the class, record books on tape, read to students in lower grades, and read to prepare a performance of her favorite stories. He states that social performance provides an authentic purpose and motivation for reading. Interestingly, there is an aspect of Rasinski’s description here that recognizes reading as a social practice. He believes that Erica will be motivated to practice fluent reading because she knows she will be reading the text before an audience of her peers. So the context here is a public, classroom performance rather than communication of whatever ideas are conveyed by Erica’s construction of the text. Public, classroom performance is a familiar social context in NLS, though we can’t know the exact meaning this social constituent of context lends to Erica’s reading since that was not a part of the discussion between the assessor and Erica. The meaning suggested by Rasinski is something like saving face and the approval of her audience. Rasinski also suggests using socially “supported reading activities” (p. 192). He suggests extending the social context to various forms of group oral readings: “paired reading… choral reading, echo reading, and talking books in which Erica reads while getting the support from a more fluent reader”

(p. 192). It is at the end of this section that Rasinski makes the suggestion of using television captioning a home so that she is supported by the program. Rasinski's conclusion affirms that the social situations above are related to Erica's reading as context.

As I have already stated, Rasinski also presents efficient, rapid reading, or fluency, as one of Erica's textual focuses, though the argument could be made that this is Rasinski's own focus rather than Erica's. Regardless, fluency is a qualitative description of her reading and does not fulfill the criteria for text (an object of focus) or context (the constituents of a reading event that contribute to the meaning of the object of focus). Fluency is best taken as a description of word recognition and meaning making and is involved in the text – context relationship as social expectations and norms. Rasinski makes a reasonable argument that Erica takes cues on the rate at which she should be reading from the social context of her classroom peers. The contextual factor that Rasinski presents as related to Erica's rapid recognition of the words and meaning making is the social context of the class with its norms and time constraints. Rasinski states that Erica reads one-fourth as fast as her peers at the time of the assessment, and concludes that her reading pace "poses a problem for the teacher, the students, and especially Erica, who, like most other elementary students, is probably aware of the reading of her classmates" (p. 190). So the institutional requirements are a context that places pressure on Erica to read more quickly. Another contextual factor that Rasinski relates to fluent word identification is the purpose and expectations set by middle and high school institutions. Rasinski expects the reading load to result in a level of frustration that will cause Erica not to read and even to give up on learning.

To summarize, though Rasinski is identified by Goodman and Anders as representative of the 'skills perspective', he discusses a number of linguistic, personal, and social constituents of context. Purpose enters the discussion as motivation and is a context of both word recognition and the fluency/word/meaning unit Rasinski uses in his discussion. Word recognition is also tied to semantic and orthographic information, so we can identify these as constituents of context based on the linguistic understandings of these 'contexts' in cognitive print literacy theories. Social constituents of context are

present in Rasinski's discussion as the social performance of a text. Finally, classroom necessities and norms and institutional expectations are presented as partially constituting the context of Erica's reading.

Context in the 'Reading Recovery' Perspective on Erica's Reading

Diane Ford was chosen as the voice representing Reading Recovery. She makes no explicit reference to context. Ford discusses Erica's effective use of linguistic knowledge cues and her meaning making, Erica's use of visual information for 'problem-solving' unknown words in the print/text, Erica's vocabulary, and Erica's ability to predict what comes next during reading. Ford structures her discussion around Erica's strengths, areas where Erica's learning needs support, and teaching approaches for providing that support. Within Ford's analysis we can identify considerations of orthographic, syntactic, and semantic constituents of context.

Ford identifies both the print and the meaning of the text as the objects of Erica's textual focus. Ford uses the term print to signify Erica's decoding of the print into words.

> This is evidenced in her statement that print is her greatest challenge. She is uncomfortable with some terminology…and although she persists at problem-solving new words…she is not efficient in seeing how words work, looking within words, finding the largest units that will make her problem-solving more efficient. (p. 188)

The language that Ford uses lends itself to this analysis of factors Ford believes contribute to problem-solving print and making meaning of text because she states her analysis in terms of what Erica is attending to and which linguistic factors are 'lending support' in Erica's reading. As we can see in the block quote above, the factors Ford presents as contributing (or not) to Erica's deciphering of the print are syntax ('the ways words work') and within word orthographic context. Regarding the constituents of the reading event that Erica uses to construct a meaning for the text, Ford states that "Erica actively pursues meaning, and works throughout the reading of the text…to draw upon her own experiences, apply her knowledge of how language works, and decipher the system of signs within the story" (p. 187). Ford's description of these constituents is another way of saying that syntax, semantics, and word structure (which I have been identifying as orthographic context) are contributing to Erica's understanding of the

text. This is restated later as the meaning, language, and visual information that Erica uses to support her reading (p. 188). Finally, Ford explains that Erica needs to improve her ability to use visual, syntactic, and semantic cues to predict more accurately, because "proficient readers constantly anticipate what is likely to occur in text, from the perspective of language structure, meaning, and visual patterns within words" (p. 188). Ford is using the psycholinguistic understanding of context as the orthographic, syntactic, and semantic structure of written language (Rumelhart, 1994, p 874; Stanovich, 2000, p. 5).

Context in the Miscue Analysis Perspective on Erica's Reading

Yetta Goodman, in her own words, represents the perspective "based on miscue analysis and research" (p. 193). She discusses reading as a transaction through which readers construct a meaningful text. In Goodman's description it is the reader who 'mediates' a meaning "with the text" (p 193). Goodman does explicitly discuss context. Goodman sees the text and the meanings readers construct as dependent upon the syntactic and semantic context. She explains that "words are not the same just because they look the same. Words have different meanings and different syntactic patterns in different contexts even within the same story" (p. 193). Then again, in her analysis of Erica's reading of the word 'husband' at different points in the story, Goodman refers to the structure of the sentence as the *context* in which the word occurs.

The objects Yetta Goodman identifies as Erica's textual focuses are *words*, a *meaningful text,* and an *oral text*. As was the case with Ford's discussion, Goodman's phrasing facilitates my analysis because she specifically discusses what readers use to arrive at words and a meaningful text. According to my definition of context, as I hope is clear at this point, the objects that Erica uses to transact with the text constitute the context. The factors that Goodman identifies as effecting Erica's word identification, meaning, and oral text are linguistic context, social purpose, and oral text. Notice that oral text is plays a role as both the focal object and the context, depending on the text-context relationships we are discussing.

The factors Goodman presents as contributing to Erica's recognition of words and their meanings are the context objects graphophonic information, text redundancy, and meaning. Erica's oral pronunciation is presented as a context for checking the acceptability of her attempts at identifying words. Goodman states that Erica uses "her knowledge of initial and final sound- letter correspondences and syllabication" (p. 194) in her attempt to recognize the word *husband*. The redundancy of husband and woodman as the main character are said to help Erica eventually recognize that the words are referring to the same person, and Goodman examines Erica's mentioning of 'he', 'the man' and 'the dad' in her retelling to support that conclusion. That Erica uses semantic context in word recognition is evidenced by her decision that the word is husband because, she says, "'it made a little bit sense'" (p. 194).Goodman's extended discussion of the redundancy of 'husband' is important in that it confirms a decision I made in chapter four regarding the contextualist sub-category 'references'. The reader might recall that Pepper (1942) divided the category 'texture' into the sub-categories strands, context, and references. Because much of Pepper's discussion of references was unconnected to context, I left the definition of this phenomenon for reading theories to determine. Here, Goodman calls woodman a 'co-referent' to husband. She means, of course, that both words refer to the same person. This sort of reference is a linguistic context that involves both syntax and meaning. Goodman then turns her attention to the connection of wife and husband. Goodman attributes Erica's eventual correct reading of husband with the context of the sentence in which her successful identification occurs. Specifically, Goodman states that "the determiner her is an additional anaphoric clue in this context, which Erica puts to good use to infer the expected response" (p. 194). Anaphora is a linguistic structure that refers back to another structure (The American Heritage Dictionary of the English Language, Fourth Edition, 2006). Verbs and noun –pronoun combinations can be used in this way. In this instance her is the pronoun replacing and referring back to the antecedent wife, and associating wife with husband. This anaphoric reference establishes a syntactic and semantic context that allows Erica to infer husband as the target word.

The factors Goodman presents as contributing to Erica's construction of the meaning of the text are "syntax (grammatical) and meaning (semantic/pragmatic) cues as well as those that provide

information about words, letters, and sounds" (p. 193). Here again Goodman presents oral reading as a context for word recognition. I stress this point because it is one of two areas in which she clearly differs from the understanding of context in the print literacy theories examined in chapter three. The linguistic constituents of context, letters, words, syntactic, semantic, and pragmatic context, are already well established in my category construction.

Finally, Goodman discusses the purposes of Erica's reading. At the end of her analysis, Goodman states that Erica "may be reading orally for a teacher's benefit, sounding out and working at the word level but at the same time silently constructing a meaningful written text for her own purpose" (p. 195). The textual focuses she is working with here are Erica's production of an oral text and a meaningful written text. Each text has a purpose behind it that contextualizes the textual production. I examined the context of purpose (Green & Chandler, 1990) in my analysis of Tim Rasinski's description of context above. Goodman identifies two contextualizing purposes here, the rendering of an acceptable oral reading of the story and constructing a text that has personal meaning. Here 'reading for the teacher' gives purpose and context to the production of her oral text and gives it a social significance. The purpose of producing a socially acceptable oral presentation is the context of the oral text, and the oral text is a context of Erica's word recognition for the written text. This is an interesting way of understanding the context that purpose is establishing here, because these shifting texts and contexts affirm the usefulness of my working construct.

In regard to the second purpose Goodman suggests, Erica's own purpose extends the context used to produce a meaningful text beyond the linguistic constituents of context noted above. Personal motivation is also a part of the context of the process of producing a meaningful text. In this analysis Goodman expands beyond the linguistic context of letters, words, syntax, semantics, and pragmatics by including Erica's dual purposes, one of which is to produce an oral text in a social context. Rasinski introduced the immediate social situation in which Erica's oral reading occurs as a part of the context of her reading. This contextual constituent is expanded upon in David Bloome's analysis.

Gopa Goswami, Erica's teacher, represents the retrospective miscue analysis perspective on instructional practice. Though she makes explicit reference to "structural context" (p. 196) and the "context where the semantic cues are stronger" (p. 196), the bulk of Goswami's discussion focuses on the role of retrospective miscue analysis in teaching Erica to read. Thus her perspective is not readily comparable to the other five, and since the discussion does not cover any new ground, I have omitted further analysis.

Context in the Sociocultural/Sociolinguistic Perspective on Erica's Reading

The last perspective is presented by David Bloome. Bloome, representative of the sociocultural/sociolinguistic perspective, does make explicit reference to context. In his introductory comments, Bloome refers three times to the view that understands reading as "a decontextualized and monolithic set of cognitive processes" (p. 184). Bloome describes the decontextualized view of reading as having been 'debunked' by socially-oriented researchers and theorists. The decontextualized view is described as "defining reading as an interaction between a reader and a text" (p. 183), and focusing on "the cognitive processes the child employs" (p. 184). The similarities are obvious enough that it is reasonable to conclude that the 'decontextualized cognitive processes' view of reading to which Bloome refers is the school of thought I have identified as the dominant cognitive print-reading perspective, though the emphasis on cognitive skills clearly indicates that he has in mind processing theories like Rumelhart's and Stanovich's rather than Rosenblatt's transactional view. His alternate perspective emphasizes "questions about what social relations and social identities are being established and what definitions of reading are being negotiated" (p. 184). The negotiation of relationships, identity and meaning are, of course, central to my definition of context.

Bloome's discussion differs from the rest in that he approaches the reading as a "miscue analysis event" (p. 184) with various phases, one of which is Erica's oral reading of the story. The enactment of the social practice of miscue analysis is described as "a social event, with implications for social relationships and for definitions of reading and for being a reader" (p. 186). Bloome's analysis of the

miscue analysis event focuses on the social interaction of the participants and how the interaction is mediated by the text. Bloome begins with questions of what exactly is being produced in the event, who is producing it, and how it is being produced. He rejects the common belief that the teacher/evaluator's "evaluations…are merely a series of procedures that more or less accurately describe how well someone reads or what internal psychological processes the reader uses" (p. 184). Instead, Bloome opts for analyzing the production of social relationships and social identities and the negotiation or imposition of definitions of reading in the event. In this analysis of production and negotiation, Bloome's focus on Erica's reading as part of an *event* is congruent with my working understanding that a thorough understanding of specific objects and phenomena are only possible if we take the entire situation and event as the contextual unit of analysis. Further, he provides a relational explanation of the ways that meanings and positions that are established in the event.

Bloome divides the reading portion of the event into two types of phases, phases when Erica is engaged in an "oral rendition of the written text" (p. 185), and phases when Erica interacts with those present at the 'evaluation'. I call the oral rendition the "text" of the reading phases. The statements regarding her performance are the text of the interaction phases.

In his description of the phases of the event Bloome makes reference to elements of both time and space. Bloome begins his analysis with a reference to the physical-spatial context and its relationship to the meanings made during the event.

> There must have been some interaction between the evaluator and the child regarding where to sit, what book to use, and when to begin. This phase of the miscue analysis event needs to be acknowledged since it implicates a particular reading practice to be used in the second phase of the event. (p. 185)

As described in the section on spatial context above, the physical location and arrangement of the participants and artifacts affects the available meanings of a reading event. Bloome provides us with concrete examples of how physical space is relevant to the production of the social event called miscue analysis.

Bloome continues this line of analysis in his description of the miscue analysis as a "face-to-face-evaluation [that] can be viewed as a social event involving actors and text" (p. 183). Describing miscue analysis as a face-to-face event in which actors' interaction revolves around (or is mediated by) a physical (what book to use) and discursive text is a concrete way of describing the presence of a physical and social spatial context in a reading event. Bloome's consideration of time is found in his analysis of the process of verbal action and reaction through which actors negotiate the particulars of the event. Consideration of the interaction that signals when to begin indicates that time is active in the event as well. He also finds significance in the variation in prosody or rhythm, stress, and tones of Erica's oral text. This can be seen as Erica's use of time (as timing) to signify her understanding, negotiation, and performance. Bloome notes that "the velocity and volume of her delivery increases" (p. 186) during one phase of her unaided retelling of the story to the evaluator. In this way the meaning of oral text is related to Erica's timing of her production.

Bloome associates Erica's oral text with the context of the social (reading) practice 'basalese'. 'Basalese' is Bloome's term for the oral reading practice expected in the assessment situation. He is referring to the oral reading of basal texts. The specific objects Erica focuses on during her engagement in this social practice provide the context of her oral text. Bloome identifies them as the performance rules of basalese ("the sequential oral rendering of words, hesitations, and pauses before difficult words, regressions, and monotone unstressed prosody" [p. 185]), the rights and obligations of the participants ("who has the right and obligation to render orally, to correct, to interrupt, to be silent, to close the book, to write, to comment, and so on" [p. 185]), and a reflexive awareness of her own rendering of the text. Bloome see's an indication that Erica is aware of these objects through statements such as "'I don't know that word, I'm gonna pass it'" (p. 185). Bloome concludes that such statements indicate that Erica knows that there are specific expectations involved in the reading practice and that she is negotiating her role by assuming the ability to negotiate some of her performance. Her comments also indicate that she is conscious of the text she is producing.

During the ‘interaction with those present’ phases of the reading Bloome describes Erica’s contextual focus as on the rules and participatory roles within “the social relationship between the evaluator, Erica, and the written text.” The statement quoted above is also a negotiation of her relationship with the evaluator and text, and indicates that Erica situates her oral statements within the negotiation of the social practice and the social event. This context is further indicated by the evaluator’s direction to Erica to “‘Keep your voice nice and loud, O.K.’” (p. 185). Bloome states that this exchange “signals that her performance includes audiences other than the evaluator who are also in attendance” (p. 185).

Bloome continues to examine Erica’s negotiation of various participatory roles in his analysis of the conversation following the oral reading and the unaided retelling.

Bloome’s analysis addresses the question that was left unanswered by cognitive print theories, ‘what is the relationship between the activity of reading and the *immediate* context of the reading event?’. His answer is that the social practice and social event are the context for the production of Erica’s oral texts. Bloome does not distinguish between the oral and written or personal text in the way that Ford does. The miscue analysis event with its rules, roles, authority/power dynamics, and repertoire of practices is the context that forms and is formed by oral text production.

The Effect of Using My Definition of Reading Context on Actual Data

In this analysis of Goodman and Ander’s (1999) paper, "Listening to Erica Read: Perceptions and Analysis from Six Perspectives," I have been able to use my working definition of reading context to make sense of the text and contexts that each perspective sees in Erica’s oral reading. The linguistic contexts of letters, words, syntax, and semantics, were all identified by multiple authors. Pragmatics was also mentioned by Goodman as one of the contextual contributions to textual meaning. The social context of the miscue analysis event was relevant in both Goodman’s and Bloome’s analyses. Rasinski stated that the social context (identified as *oral reading to peers* and *the school community*) establishes an authentic purpose to reading. The purpose of the oral reading provided context in both Rasinski and Goodman’s

analyses. Oral text also worked as a context in Goodman's analysis of Erica's word recognition. My working definition of reading context is most clearly represented in David Bloome's analysis. This is not surprising since Bloome explicitly draws on Vygotskian/sociocultural theoretical perspectives that consider the immediate social situation to be relevant to human activity.

Goodman and Anders conclude their article with the questions, "'So how should Erica be taught? Do we know the best way?'" (p. 197). They answer that "'it depends on your understanding of the reading process'". The answer remains the same when I modify the question to ask, what is the context of Erica's oral reading? The constituents that various theorists and researchers consider to be the context of any particular reading event are different according to their philosophical and theoretical perspectives.

The next question we can ask is not which perspective is correct, but: What are the effects of using a particular understanding of context to understand reading? What is the effect of using my definition of reading context? It gives us a framework and vocabulary (Reckwitz, 2002) to speak about what we consider text, and what we believe is working with text in the production of practice, identity, and meaning: context. A common ground enables productive dialogue between paradigms. The expanded list of sub-categories that I have developed provides a single framework for discussing, for example, what Rasinski calls authentic purpose, Goodman calls "reading orally for a teacher's benefit" (p. 195), and Bloome describe as social relationships and performance. Within my framework the common ground between these researchers is describing what they consider to be text and what they consider to be the social objects (people, artifacts, and ideas) that affect the meaning the reader makes of the text. They will have different understandings of that meaning making relationship, and each perspective will have a different answer to the question depending on their theoretical dispositions, but the dialogue can establish the boarders and boundaries, overlaps and exclusions as areas for research and theory development. We will achieve a good deal if we extend discussions like the one here in Goodman & Anders to defining our understandings of the text-context relationship and exploring the effects of using those definitions to teach, assess, and research reading.

Implications

The Need for a New Theory

In suggesting the implications of a new theory of context I am guided by Reckwitz's (2002) reminder that the value of a theory is not whether it is 'true'. Rather, the value lies in the effects of its use. As we have seen, there is a considerable attention to context in contemporary discussions of reading. Cognitive reading theorists and researchers talk about the limited effects of linguistic contexts while sociocultural reading theory and research insist that we can only understand reading practices in their social, cultural, political, and historical contexts. Despite this consistent emphasis on the effects of context there is no generally accepted theory of what exactly we as a discipline mean by 'context' in reading. One significant effect of the use of my definition is to provide our field with an historically recognizable articulation of what has been said, the problems with various under-theorized conceptualizations and uses, and a formulation of a rationally defensible understanding of a phenomenon that we all agree is vital to reading.

In his look at the newness of multimodal literacies Kress (2003) observes,

> We are forced to confront this world of change with theories which were shaped to account for a world of stability. There is an urgent need for theoretical accounts that tell us how to understand communication in periods of instability. (p. 11)

My category has the advantage of an historical definition. It is able to conceptualize context as it was in the past, and I t is also able to describe how literacy is currently transforming due to the technological and social changes of the present. Though an entire theory of literacy that describes reading, writing and their digital permutations (digital production of multimodal text as '*design*' (Janks, 2010) has cache at the moment) is ultimately what is needed, I believe this theoretical research has contributed to that progress to some modest degree.

Also, the transparency of my method and process allows for my readers to engage in a dialogue with my sources, my analysis and critiques and conclusions; to accept, reject and extend the ideas. That characteristic of this category construction was largely achieved through the approach to historical

empirical research as outlined by Engeström (1987). Throughout the process I defined basic epistemological principles that guided the selection of data, and I narrated the data selection and analysis so the reader can follow the logic and participate dialogically in the soundness of the principles and arguments and analyses. My hope is that I have been successful in offering my part in what needs to be an ongoing process of theory development for the new historical moment.

Ultimately, however, the strength of this theory of context must be found in its usefulness for informing teaching practice and transforming the literacy practices that all kinds of people use in their daily lives. I have premised my arguments on the belief that current mainstream understandings of literacy represent a different historical period with different reading and writing technologies and different reading practices, purposes, expectations, and roles. Therefore, the purpose of this or any theory that contributes to our understanding of contemporary reading must be to make people better readers, readers who are better able to meet the demands of the sorts of text and context they are using in the 21st century. I will take up the question of how we can define 'better reading' in my educational implications below

Educational Implications

If new conditions bring new theoretical understandings, how can we bring our new understandings of reading, or in this case, reading context, into fruitful contact with practice? What then can be said about the place of a new definition of reading context in 21st century reading pedagogy? Ilana Snyder (2002) reminds us that periods of change can create opportunities to revisit some old questions and invent new answers for the new world. Technologically mediated literacy invites us to ask anew, "What is education for? What do we need to ensure that our students experience and have access to?" (p. 173). A review of the literature that deals with literacies that take place through NCTs shows an increasing emphasis on and call for pedagogical practices that enhance students' abilities to navigate, make sense of, and effectively interact with the huge mass of multimodal texts they encounter on the screen. One significant area of concern is that pedagogical responses have a vision that extends beyond

the creation of readers as "effective information consumers" (Shapiro & Hughes, 1996, para. 5). The call is for preparing readers to understand online information (and text generally) in its social, cultural, and political contexts (Kellner, 2002; Swanson, 2004). This is often referred to as **critical literacy** (Lankshear & McLaren, 1993; Luke, 2000).

One outcome of critical literacy practices is to enable readers to consciously participate in the positions they take toward the meanings of text. The objectivity or neutrality of texts is rejected in favor of an understanding that all texts present particular perspectives and work to position readers in particular ways. Readers come to see that the context of the message evokes certain connections and discourages others. My definition of context and the text-context relationship can be used to teach people how to critically explore the ways that the possible meanings of what we encounter in various text media depend on specific contextual relations. Students can learn to put what they see, hear, and feel into context by identifying the ideological connections that are made by syntax, discourse and rhetoric, spatiality, the cultural history of ideas, hyperlinks, and the other contextual objects I have examined. A useful, effective definition of context is absolutely essential for the work of preparing students to engage in these types of reading practices. Teachers must be clear about what context *is* if they are to teach their students how the context of what is being communicated works with the text to increase the likelihood that readers will form particular meanings and take particular stances toward the message.

When we think of the need to teach students how to read multimodal texts, there are some pedagogical applications of this theoretical definition that are readily available. We currently teach strategies for using linguistic context: visual, syntactic, and semantic cues (Tompkins, 2010). One of the ways that we can begin to teach students how context works and how to use context in reading is to teach them the significance of hyperlinks. Hyperlinks are a tangible connection of ideas, images, and all of the objects that are defined as context. Exploring hyperlinks as a semantic map uses a familiar practice (mapping) to teach new ideas about text and context.

Another way to enhance our students' understandings of context is to engage in activities that examine and manipulate images. We currently give students scissors and paper with text and images and

have them cut and arrange objects: words in sentences; phrases and pictures that represent the beginning, middle, and end of a story. This is familiar to elementary classroom students and teachers. We can use this same approach to teach our students to use the spatial relations of the image to read the text and context of multimodal displays. We first have them explore the spatial associations in images in a manner similar to my process in this paper. Then we can have them use technology (or paper and scissors!) to move objects around and explore the changes in meaning that result. There is an appealing element of play in this activity.

Literacy teaching approaches like reader response and literature circles encourage readers to explore and share the meanings that they construct for texts. One typical practice is to teach students to connect 'text-to-self', 'text-to text', and 'text-to-world'. This practice could be more effective if students were taught to use my sub-categories (constituents) of context to develop a rich understanding of those connections. Interestingly, if we reverse the order of the connections and strive for a somewhat more transactional analysis, students can access how the meaning of the text is constructed within contextual connections: How does my personal experience enter into what I understand this text to be saying? For instance, how does my personal experience enter into how I understand this character's motivations? How am I using my own world to imagine the text world? What have I learned in other texts (writ large) that I bring to this text in order to solve the mystery, anticipate character's actions, etc. These suggestions are all contextualizing practices for narrative writing, but they can be easily adjusted for expository genres.

Despite early idealistic visions of a grand democratization of reading and readership, writing and authorship, (hopes pinned on the more open production, distribution, and consumption of self expression, information, and communications of all kinds: news, narrative, political expression, memoir, art, music, etc.), the realities of network management (the way search engines function, website membership requirements, corporations and whole nations that impose censorship, etc.) quickly revealed that the new order contains its own hierarchies and gate keepers. The technological affordances for multi-design, multi-authoring, and instant distribution both disrupt the old relations of production and consumption and bring new relations. In effect, technological development led to new means and relations of production,

but they too have their contradictions. They too position readers in particular ways and afford some reading practices while discouraging others. In short, communication through NCTs is still entirely contextual and political (Kress, 2003; Warschauer, 2002; Snyder, 2002). Students who are aware of how production, distribution, and consumption operate are more aware of the sociopolitical context wherein all texts take their form.

For instance, reading Facebook provides a useful example of how this theory of context can be practically applied in reading pedagogy and reading practice. In a very overt way, the webpage is as much an identity representation as it is a means of communication. Put another way, the writer is communicating an identity as much as she is communicating information and maintaining relationships. For clarity's sake, I will limit this example of reading to the reading of the identity of the page's author. I want to present an answer to the question of how my theory of context empowers a reader to take control of the identities they construct for their friends (and others) on Facebook (FB)? I suggest the answer as one example of 'better', more effective reading.

The reader approaching the FB webpage begins with an understanding that the meanings of the page are not automatic or natural. The author's identity is established through a network of the 'objects' afforded by various communication modes that FB makes available. The reader brings a knowledge of how FB gate-keeps and privileges a certain type of production and consumption to her reading of the FB page. The reader who is aware of how both the features the designers of FB offer and the layout of the FB page affect the types of identity constructions FB affords is more than a consumer. Knowledge brings agency. She is able to take the roles of both consumer and producer in her reading of the identity information and presentation. Readers need to better understand how people contextualize themselves to produce a digital identity because the generation we are teaching will increasingly need to take control of the construction of their digital selves. (Think of the latest story of someone who lost a job due to their Facebook page.) The semiotics of the text – context transaction need not be a mystery.

The reader knows that the architecture of Facebook only allows for certain types of identity representation through these communication objects and relationships. FB itself is a context with a limited

range of objects and relations, but she knows that there is agency in the representation and that is where the representation can be read as moving beyond the generic options. She reads the profile picture itself as a purposeful semiotic. We can assume the context of purpose regardless of whether the author is completely aware of the exact goal of his representation. The composition of the picture isn't accidental. It was chosen, and it can be read in the same way as I described above using the example of the painting by Greuze. The reader also looks at how the profile picture is positioned, and what it is connected to, both as hyperlinks and proximal context. The profile picture is linked to a folder page with other pictures labeled "Profile Pictures by (the name of the person)". The link associates it with these other *potential* profile pictures. The reader understands that these are context for the current profile pic; they add depth to the identity representation that the writer has chosen to present.

The author of the page is also represented by the pictures of friends. The number of friends is presented above a series of profile pictures in a column below the profile picture. The list contextualizes the person, basically by definition. It places the author within (at the head of) a social group, all identified as friends. The profile picture is also at the head and left of a column of comments in alphabetic print, short blurbs and brief conversations that also can be read with awareness of context. Each of these short comments is connected to an image and linked to the FB pages of all of the participants. There are social and cultural meanings that contextualize the images, the print, the conversations, etc. Of course, the rest of the page is also context to the alphabetic print, but the point here is that the context aware reader has a better grasp on how the author is designing and presenting a tailored identity. She is not entirely in control of the identity that results, but she has conscious agency in the transaction of meanings. She is also more aware of what she brings to the transaction.

This is mundane enough when it comes to how she understands and positions herself in relation to her best friend's self representation, but it is highly significant when it comes to the understanding and position she takes toward the self presentation of a political candidate. Surrounding and connecting oneself with nationalistic imagery and conversations about patriotism establishes a certain identity and contextualizes the politician within a huge sociopolitical and historical matrix. Surrounding oneself with

images of workers and pro-labor discussion threads contextualizes the politician in another way. A critical awareness of the ways that people contextualize themselves and the effects of various contextualizations moves people toward forms of reading through which a reader can knowledgably grapple with the forces at play.

We also want to keep in mind that the ideological character of representation is not inherently problematic. Like any good dialectical object, ideology has its contradictions. The ideologies carried by our communication modes provide a shared set of socially and culturally recognized beliefs, meanings, ways of knowing and acting, ways of being. Socialization into discourses and literacy practices provides a system of signification through which people interact and make sense of the world. Social life depends upon a degree of ideological commonality (Gee, 2001; Stephens, 1992). I find Stephens' (1992) observation instructive. "If a child is to take part in society and act purposively within its structures, he or she will have to master the various signifying codes used by society to order itself" (p. 8). In short, we need language and representation to be ideological because we need to communicate mutually recognized ideas.

Finally, NCTs are a major catalyst for globalization and multicultural intersections. Therefore, there is an increasing need for literacy theory, pedagogy, and practices that prepare students for effective and transformative communication and participation in a culturally diverse world. The expectation I presented at the outset of this dissertation can be revisited here as a second characteristic of better, more effective reading. There is an expectation, often expressed as a social and moral imperative (Endres, 2001; New London Group, 1996), for students of the twenty-first century to be able to establish cross cultural understandings that enable them to "recognize, value, and use" (Kostogriz, 2002), "negotiate" (Fairclough, 1999; Gutiérrez, Baquedano-Lopez, & Turner, 1997; New London Group, 1996), "engage and bridge" (Luke, 2003), "juxtapose, network, and transcend" (Gee, 1997), and "work across" (Fairclough, 1999) social, cultural, and linguistic differences. I suggest that at least part of that cross-cultural dialogue requires a full theory of new mediated, multimodal literacies to negotiate NCT mediated communications. My theoretical definition of reading context is one contribution to that project.

Limitations

I will frame the limitations of this work in terms of the strata of my construct. There are limitations to the scope of my construct at levels beyond reading context, and there are limitations as we look at the layers within my construct. In my introduction I hypothesized that reading itself has undergone an historical shift and requires a new theorization to capture the new materiality, practices, and relationships that have emerged. Yet my category development focuses only on one aspect of reading, context. This limitation was established from the outset and has been acknowledged repeatedly. I suggest to my readers that the historical empirical method provides an approach to pursuing the entire project of constructing a full categorical definition of reading under current historical conditions.

The limitations within my category have gone largely unacknowledged, and I want to address them here. First, developing a construct using theory as data involves selecting a small sample of theories that represent the major concepts and arguments that define each school of thought. I followed a clearly stated method for selecting representative theories, but I am acutely aware of the scope of theory that was not covered. Furthermore, those voices that I did cover cannot help but represent only my own (subjective) location within the dialogue. Another theorist with a different history, speaking from an alternate position within the contemporary conversation, would undoubtedly select other works as representative. Still, assuming that I am in the dialogue, I take my lead from Rosenblatt in asserting that my contribution is recognizable as extending part of the ongoing dialogue by those who share some of my dialogical history. Still, an accounting of the limitations of my decisions to include and exclude is in order.

Beginning with cognitive reading theories, my research showed that the long standing distinction within the field was between ‘bottom-up’ and top-down’ reading theories. In recent years, however, that way of understanding the various schools of thought has largely given way to distinguishing between cognitive, ‘within-the-head’ theories and social ‘practice’ theories. This is the line of thought and frame of reference that I used, and my task became defining the boundaries of cognitive reading theories. I

describe my process in order to highlight how my decision to divide reading theories into these two camps is my response to recent historical developments and is bound to this particular moment in theory development.

In order to characterize the dominant school of thought in reading context theory I used three frequently referenced, well recognized theories. I chose them for clearly stated and what I considered to be good reasons (particularly because they are very frequently cited when the concept of context effects is on the table), but I am now acutely aware that my definition of the cognitive understanding of reading context is only as rich as both the scope and the depth of my analysis. I believe the depth of my analysis of those theories is adequate, but the scope is quite limited. I drew in interactive and transactive reading theories, but I omitted schema theories of reading (e.g. Anderson, 2004), dual coding theories (Sadoski & Paivio, 2004), Walter Kintsch's (2004) Construction-Integration model, and other perspectives that fall within the cognitive tradition. These theoretical perspectives would have added breadth to my analysis and characterization of the cognitive paradigm, but unless I was willing to significantly expand the length of the chapter, I needed to sacrifice either scope or depth. I chose to allow for depth in my analysis of Rumelhart, Stanovich and Rosenblatt rather than covering more perspectives in less detail.

I faced similar choices in each of the subsequent chapters. There are many other thinkers who have contributed to Cultural Historical Activity Theory, and they offer a variety of alternative conceptualizations that I did not touch on. In chapter five, my analysis of NLS drew from the broadest set of theorists of any section of this category development, but I still developed the bulk of the sub-categories of context from Lewis's analysis of reading in one classroom. Again, the task of controlling the breadth and length of the discussion, what I perceived as a need to restrain the analysis to a course that did not overwhelm or lose the reader in an ocean of voices, restricted the number of theorists I drew into each section of the discussion.

Not only were my sources limited, but so is the depth of my analysis of the sub categories of objects that constitute context. As I stated in the conclusion to my working definition, my category construction outlines the sub categories or 'objects' that constitute context, but they remain, by necessity,

theoretically undefined. Each of the constructs should themselves be developed into a well defined theoretical category. There is some reassurance in the fact that this is not peculiar to my research and theoretical definition. It is the case with all theory development that as we acknowledge the complexity, contradictions, and transitivity of the construct we have in view we use all manner of definitive terminology and treat all sorts of constructs as if they were fixed and agreed upon. If we did not, we would endlessly digress upon defining each of the concepts we wanted to use to define the construct we were initially interested in. Still, this is a limitation I want to draw attention to so that the reader can consider (and dare I hope, *pursue*) how they themselves define and understand the constructs I have left undefined.

In this work it was not possible to give them a depth of treatment. Nor was it possible to try to develop even a representative list of the sorts of objects that we can consider to fall within each sub-category. It is commonplace that theorists who wrestle with the idea of context state up front that a context can ultimately encompass everything (see Pepper, 1942; van Dijk, 2008, 2009). Is not the fact that the human activity of reading is situated within a material universe a good starting place for understanding reading in its fullness? And who is to say where the strands of which reading objects are constituted (the still smaller objects like pixels and ink molecules) cease to have any significance at all? I restricted my description of the sub-categories that constitute reading context to examples used by the theorists I drew into the discussion. This has the advantage of grounding my characterization of rules, communities, the division of labor, reader/subjects, text/ objects, material and linguistic instruments, orthography, semantics, syntax, personal cognition, society (local and historical), culture (local and historical), history, politics, the material environment, time and space in the flow of the current and ongoing theoretical discussion. My representation of these sub-categorical objects is ultimately limited, however, by the choices I made about whose voices to include and whose to leave out.

Conclusion

The audience that I hope would entertain my concept of reading context clearly begins with reading theorists and researchers. In the future they are the community that will carry out the entire project of theorizing the new and the old in NCT mediated reading (along with the ever fuller spectrum of literacies that have and will emerge). That theorization is necessary if we are to understand and work with new literacies. The preliminary projects that have been undertaken (see Leu et. al., 2004) will need refining as both technology and practices continue to develop. With that development will come new theory and research.

In this dissertation I was working at the level of the analysis and construction of the category 'reading context' and category construction. I do not want to represent this research as resulting in a full theory of context that explains its workings or provides a formal model of how context is established and negotiated by participants in reading events. That level of theory is developed through *actual empirical* research that tests and uses the theoretical definition that I have constructed. Testing my construct on that level is a next step after this category analysis. It is my hope that this definition of a theoretical category for reading context can contribute to that process of theory building to meet the needs of twenty-first century literacy.

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